FINANCIAL STATEMENTS

December 31, 2020

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Financial Reporting Responsibility

Management of the Bank of Canada (the Bank) is responsible for the financial statements, which are prepared in accordance with International Financial Reporting Standards. The amounts and financial information included in the statements reflect management's best estimates and judgment. Financial information presented elsewhere in the Annual Report is consistent with the financial statements.

Management is responsible for the integrity and reliability of the financial statements and the accounting system from which they are derived. The Bank maintains a system of internal controls to provide reasonable assurance that transactions are properly authorized and recognized, that financial information is reliable, that assets are safeguarded, that liabilities are recognized, and that operations are carried out effectively. The Bank's internal audit department reviews internal controls, including the application of accounting and financial controls.

The Board of Directors is responsible for ensuring that management fulfills its responsibilities for financial reporting and internal controls. The Board exercises this responsibility through its Audit and Finance Committee (the Committee). The Committee is composed of members who are neither officers nor employees of the Bank and who are financially literate. The Committee is therefore qualified to review the Bank's annual financial statements and to recommend their approval by the Board of Directors. The Committee meets with management, the Chief Internal Auditor and the Bank's independent auditors, who are appointed by the Governor-in-Council. The Committee has established processes to evaluate the independence of the Bank's independent auditors and oversees all services provided by them. The Committee has a duty to review the adoption of, and changes in, accounting principles, policies and procedures that have a material effect on the financial statements, and to review and assess key management judgments and estimates material to the reported financial information.

These 2020 financial statements have been audited by the Bank's independent auditors, PricewaterhouseCoopers LLP and KPMG LLP, and their report is presented herein. The independent auditors have full and unrestricted access to the Committee to discuss their audit and related findings.

Tiff Macklem
Governor

Coralia Bulhoes, CPA, CA,
Chief Financial Officer and Chief Accountant

Ottawa, Canada
February 19, 2021

Independent Auditors' Report

To the Minister of Finance, registered shareholder of the Bank of Canada

Our opinion

We have audited the financial statements of the Bank of Canada (the Bank), which comprise the statement of financial position as at December 31, 2020, and the statement of net income and comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Bank as at December 31, 2020, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS).

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the "*Auditors' responsibilities for the audit of the financial statements*" section of our report. We are independent of the Bank in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other information

Management is responsible for the other information. The other information comprises the information, other than the financial statements and our auditors' report thereon, included in the 2020 Annual Report. Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon. In connection with our audit of the financial statements, our responsibility is to read the other information, identified above, and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of management and those charged with governance for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Bank's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Bank or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Bank's financial reporting process.

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error; design and perform audit procedures responsive to those risks; and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Bank's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Bank's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Bank to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

KPMG LLP	PricewaterhouseCoopers LLP
Chartered Professional Accountants	Chartered Professional Accountants
Licensed Public Accountants	Licensed Public Accountants

Ottawa, Canada
February 19, 2021

Statement of financial position

As at December 31 (in millions of Canadian dollars)

	Note	2020	2019
Assets			
Cash and foreign deposits	3, 4, 6	6.5	6.4
Loans and receivables	3, 5, 6		
Securities purchased under resale agreements		155,317.6	15,516.5
Other receivables		6.3	5.4
		155,323.9	**15,521.9**
Investments	3, 6		
Government of Canada treasury bills		51,750.2	23,367.4
Government of Canada bonds—carried at amortized cost		105,979.0	79,030.5
Government of Canada bonds—carried at FVTPL		202,369.1	-
Canada Mortgage Bonds		9,660.9	510.7
Other bonds		14,399.6	-
Securities lent or sold under repurchase agreements		3,775.8	-
Other securities		3,344.1	-
Shares in the Bank for International Settlements (BIS)		486.1	438.3
		391,764.8	**103,346.9**
Capital assets	7, 8, 9		
Property and equipment		568.2	590.6
Intangible assets		83.1	59.4
Right-of-use leased assets		45.4	50.9
		696.7	**700.9**
Other assets	10	41.5	66.7
Total assets		**547,833.4**	**119,642.8**
Liabilities and equity			
Bank notes in circulation	3, 6, 11	106,925.0	93,094.3
Deposits	3, 6, 12		
Government of Canada		80,559.0	21,765.6
Members of Payments Canada		345,664.3	249.5
Other deposits		9,877.2	3,228.2
		436,100.5	**25,243.3**
Securities sold under repurchase agreements	3, 6	3,000.8	-
Derivatives—Indemnity agreements with the Government of Canada	3, 6	29.3	-
Other liabilities	3, 6, 9, 13, 14	1,199.7	774.9
Total liabilities		**547,255.3**	**119,112.5**
Commitments, contingencies and guarantees	15		
Equity	16	578.1	530.3
Total liabilities and equity		**547,833.4**	**119,642.8**

Tiff Macklem
Governor

Coralia Bulhoes
Coralia Bulhoes, CPA, CA
Chief Financial Officer and
Chief Accountant

Claire M. C. Kennedy
Lead Director, Board of Directors, and
Chair, Audit and Finance Committee

(See accompanying notes to the financial statements.)

Statement of net income and comprehensive income

For the year ended December 31 (in millions of Canadian dollars)

	Note	2020	2019
Income			
Interest revenue			
Investments—carried at amortized cost		2,147.4	2,083.4
Investments—carried at FVTPL		431.7	-
Securities purchased under resale agreements		789.7	191.4
Other sources		9.1	0.8
		3,377.9	**2,275.6**
Interest expense			
Deposits		(794.0)	(406.5)
Other		(0.4)	(0.1)
Net interest income		**2,583.5**	**1,869.0**
Dividend revenue		-	4.2
Other revenue		6.2	8.0
Net gains and losses on financial instruments carried at FVTPL	3	-	-
Total income		**2,589.7**	**1,881.2**
Expenses			
Staff costs		323.1	285.5
Bank note research, production and processing		51.1	60.9
Premises costs		30.2	32.0
Technology and telecommunications		89.0	72.3
Depreciation and amortization		61.1	54.9
Other operating expenses		71.0	73.9
Total expenses		**625.5**	**579.5**
Net income		**1,964.2**	**1,301.7**
Other comprehensive income (loss)			
Remeasurements of the net defined-benefit liability/asset	14	(191.3)	(133.4)
Change in fair value of BIS shares	3	47.8	5.0
Other comprehensive income (loss)		**(143.5)**	(128.4)
Comprehensive income		**1,820.7**	**1,173.3**

(See accompanying notes to the financial statements.)

Statement of changes in equity

For the year ended December 31 (in millions of Canadian dollars)

	Note	Share capital	Statutory reserve	Special reserve	Investment revaluation reserve	Retained earnings	Total
Balance as at December 31, 2018		5.0	25.0	100.0	395.3	-	525.3
Comprehensive income for the year							
Net income		-	-	-	-	1,301.7	**1,301.7**
Remeasurements of the net defined-benefit liability/asset	14	-	-	-	-	(133.4)	**(133.4)**
Change in fair value of BIS shares	3	-	-	-	5.0	-	**5.0**
		-	-	-	5.0	1,168.3	**1,173.3**
Surplus for the Receiver General for Canada	13, 16	-	-	-	-	(1,168.3)	**(1,168.3)**
Balance as at December 31, 2019		5.0	25.0	100.0	400.3	-	530.3
Comprehensive income for the year							
Net income		-	-	-	-	1,964.2	**1,964.2**
Remeasurements of the net defined-benefit liability/asset	14	-	-	-	-	(191.3)	**(191.3)**
Change in fair value of BIS shares	3	-	-	-	47.8	-	**47.8**
		-	-	-	47.8	1,772.9	**1,820.7**
Surplus for the Receiver General for Canada	13, 16	-	-	-	-	(1,772.9)	**(1,772.9)**
Balance as at December 31, 2020		5.0	25.0	100.0	448.1	-	578.1

(See accompanying notes to the financial statements.)

Statement of cash flows

For the year ended December 31 (in millions of Canadian dollars)

	2020	2019
Cash flows from operating activities		
Interest received	4,386.0	2,259.3
Dividends received	-	4.2
Other revenue received	6.8	7.1
Interest paid	(792.7)	(406.7)
Payments to or on behalf of employees and to suppliers	(507.9)	(484.8)
Net increase in deposits	410,857.2	437.1
Acquisition of securities purchased under resale agreements	(272,367.9)	(7,399.9)
Proceeds from maturity of securities purchased under resale agreements	117,638.4	7,399.9
Net proceeds from securities sold under repurchase agreements	3,000.8	-
Purchases of Canada Mortgage Bonds	(8,740.9)	-
Purchases of Government of Canada bonds—carried at FVTPL	(213,202.0)	-
Proceeds from maturity of Government of Canada bonds—carried at FVTPL	7,247.3	-
Purchases of other bonds	(15,294.7)	-
Proceeds from maturity of other bonds	27.6	-
Proceeds from disposal of other bonds	9.3	-
Purchase of other securities	(62,901.2)	-
Proceeds from maturity of other securities	59,563.8	-
Net cash provided by operating activities	**28,929.9**	**1,816.2**
Cash flows from investing activities		
Acquisition of securities purchased under resale agreements—term repo	(33,228.6)	(108,283.1)
Proceeds from maturity of securities purchased under resale agreements—term repo	48,725.8	103,446.1
Net maturities (purchases) of Government of Canada treasury bills	(29,107.1)	851.6
Purchases of Government of Canada bonds	(42,760.2)	(14,614.1)
Proceeds from maturity of Government of Canada bonds	15,740.0	15,221.0
Purchases of Canada Mortgage Bonds	(499.7)	(262.8)
Additions of property and equipment	(24.3)	(29.9)
Additions of intangible assets	(33.6)	(26.3)
Net cash used in investing activities	**(41,187.7)**	**(3,697.5)**
Cash flows from financing activities		
Net increase in bank notes in circulation	13,830.7	2,901.2
Remittance of surplus to the Receiver General for Canada	(1,568.3)	(1,025.9)
Payments on lease liabilities	(4.7)	(4.1)
Net cash provided by financing activities	**12,257.7**	**1,871.2**
Effect of exchange rate changes on foreign currency	0.2	(0.5)
Increase (decrease) in cash and foreign deposits	**0.1**	**(10.6)**
Cash and foreign deposits, beginning of year	6.4	17.0
Cash and foreign deposits, end of year	**6.5**	**6.4**

(See accompanying notes to the financial statements.)

Notes to the financial statements of the Bank of Canada

For the year ended December 31, 2020

1. The business of the Bank of Canada

The Bank of Canada (the Bank) is the nation's central bank. The Bank is a corporation established under the *Bank of Canada Act*, is wholly owned by the Minister of Finance on behalf of the Government of Canada and is exempt from income taxes. The Bank does not offer banking services to the public.

The address of the Bank's registered head office is 234 Wellington Street, Ottawa, Ontario.

The Bank conforms to the financial reporting requirements of the *Bank of Canada Act* as prescribed in the Bank's bylaws, which require that the Bank's financial statements be prepared in accordance with generally accepted accounting principles as set out in the *CPA Canada Handbook*, published by the Chartered Professional Accountants of Canada (CPA Canada). Consistent with CPA Canada guidance, the Bank is a government business enterprise as defined by the Canadian Public Sector Accounting Standards and, as such, adheres to the standards applicable to publicly accountable enterprises. In compliance with this requirement, the Bank has developed accounting policies in accordance with International Financial Reporting Standards (IFRS).

The Bank's mandate under the *Bank of Canada Act* is to promote the economic and financial welfare of Canada. The Bank's activities and operations are undertaken in support of this mandate and not with the objective of generating revenue or profits. The Bank's four core areas of responsibility are the following:

- **Monetary policy**: The Bank conducts monetary policy to preserve the value of money by keeping inflation low, stable and predictable.
- **Financial system**: The Bank promotes safe, sound and efficient financial systems, within Canada and internationally, and conducts transactions in financial markets in support of these objectives.
- **Funds management**: The Bank provides funds management services for the Government of Canada, the Bank itself and other clients. The Bank is the fiscal agent for the government, providing treasury-management services and administering and advising on the public debt and foreign exchange reserves.
- **Currency**: The Bank designs, issues and distributes Canada's bank notes, oversees the note distribution system and ensures a supply of quality bank notes that are readily accepted and secure against counterfeiting.

The corporate administration function supports the management of the Bank's human resources, operations and strategic initiatives as well as the stewardship of financial, physical, information and technology assets.

The Bank has the exclusive right to issue Canadian bank notes, and the face value of these bank notes is a significant liability on the Bank's balance sheet. The Bank invests part of the proceeds from issuing bank notes into Government of Canada securities and Canada Mortgage Bonds acquired on a non-competitive basis in the primary market. The Bank also uses part of these proceeds to execute its responsibilities for its monetary policy and financial system functions.

The interest income generated from the assets backing the bank notes in circulation (net of bank note production and distribution costs) is referred to as seigniorage. It provides a stable and constant source of funding for the Bank's operations, which enables the Bank to function independently of government appropriations. Seigniorage revenue is used to fund operations and reserves. Net income is remitted to the Receiver General for Canada in accordance with the requirements of the *Bank of Canada Act*.

2. Basis of preparation

Compliance with International Financial Reporting Standards

These financial statements have been prepared in accordance with IFRS as issued by the International Accounting Standards Board.

The Board of Directors approved the financial statements on February 19, 2021.

Fiscal agent and custodial activities

Responsibility for the operational management of the Government of Canada's financial assets and liabilities is borne jointly by the Bank (as fiscal agent for the Government of Canada) and the Department of Finance Canada. In this role as fiscal agent, the Bank provides transactional and administrative support to the Government of Canada in certain areas, consistent with the requirements of section 24 of the *Bank of Canada Act*. As fiscal agent for the Government of Canada, the Bank does not bear the risks and rewards of the related financial assets and liabilities. These assets, liabilities and related revenues and expenses are not included in the financial statements of the Bank, except for the costs incurred by the Bank to fulfill its fiscal-agent role, as discussed in Note 17.

Securities safekeeping and other custodial services are provided to foreign central banks, international organizations and other government-related entities. Under the terms governing these services, the Bank is indemnified against losses. Any assets and income that are managed under these services are excluded from the Bank's financial statements because they are not assets or income of the Bank.

Measurement base

The financial statements have been prepared on a historical cost basis, except for the following items:

- financial instruments classified (or designated) and measured at fair value through profit or loss (FVTPL);
- the Bank's shares in the Bank for International Settlements (BIS), which are designated and measured at fair value through other comprehensive income (FVOCI); and
- the net defined-benefit liability/asset of employee benefit plans, which is recognized as the net of the fair value of plan assets and the present value of the defined-benefit obligations.

Functional and presentation currency

The Bank's functional and presentation currency is the Canadian dollar. The amounts in the notes to the financial statements of the Bank are in millions of Canadian dollars, unless otherwise stated.

Significant accounting policies

This section contains the Bank's accounting policies that relate to the financial statements as a whole. When an accounting policy is applicable to a specific note to the financial statements, the policy and related disclosures are provided within that note.

Revenue recognition

- Interest revenue is recognized in net income using the effective interest method.
- Dividend revenue from the Bank's investment in BIS shares is recognized as dividends are declared.

- Other revenue is recognized in net income as it is earned, when it can be reliably measured and when collectability is probable.

Foreign currencies

Investment income and expenses denominated in foreign currencies are translated into Canadian dollars at the exchange rate in effect at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are translated into Canadian dollars at the exchange rate prevailing at the end of the reporting period. The resulting foreign exchange gains and losses are included in *Other revenue*. Gains or losses on equity investments classified as FVOCI, including those related to the exchange rate, are recognized in other comprehensive income.

Impairment of non-financial assets

Non-financial assets, including *Property and equipment, Intangible assets* and *Right-of-use leased assets* are reviewed annually for indicators of impairment and whenever events or changes in circumstances indicate that the carrying amount exceeds their recoverable amount.

Intangible assets under development are assessed for impairment annually.

Key accounting judgments, estimates and assumptions

The preparation of the financial statements requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses, and other related information.

The Bank based its assumptions and estimates on the information available when these financial statements were prepared. Existing circumstances and assumptions about future developments may change, however, in response to market fluctuations or circumstances that are beyond the control of the Bank. In such cases, the impact will be recognized in the financial statements of a future reporting period.

Judgments, estimates and underlying assumptions are reviewed for appropriateness and consistent application on an ongoing basis. Revisions to accounting estimates are recognized in the reporting period in which the estimates are revised and in any future reporting periods affected. Significant judgment and estimates are used in the measurement of financial instruments (Note 3C) and employee benefits (Note 14).

Current changes to IFRS

No new or amended standards were adopted by the Bank in 2020 that had a significant impact on its financial statements.

Future changes to IFRS

There are currently no new or amended standards issued but not yet effective that are expected to have a significant impact on the Bank's financial statements.

3. Financial instruments

A) Accounting policy

Recognition and derecognition

The Bank accounts for all financial instruments using settlement-date accounting. Financial assets and liabilities are recorded when the Bank becomes party to the contractual provisions of the instruments. Financial instruments are initially recognized at fair value plus transaction costs, if any.

The Bank derecognizes a financial asset when it considers that substantially all the risks and rewards of the asset have been transferred or when the contractual rights to the cash flows of the financial asset expire. The Bank does not derecognize collateral pledged by the Bank under standard repurchase agreements and securities-lending transactions since the Bank retains substantially all risks and rewards on the basis of the predetermined repurchase price. The Bank derecognizes financial liabilities when the Bank's obligations are discharged, are cancelled or expire.

Classification and measurement

The Bank's financial instruments are classified and subsequently measured as follows:

Financial instrument	Classification and subsequent measurement	Carrying value	Fair value
Financial assets			
Cash and foreign deposits	Amortized cost	6.5	*
Loans and receivables			
Securities purchased under resale agreements	Amortized cost	155,317.6	155,459.4
Other receivables	Amortized cost	6.3	*
		155,323.9	*
Investments			
Government of Canada treasury bills	Amortized cost	51,750.2	51,781.9
Government of Canada bonds—primary market	Amortized cost	105,979.0	113,323.9
Government of Canada bonds—secondary market			
Government of Canada bonds	FVTPL	198,837.6	198,837.6
Real-return bonds	FVTPL	3,531.5	3,531.5
		202,369.1	202,369.1
Canada Mortgage Bonds	Amortized cost	9,660.9	9,775.9
Other bonds			
Provincial bonds	FVTPL	14,219.6	14,219.6
Corporate bonds	FVTPL	180.0	180.0
		14,399.6	14,399.6
Securities lent or sold under repurchase agreements	FVTPL and amortized cost	3,775.8	3,776.0
Provincial money market securities	Amortized cost	3,344.1	3,346.4
Shares in the Bank for International Settlements	FVOCI	486.1	486.1
		391,764.8	**399,258.9**
Financial liabilities			
Bank notes in circulation	Face value	**106,925.0**	*
Deposits	Amortized cost	**436,100.5**	*
Securities sold under repurchase agreements	Amortized cost	**3,000.8**	*
Derivatives—Indemnity agreements with the Government of Canada	FVTPL	**29.3**	**29.3**
Other financial liabilities	Amortized cost	**659.1**	*

* Approximates carrying value due to their nature or term to maturity

Financial assets at amortized cost

The Bank's financial assets at amortized cost are primarily debt instruments with cash flows consisting solely of payments of principal and interest. The Bank's objective is to hold the financial assets in order to collect contractual cash flows. Interest income is calculated by applying the effective interest rate to the gross carrying amount of financial assets, unless a financial asset has become credit-impaired, in which case interest revenue is calculated by applying the effective interest rate to its amortized cost net of the expected credit loss (ECL) provision.

Cash and foreign deposits is composed of cash on hand and highly liquid demand deposits in foreign currencies with other central banks or international financial institutions. They are principally held for cash flow management purposes and are managed by collecting contractual cash flows.

Securities purchased under resale agreements (SPRAs), *advances to members of Payments Canada*, *other receivables*, *Government of Canada treasury bills*, *Government of Canada bonds—primary market, Canada Mortgage Bonds* and *provincial money market securities* are debt instruments that are managed by collecting contractual cash flows. They are measured at amortized cost using the effective interest method less any ECLs.[1] Additional disclosure for SPRAs can be found in Note 5.

Financial assets designated at FVTPL

Government of Canada bonds—secondary market, *real-return bonds*, *provincial bonds* and *corporate bonds* are debt instruments whose business objective is achieved by both collecting contractual cashflows and selling financial assets. The Bank has elected to irrevocably designate these at FVTPL in order to reduce the accounting mismatch arising from the derivative-related indemnity agreement on each of these instruments. Changes in fair value as well as any gains or losses realized on disposal are recognized in income (loss). Amounts relating to fair value changes and realized gains and losses can be found in Note 3D. The Bank has also elected to present interest income and expense resulting from these instruments separate from net gains and losses. Interest is calculated using the effective interest method.

The Bank operates a securities-lending program for provincial bonds purchased under the Provincial Bond Purchase Program (PBPP). The Bank enters into arrangements whereby it lends securities against non-cash collateral, with the agreement to receive the securities back at a future date, thereby retaining substantially all the risks and rewards of ownership. As a result, the securities do not qualify for derecognition and remain on the statement of financial position.

Financial assets designated at FVOCI

The Bank holds 9,441 BIS shares (9,441 BIS shares as at December 31, 2019), which are held as part of its functions as a central bank and are long-standing in nature. Ownership of BIS shares is limited to central banks, and new shares can be acquired only following an invitation to subscribe extended by the BIS Board of Directors. The shares are non-transferable unless prior written consent is obtained from the BIS. The Bank's business model is to hold these shares to enable its participation as a member of the BIS.

The shares in the BIS are not held for trading. They are managed by collecting dividend payments. Unrealized changes in the fair value are recognized in other comprehensive income and accumulated in the investment revaluation reserve in *Equity*. Dividends are recognized in net income, as they represent a return on equity and not a return of invested capital to shareholders.

Financial liabilities at face value

Bank notes in circulation represents those bank notes that have been produced and issued for use in the economy. Bank notes in circulation are non-interest-bearing liabilities and are due on demand. They are recorded at face value. The fair value of bank notes in circulation approximates their carrying value.

Financial liabilities at amortized cost

Deposits is composed of deposits by the Government of Canada, members of Payments Canada and other financial institutions, and also includes unclaimed balances remitted to the Bank in accordance with governing legislation. The Bank pays interest on the deposits for the Government of Canada, members of Payments Canada and some

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1 The effective interest method uses the rate inherent in a financial instrument that discounts the estimated future cash flows over the expected life of the financial instrument in order to recognize interest on a constant-yield basis.

other financial institutions at short-term market rates. The Bank pays interest on unclaimed balances in accordance with governing legislation. Interest expense on deposits is included in net income. Deposits are managed by paying contractual cash flows and are measured at amortized cost using the effective interest method.

Securities sold under repurchase agreements stems from the Bank's Securities Repo Operations program, which was introduced in July 2020 to support liquidity in the securities financing market. Under this program, the Bank enters into sale and repurchase agreements for Government of Canada securities, whereby the securities are sold and repurchased the following day. Under such transactions, the Bank retains substantially all the risks and rewards associated with the assets. Where financial assets are not eligible for derecognition, the transfers are viewed as secured financing transactions, with any consideration received resulting in a corresponding liability measured at amortized cost. The Bank is not entitled to use these financial assets for any other purpose.

Other financial liabilities consists of surplus payable to the Receiver General for Canada, accounts payable and accrued liabilities.

Financial liabilities at FVTPL

Derivatives—Indemnity agreements with the Government of Canada (the derivatives) consists of agreements that were entered into to address market fluctuation as a result of the Bank's operations under the Government of Canada Bond Purchase Program (GBPP), the PBPP and the Corporate Bond Purchase Program (CBPP). Realized losses resulting from the sale of assets within these programs are indemnified by the Government of Canada, whereas realized gains on disposal will be remitted. Given that the value of the agreements responds to changes in the underlying prices of the instruments in the programs, the indemnity agreements are considered derivatives. These agreements are initially recognized and are carried at their fair value on the statement of financial position with changes in fair value recognized in income (loss). The fair value of these derivatives is calculated as the difference between the fair value of the related instruments and their amortized cost.

Financial guarantee contracts—Indemnity agreements with the Government of Canada

The Bank entered into separate agreements with the Government of Canada that indemnify the Bank in the event that credit losses are incurred on securities purchased under the Provincial Money Market Purchase Program or under the Commercial Paper Purchase Program. These agreements are recognized as stand-alone financial guarantee contracts and are accounted for under International Accounting Standard 37. An asset will be recognized only when there is an issuer default and the Bank has filed a reimbursement claim with the government.

Impairment and write-off

The Bank calculates ECLs on investments in debt instruments that are measured at amortized cost, on foreign currency swap facility commitments and on the Large Value Transfer System (LVTS) guarantee. The amount of ECLs is updated at each reporting date to reflect changes in credit risk since initial recognition. The ECL is estimated as the difference between all contractual cash flows that are due to the Bank in accordance with the contract and all the cash flows that the Bank expects to receive, discounted at the original effective interest rate. The ECL model is a function of the probability of default, loss given default and exposure at default of an issuer, discounted to the reporting date using the effective interest rate. Instruments were grouped on a collective basis by counterparty and instrument type for evaluation of the ECL.

Key concepts

Probability of default
The likelihood that a borrower will not be able to meet its scheduled repayments.

Loss given default
The amount of the loss the Bank would likely incur when a borrower defaults on a loan, which is expressed as a percentage of exposure at default.

Low credit risk
The Bank has applied the low credit risk practical expedient available under IFRS 9. The Bank considers a financial asset to have low credit risk when the asset's creditworthiness is judged to be "investment grade," which the Bank broadly defines as equivalent to BBB or higher.

Significant increase in credit risk
In assessing whether the credit risk on a financial asset has increased significantly since initial recognition, the Bank compares the risk of a default occurring on the financial asset as at the reporting date with the risk as at the date of initial recognition. The Bank considers many factors when assessing a financial asset for a significant increase in credit risk, including but not limited to (1) an actual or expected significant deterioration in the financial asset's credit rating; (2) significant deterioration in external market indicators of credit risk for a financial asset; and (3) existing or forecast adverse changes in the business, financial, regulatory, technological or economic environment of the counterparty that result in a significant decrease in the counterparty's ability to meet its debt obligations.

The Bank regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate. The Bank assumes that the credit risk on a financial asset has not increased significantly since initial recognition if the financial asset is determined to have low credit risk at the reporting date and monitoring activities do not indicate the presence of a trigger event. The Bank corroborates external credit ratings with an internal analysis performed annually, with quarterly updates. The Bank also performs continuous monitoring of relevant economic and financial developments.

Credit-impaired
A financial asset is deemed credit-impaired when one or more events with a detrimental impact on its estimated future cash flows have occurred. Such events could include but are not limited to (1) significant financial difficulty of the counterparty; (2) a breach of contract, such as a default or past-due event; and (3) the likelihood that the counterparty will enter bankruptcy or other financial reorganization.

Default
The Bank will consider a financial asset to be in default when the borrower is unlikely to pay its credit obligations to the Bank in full, without recourse by the Bank, such as realizing collateral (if held).

The ECL model applies a three-stage approach to measure the allowance for credit losses. Expected credit losses are measured based on the stage assignment of the financial instrument:

Stage 1

Financial assets are categorized as Stage 1 when first recognized. The Bank records an allowance for 12-month ECLs in profit or loss, and interest revenue is calculated on the gross carrying amount of the asset.

Stage 2

Financial assets are categorized as Stage 2 when they have experienced a significant increase in credit risk since initial recognition. The Bank records an allowance for lifetime ECLs, and interest revenue is calculated on the gross carrying amount of the asset.

Stage 3

Financial assets are categorized as Stage 3 when they are considered credit-impaired. The Bank records an allowance for lifetime ECLs, and interest revenue is calculated based on the net carrying amount of the asset (gross carrying amount less the loss allowance), rather than on its gross carrying amount.

Fair value of financial instruments

Financial instruments are classified using a fair value hierarchy that reflects the significance of the inputs used in making the measurements:

Level 1
Unadjusted quoted prices in active markets for identical assets or liabilities, which represent actual and regularly occurring arm's-length market transactions

Level 2
Inputs other than quoted prices included in Level 1, which are observable for the assets or liabilities either directly (e.g., prices for similar instruments, prices from inactive markets) or indirectly (e.g., interest rates, credit spreads)

Level 3
Unobservable inputs for the assets or liabilities that are not based on observable market data as a result of inactive markets (e.g., market participant assumptions)

Estimated fair values for financial instruments are designed to approximate amounts for which the instruments could be exchanged in a current arm's-length transaction between knowledgeable, willing parties. The fair value hierarchy requires the use of observable market inputs wherever such inputs exist. In measuring fair value, a financial instrument is classified at the lowest level of the hierarchy for which a significant input has been considered. Transfers may occur between levels of the fair value hierarchy as a result of changes in market activity or the availability of quoted market prices or observable inputs. The Bank's policy is to record transfers of assets and liabilities between the different levels of the fair value hierarchy using the fair values as at the end of each reporting period.

B) Financial instruments introduced during the year

In response to the economic impacts of the pandemic, the Bank has undertaken a number of actions to support the Canadian economy and financial system. These include establishing several asset purchase programs to increase liquidity in core funding markets and measures to provide liquidity to financial institutions.

Asset / Program / Effective date	Description	Objective
Securities purchased under resale agreements / March 12, 2020	Expansion of duration to include terms of approximately 1, 3, 6, 12 or 24 months (previously from 1 to 90 business days)	To support interbank funding
Bankers' acceptances / Bankers' Acceptance Purchase Facility / March 13, 2020 (discontinued on October 26, 2020)	Secondary market purchases of one-month bankers' acceptances issued and guaranteed by Canadian banks	To support one of Canada's core funding markets and to provide a key source of financing for small and medium-sized corporate borrowers
Canada Mortgage Bonds / Canada Mortgage Bond Purchase Program / March 17, 2020 (discontinued on October 29, 2020)	Secondary market purchases of Canada Mortgage Bonds with the Canada Mortgage and Housing Corporation	To support market functioning
Advances to members of Payments Canada / Standing Term Liquidity Facility / March 19, 2020	Advances to eligible financial institutions in need of temporary liquidity support	To complement the Bank's current tools for the provision of liquidity and to strengthen the Bank's role as lender of last resort
Provincial money market securities / Provincial Money Market Purchase Program / March 24, 2020 (discontinued on November 13, 2020)	Asset purchase facility that acquires provincially issued money market securities (treasury bills and short-term promissory notes) through the primary issuance market	To support the liquidity and efficiency of provincial government funding markets

Asset / Program / Effective date	Description	Objective
Government of Canada bonds—secondary market (including real-return bonds) / Government of Canada Bond Purchase Program / April 1, 2020	Purchases of Government of Canada nominal and real-return bonds in the secondary market to support market functioning and provide monetary stimulus	Initially, the objective was to address strains in the Government of Canada bond market (including the real-return bond market) and to enhance the effectiveness of all other actions taken to support core funding markets. As market conditions evolved, these operations continued as a tool of monetary policy stimulus.
Commercial paper / Commercial Paper Purchase Program / April 2, 2020	Primary and secondary market purchases of commercial paper, including asset-backed commercial paper, issued by Canadian firms, municipalities and provincial agencies	To help support the flow of credit to the economy by alleviating strains in Canada's commercial paper markets
Securities purchased under resale agreements / Contingent Term Repo Facility / April 6, 2020	Funding for a one-month term to eligible counterparties against securities issued or guaranteed by the Government of Canada or a provincial government	To counter any severe market-wide liquidity stresses and to support the stability of the Canadian financial system
Provincial bonds / Provincial Bond Purchase Program / May 7, 2020	Secondary market purchases of Canadian-dollar-denominated bonds issued by all provinces and fully guaranteed provincial agencies	To support the liquidity and efficiency of provincial government funding markets
Corporate bonds / Corporate Bond Purchase Program / May 26, 2020	Purchases of bonds through a tender process in the secondary market	To support the liquidity and proper functioning of the corporate debt market
Securities sold under repurchase agreements / Securities Repo Operations program / July 27, 2020	A temporary source of Government of Canada nominal bonds and treasury bills to primary dealers by making a portion of the Bank's holdings of these securities available on an overnight basis through daily repurchase operations	To support liquidity in the securities financing market and to foster the well-functioning of the Government of Canada securities market

C) Accounting estimates and judgments

Expected credit losses

Judgment is required when determining the appropriate amount of ECLs to recognize. The measurement of ECLs reflects an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes, the time value of money, and reasonable and supportable information that is available without undue cost or effort at the reporting date regarding past events, current conditions and forecasts of future economic conditions.

In certain cases, the Bank may consider that events are a significant increase in credit risk as opposed to a true default. In making this assessment, the Bank considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort. Forward-looking information considered includes the future prospects of the industries in which the Bank's counterparties operate, and consideration of various external sources of actual and forecast economic information.

Significant judgments required for measuring ECLs include the following:

- determining criteria for assessing whether a financial asset is considered to have low credit risk;
- determining criteria for assessing what constitutes a significant increase in credit risk; and
- determining appropriate data inputs for probability of default, loss given default and exposure at default.

All of the Bank's financial assets subject to impairment assessments are Stage 1 and are considered to have low credit risk. There were no transfers of financial instruments between stages during the reporting period. The Bank did not record any ECLs on these financial instruments as at December 31, 2020 ($nil as at December 31, 2019) because the amount was deemed not to be material. By its nature, the ECL estimates are subject to measurement uncertainty. The Bank will continue to review its judgments and assumptions to assess whether the ECL estimate has changed. There are no significant past due or impaired amounts as at December 31, 2020 ($nil as at December 31, 2019).

Financial guarantees and loan commitments

This category includes the Bank's foreign currency swap facility commitments and the LVTS guarantee. For guarantees and commitments made by the Bank that are not currently in use but where there is a clear indication that use can reasonably be expected within the next 12 months, the Bank would assess the guarantee or commitment for any impairment on a case-by-case basis based on expected drawings.

For a financial guarantee contract, since the Bank is required to make payments only in the event of a default by the counterparty in accordance with the terms of the instrument that is guaranteed, the ECL allowance would be calculated as the expected payments to reimburse the holder for a credit loss that it incurs, less any amounts that the Bank expects to receive from the holder, the counterparty or any other party.

For undrawn loan commitments, the ECL is the present value of the difference between the contractual cash flows that are paid out by the Bank if the holder of the loan commitment draws down the loan and the cash flows that the Bank expects to recover.

As at December 31, 2020, no ECL had been recorded as none of the Bank's financial guarantees and commitments had been drawn upon, nor does the Bank expect that any will be drawn upon within the next 12 months ($nil as at December 31, 2019).

Fair value of financial instruments

Where observable prices or inputs are not available, judgment is required to determine fair values by assessing other relevant sources of information. The fair value of the BIS shares is determined using significant unobservable inputs (Level 3). It is estimated as 70 percent of the Bank's interest in the net asset value of the BIS at the reporting date. This is consistent with the methodology applied by the BIS for all share repurchases since the 1970s and was further endorsed in a decision by the International Court at The Hague relating to a share repurchase by the BIS in 2001 (the last share repurchase conducted by the BIS). The Bank expects the value of the BIS shares to fluctuate over time in conjunction with the strength of the BIS balance sheet and exchange rates.

D) Supporting information

Fair value of financial instruments

Below are the valuation methods used to determine the fair value of each financial instrument and its associated level in the fair value hierarchy. There were no changes to valuation methods during the period.

Derivatives—Indemnity agreements with the Government of Canada

Calculated using market prices derived from observable inputs (Level 2). The fair value of the derivatives amounts to $29.3 million and is calculated as the difference between the underlying prices of the instruments in the programs and their underlying amortized cost. The Bank expects the value of the derivatives to fluctuate over time, moving opposite to the fair value movements of the underlying instruments.

Cash and foreign deposits, other receivables, deposits, securities sold under repurchase agreements and other financial liabilities

Carrying amount (approximation to fair value assumed due to their nature or term to maturity)

SPRAs, Government of Canada treasury bills, Government of Canada bonds, Canada Mortgage Bonds, provincial money market securities, real-return bonds, provincial bonds, securities lent or sold under repurchase agreements and corporate bonds

Prices observed in active markets (Level 1), or market prices derived from observable inputs (Level 2)

The following table shows the fair value and carrying value of the Bank's financial assets classified in accordance with the fair value hierarchy described above.

	Level 1	Level 2	Level 3	Fair value	Carrying value
As at December 31, 2020					
Securities purchased under resale agreements	-	155,459.4	-	155,459.4	155,317.6
Government of Canada treasury bills	47,725.6	4,056.3	-	51,781.9	51,750.2
Government of Canada bonds—primary market	113,188.9	135.0	-	113,323.9	105,979.0
Government of Canada bonds—secondary market	198,138.3	699.3	-	198,837.6	198,837.6
Real-return bonds	3,183.0	348.5	-	3,531.5	3,531.5
Canada Mortgage Bonds	9,775.9	-	-	9,775.9	9,660.9
Provincial bonds	11,548.7	2,670.9	-	14,219.6	14,219.6
Corporate bonds	13.7	166.3	-	180.0	180.0
Securities lent or sold under repurchase agreements	3,683.3	92.7	-	3,776.0	3,775.8
Provincial money market securities	-	3,346.4	-	3,346.4	3,344.1
Shares in the Bank for International Settlements	-	-	486.1	486.1	486.1
Total	**387,257.4**	**166,974.8**	**486.1**	**554,718.3**	**547,082.4**

The table below presents the comparative fair value and carrying value as at December 31, 2019.

	Level 1	Level 2	Level 3	Fair value	Carrying value
As at December 31, 2019					
Securities purchased under resale agreements	-	15,516.5	-	15,516.5	15,516.5
Government of Canada treasury bills	23,364.6	-	-	23,364.6	23,367.4
Government of Canada bonds—primary market	82,450.0	170.2	-	82,620.2	79,030.5
Government of Canada bonds—secondary market	-	-	-	-	-
Real-return bonds	-	-	-	-	-
Canada Mortgage Bonds	516.3	-	-	516.3	510.7
Provincial bonds	-	-	-	-	-
Corporate bonds	-	-	-	-	-
Securities lent or sold under repurchase agreements	-	-	-	-	-
Provincial money market securities	-	-	-	-	-
Shares in the Bank for International Settlements	-	-	438.3	438.3	438.3
Total	**106,330.9**	**15,686.7**	**438.3**	**122,455.9**	**118,863.4**

As a result of changes in market activity in 2020, an amount of $5,372.4 million was transferred from Level 1 to Level 2, while an amount of $7,066.1 million was transferred from Level 2 to Level 1. There were no transfers between levels in the 2019 period.

Securities lent or sold under repurchase agreements

The following table shows the fair value and carrying value of the securities that were lent or sold under repurchase agreements.

	December 31, 2020		December 31, 2019	
	Fair value	Carrying value	Fair value	Carrying value
Provincial bonds lent	771.8	771.8	-	-
Securities sold under repurchase agreements				
Government of Canada treasury bills	694.0	693.8	-	-
Government of Canada bonds—secondary market	2,310.2	2,310.2	-	-
Total	**3,776.0**	**3,775.8**	**-**	**-**

The fair value of collateral held for provincial bonds lent totalled $810.7 million, representing 105.0 percent of the fair value of the securities loaned.

The liabilities associated with the Government of Canada treasury bills and Government of Canada bonds—secondary market that were sold under repurchase agreements are equal to $3,000.8 million.

BIS shares

The following table reconciles the opening and closing balances of the BIS shares.

As at December 31	2020	2019
Opening balance at beginning of year	438.3	433.3
Change in fair value recorded through other comprehensive income	39.5	28.5
Change due to Special Drawing Rights exchange differences recorded through other comprehensive income	8.3	(23.5)
Closing balance at end of year	**486.1**	**438.3**

Derivatives—Indemnity agreements with the Government of Canada

	Related asset		Derivatives—Indemnity agreements with the Government of Canada	Derivative asset position	Derivative liability position
	Amortized cost	Fair value	Fair value	Fair value	Fair value
Government of Canada bonds—secondary market	204,728.2	204,679.3	48.9	367.3	318.4
Provincial bonds	14,915.9	14,991.4	(75.5)	0.1	75.6
Corporate bonds	177.3	180.0	(2.7)	-	2.7
Balance as at December 31, 2020	**219,821.4**	**219,850.7**	**(29.3)**	**367.4**	**396.7**

Net gains and losses on financial instruments carried at FVTPL

Unrealized gains and losses arising from financial assets carried at FVTPL are equal to the fair value of the derivatives liability shown in the table above. The $29.3 million net unrealized gains on the financial assets were offset by net unrealized losses of $29.3 million on the derivatives. Realized gains and losses in the year were immaterial. The net gains and losses for the year ended December 31, 2020, is nil.

4. Cash and foreign deposits

Composition of cash and foreign deposits

As at December 31	2020	2019
Cash on hand	2.0	1.8
Foreign deposits	4.5	4.6
Total cash and foreign deposits	**6.5**	**6.4**

The Bank's policies on classifying and measuring financial instruments are discussed in Note 3A, and related financial risks are discussed in Note 6.

5. Loans and receivables

Loans and receivables is composed primarily of SPRAs and, if any, advances to members of Payments Canada. These transactions are obligations of Payments Canada members and are fully collateralized in accordance with publicly disclosed collateral eligibility and margin requirements. The remaining amount is composed primarily of trade receivables.

Securities purchased under resale agreements is composed of overnight repurchase (repo) operations and term repo operations, in which the Bank purchases securities from designated counterparties with an agreement to sell them back at a predetermined price on an agreed transaction date. The overnight repo matures the next business day and is used to support the effective implementation of monetary policy by withdrawing intraday liquidity, thereby reinforcing the Bank's target for the overnight rate. The term repo matures up to 24 months after issuance and is used to manage the balance sheet and to promote the orderly functioning of Canadian financial markets. Balances outstanding as at December 31, 2020, consist of agreements with original terms to maturity ranging from 168 to 724 days (from 28 to 84 days as at December 31, 2019).

Advances to members of Payments Canada are collateralized liquidity loans made under either the Bank's Standing Liquidity Facility (SLF) or the Standing Term Liquidity Facility (STLF) to facilitate overnight settlement in the LVTS or to help financial institutions better manage their liquidity risks and continue to provide their customers with access to credit. Advances under the SLF mature the next business day. Advances under the STLF mature in up to 30 days. As at December 31, 2020, there were no advances to members of Payments Canada ($nil as at December 31, 2019).

The Bank's policies on classifying and measuring financial instruments are discussed in Note 3A, and related financial risks are discussed in Note 6.

6. Financial risk management

The Bank maintains a comprehensive risk management and control framework to manage its risks. The Executive Council oversees enterprise risk management and the implementation of sound management processes to safeguard the Bank. The Board of Directors has an oversight role in the Bank's performance of risk management.

The Bank is exposed to financial risks associated with its financial instruments, including credit, market and liquidity risks. The Financial Risk Office monitors and reports on the financial risks related to the Bank's statement of financial position. The following is a description of those risks and how the Bank manages its exposure to them.

Credit risk

Credit risk is the possibility of loss due to the failure of a counterparty or guarantor to meet payment obligations in accordance with agreed-upon terms.

The Bank is exposed to credit risk through its cash and foreign deposits, investments and advances to members of Payments Canada, and through market transactions in the form of SPRAs and loans of securities. The maximum exposure to credit risk is estimated to be the carrying value of those items. The Bank is also exposed to credit risk through its guarantee of the LVTS and through the execution of foreign currency contracts. The maximum exposure under guarantees and foreign currency contracts is discussed in Note 15. There are no past due or impaired amounts.

Concentration of credit risk

The Bank's investment portfolio represents 72 percent of the carrying value of its total assets (86 percent as at December 31, 2019). The credit risk associated with the Bank's investment portfolio is low because the securities held are primarily direct obligations of the Government of Canada or are fully guaranteed by the Government of Canada, which holds a credit rating of AAA with most credit agencies and has no history of default.

SPRAs represent 28 percent of the carrying value of the Bank's total assets (13 percent as at December 31, 2019). In the unlikely event of a counterparty default, collateral can be liquidated to offset credit exposure. Collateral is taken in accordance with the Bank's publicly disclosed eligibility criteria and margin requirements, which are accessible on its website. Strict eligibility criteria are set for all collateral, and the credit quality of collateral is managed through a set of restrictions based on asset type, term to maturity and credit attributes, including ratings of the securities pledged. In 2020, the Bank accepted additional types of investment grade collateral including securities issued by municipalities, other public sector entities, corporate debt securities and asset-backed commercial paper. Margin requirements for new collateral are commensurate with their risk. The Bank monitors collateral positions regularly and requires counterparties to pledge additional collateral as risk increases.

The fair value of collateral pledged to the Bank against these financial instruments at the end of the reporting period is presented below.

As at December 31		2020		2019
	$	%	$	%
Securities issued or guaranteed by the Government of Canada	4,154.0	2.5	2,993.2	18.7
Securities issued or guaranteed by a provincial government	27,855.5	17.1	12,552.0	78.4
Securities guaranteed by Crown corporations of the Government of Canada	-	-	460.3	2.9
Securities issued by a municipality	218.7	0.2	-	-
Other public sector securities	1,282.3	0.8	-	-
Corporate debt securities	113,969.2	69.9	-	-
Asset-backed commercial paper	15,473.6	9.5	-	-
Total fair value of collateral pledged to the Bank	**162,953.3**	**100.0**	**16,005.5**	**100.0**
Carrying value of collateralized securities	**155,317.6**	**100.0**	**15,516.5**	**100.0**
Collateral as a percentage of carrying value		**104.9**		**103.2**

Market risk

Market risk is the potential for adverse changes in the fair value or future cash flows of a financial instrument as a result of changes in market variables, such as interest rates, foreign exchange rates and market prices. It is composed of interest rate risk, currency risk and other price risk.

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in interest rates.

The Bank's exposure to interest rate risk arises from fluctuations in the future flows of cash and foreign deposits held by the Bank and deposits held at the Bank by other institutions because these instruments are subject to variable interest rates. The Bank also carries interest rate risk associated with fluctuations in future cash flows from real-return bonds, which are linked to inflation. The remainder of the Bank's financial assets and liabilities have either fixed interest rates or are non-interest-bearing.

The table below shows the effect of an increase (decrease) in interest rates of 25 basis points on the interest expense or revenue on deposits of both the Government of Canada and members of Payments Canada and real-return bonds, which represents substantially all the Bank's interest rate risk exposure.

For the year ended December 31	2020	2019
Interest expense on Government of Canada deposits	226.6 / (226.6)	57.9 / (57.9)
Interest expense on members of Payments Canada deposits	512.8 / (512.8)	0.7 / (0.7)
Interest expense on other deposits	20.4 / (20.4)	6.8 / (6.8)
Interest revenue on real-return bonds	3.0 / (3.0)	- / -

Currency risk

Currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The currency risk is not considered to be significant because the Bank's net foreign currency exposure relative to its total assets is small.

The Bank is exposed to currency risk primarily by holding shares in the BIS. These shares are denominated in Special Drawing Rights (SDRs). The SDR serves as the unit of account for the International Monetary Fund, and its value is based on a basket of five major currencies: the euro, the US dollar, the British pound, the Japanese yen and the Chinese renminbi. SDRs are translated into Canadian-dollar equivalents at the rates prevailing on the date when the fair value is determined.

Other price risk

Other price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate as a result of changes in market prices (other than those arising from changes in interest and exchange rates).

The Bank is exposed to other price risk through its investment in the BIS. As discussed in Note 3C, the fair value of these shares is estimated based on the net asset value of the BIS, less a discount of 30 percent. Accordingly, the fair value fluctuations of these shares reflect movements in the net asset value of the BIS and exchange rates.

In the second quarter of 2020, with the operationalization of the GBPP, CBPP and PBPP, the Bank began holding securities at FVTPL, exposing itself to fluctuations in market prices. However, all securities measured at FVTPL are fully indemnified for gains and losses beyond amortized cost. Fluctuations in market prices for the FVTPL instruments are offset by equivalent fair value fluctuations of the derivatives. Therefore, the Bank bears no net price risk related to the securities.

Liquidity risk

Liquidity risk is the potential for loss if the Bank is unable to meet its financial obligations as they become due. Liabilities with no fixed maturity include bank notes in circulation and Government of Canada deposits, with the remaining liabilities (deposits of members of Payments Canada, securities sold under repurchase agreements [if any] and other financial liabilities) due within 90 days. The Bank is also exposed to liquidity risk through its guarantee of the LVTS, as discussed in Note 15.

Historical experience has shown that bank notes in circulation provide a stable source of long-term funding for the Bank. In the event of an unexpected redemption of bank notes or a significant withdrawal from deposits of the Government of Canada or members of Payments Canada, the Bank can settle the obligation by means of several tools, including the sale of highly liquid investments backing those liabilities.

The Bank is the ultimate source of liquid funds to the Canadian financial system and has the power and operational ability to create Canadian-dollar liquidity in unlimited amounts at any time. This power is exercised within the Bank’s commitment to keeping inflation low, stable and predictable.

The following table presents a maturity analysis of the Bank’s financial assets and liabilities. The balances in this table do not correspond to the balances in the statement of financial position because the table presents all cash flows on an undiscounted basis. When the amount payable is not fixed, the amount disclosed is determined by reference to the conditions existing at the end of the reporting period.

As at December 31, 2020	Due on demand	Within 90 days	Within 4 to 12 months	Within 1 to 5 years	In more than 5 years	Total
Financial assets						
Cash and foreign deposits	6.5	-	-	-	-	**6.5**
Loans and receivables	-	42,138.9	91,526.4	21,965.3	-	**155,630.6**
Investments						
Government of Canada treasury bills	-	15,260.0	37,235.0	-	-	**52,495.0**
Government of Canada bonds at amortized cost	-	5,474.3	10,074.6	60,494.8	43,066.4	**119,110.1**
Government of Canada bonds at FVTPL	-	6,174.8	18,390.4	121,042.7	64,648.6	**210,256.5**
Canada Mortgage Bonds	-	32.3	207.9	5,182.9	4,717.1	**10,140.2**
Provincial money market securities	-	1,207.7	2,139.8	-	-	**3,347.5**
Real-return bonds	-	-	406.2	244.7	2,687.2	**3,338.1**
Provincial bonds	-	90.6	2,361.7	7,723.3	5,398.1	**15,573.7**
Corporate bonds	-	28.3	34.5	120.9	-	**183.7**
BIS shares*	486.1	-	-	-	-	**486.1**
	492.6	**70,406.9**	**162,376.5**	**216,774.6**	**120,517.4**	**570,568.0**
Financial liabilities						
Bank notes in circulation	106,925.0	-	-	-	-	**106,925.0**
Deposits						
Government of Canada	80,559.0	-	-	-	-	**80,559.0**
Members of Payments Canada	-	345,664.3	-	-	-	**345,664.3**
Other deposits	9,877.2	-	-	-	-	**9,877.2**
Securities sold under repurchase agreements	-	3,000.8	-	-	-	**3,000.8**
Other financial liabilities	-	705.0	-	-	-	**705.0**
	197,361.2	349,370.1	-	-	-	**546,731.3**
Net maturity difference	**(196,868.6)**	**(278,963.2)**	**162,376.5**	**216,774.6**	**120,517.4**	**23,836.7**

* The Bank's investment in BIS shares has no fixed maturity.

Cash flows associated with the indemnity agreements are settled monthly after disposition of related securities. Where securities are held to maturity, there are no cash flows associated with the indemnity agreements. As at December 31, 2020, the Bank had not disposed of any securities related to the indemnity agreements that had not been settled, and, therefore, no indemnity agreement cash flows are presented above.

As at December 31, 2019	Due on demand	Within 90 days	Within 4 to 12 months	Within 1 to 5 years	In more than 5 years	Total
Financial assets						
Cash and foreign deposits	6.4	-	-	-	-	**6.4**
Loans and receivables	-	15,538.2	-	-	-	**15,538.2**
Investments						
Government of Canada treasury bills	-	10,625.0	12,875.0	-	-	**23,500.0**
Government of Canada bonds	-	6,169.2	11,101.5	41,356.8	32,938.4	**91,565.9**
Canada Mortgage Bonds	-	-	13.6	544.5	-	**558.1**
BIS shares*	438.3	-	-	-	-	**438.3**
	444.7	**32,332.4**	**23,990.1**	**41,901.3**	**32,938.4**	**131,606.9**
Financial liabilities						
Bank notes in circulation	93,094.3	-	-	-	-	**93,094.3**
Deposits						
Government of Canada	21,765.6	-	-	-	-	**21,765.6**
Members of Payments Canada	-	249.5	-	-	-	**249.5**
Other deposits	3,228.2		-	-	-	**3,228.2**
Other financial liabilities	-	487.1	-	-	-	**487.1**
	118,088.1	**736.6**	**-**	**-**	**-**	**118,824.7**
Net maturity difference	**(117,643.4)**	**31,595.8**	**23,990.1**	**41,901.3**	**32,938.4**	**12,782.2**

* The Bank's investment in BIS shares has no fixed maturity.

7. Property and equipment

Property and equipment consists of land, buildings, computer equipment, other equipment and related projects in progress.

Accounting policy

Property and equipment is measured at cost less accumulated depreciation, except for land, which is not depreciated, and is net of any related impairment losses. Projects in progress are measured at cost but are not depreciated until the asset is available for use. Cost includes expenditures that are directly attributable to the acquisition or construction of the asset. When major components of an item of property and equipment have different useful lives, they are accounted for as separate items of property and equipment. Upon replacing a significant part of an item of property and equipment, the carrying amount of the replaced part is derecognized and any gain or loss is recognized in depreciation. Depreciation is calculated using the straight-line method and is applied over the estimated useful life of the assets. The estimated useful life and the depreciation method are reviewed at the end of each annual reporting period, with the effect of any changes in estimate being accounted for on a prospective basis. The estimated useful life for major asset classes are as follows:

Buildings	15 to 65 years
Computer equipment	3 to 10 years
Other equipment	5 to 20 years

Leasehold improvements (included in *Other equipment*) are depreciated over the lesser of their useful life or the term of the lease.

Supporting information

Carrying amount of property and equipment

	Land and buildings	Computer equipment	Other equipment	Total
Cost				
Balances as at December 31, 2018	**575.8**	**142.5**	**77.2**	**795.5**
Additions	1.0	21.6	7.3	**29.9**
Disposals	-	-	(0.8)	**(0.8)**
Transfers to other asset categories	(1.4)	0.3	1.1	-
Balances as at December 31, 2019	**575.4**	**164.4**	**84.8**	**824.6**
Additions	3.4	15.6	5.3	**24.3**
Disposals	(1.7)	(7.9)	(0.6)	**(10.2)**
Balances as at December 31, 2020	**577.1**	**172.1**	**89.5**	**838.7**
Accumulated depreciation				
Balances as at December 31, 2018	**(121.7)**	**(46.7)**	**(26.8)**	**(195.2)**
Depreciation expense	(18.0)	(15.5)	(6.0)	**(39.5)**
Disposals	-	-	0.7	**0.7**
Balances as at December 31, 2019	**(139.7)**	**(62.2)**	**(32.1)**	**(234.0)**
Depreciation expense	(17.9)	(23.3)	(5.5)	**(46.7)**
Disposals	1.7	7.9	0.6	**10.2**
Balances as at December 31, 2020	**(155.9)**	**(77.6)**	**(37.0)**	**(270.5)**
Carrying amounts				
Balances as at December 31, 2019	**435.7**	**102.2**	**52.7**	**590.6**
Balances as at December 31, 2020	**421.2**	**94.5**	**52.5**	**568.2**

Projects in progress				
Included in *Carrying amounts* at December 31, 2019	0.2	18.5	8.4	**27.1**
Commitments at December 31, 2019	2.4	5.4	2.8	**10.6**
Included in *Carrying amounts* at December 31, 2020	0.1	12.0	6.1	18.2
Commitments at December 31, 2020	1.5	2.4	7.5	11.4

The commitments at December 31, 2020, consist primarily of computer and mechanical equipment related to resiliency initiatives.

8. Intangible assets

Intangible assets are identifiable non-monetary assets without physical substance that represent future economic benefits and are controlled by the Bank. The Bank's intangible assets consist of computer software that has been developed internally or acquired externally.

Accounting policy

Costs that are directly associated with the internal development of identifiable software are recognized as intangible assets if, in management's best estimate, the asset can technically be completed and will provide a future economic benefit to the Bank. Subsequent expenditure is capitalized only when it increases the future economic benefits in the specific asset.

Computer software assets that are acquired by the Bank and have a finite useful life are measured at cost less accumulated amortization and impairment losses.

Amortization is calculated using the straight-line method and is applied over the estimated useful life of the assets, which may vary from 3 to 15 years. The estimated useful life and amortization method are reviewed at the end of each annual reporting period, with the effect of any changes in the estimate being accounted for on a prospective basis.

Supporting information

Carrying amount of intangible assets

	Internally generated software	Other software	Total
Cost			
Balances as at December 31, 2018	**62.7**	**81.3**	**144.0**
Additions	15.3	11.0	**26.3**
Disposals	-	-	-
Balances as at December 31, 2019	**78.0**	**92.3**	**170.3**
Additions	31.8	1.8	**33.6**
Disposals	(15.5)	(39.9)	**(55.4)**
Transfers to other asset categories	17.7	(17.7)	-
Balances as at December 31, 2020	112.0	36.5	148.5
Accumulated amortization			
Balances as at December 31, 2018	**(47.4)**	**(52.6)**	**(100.0)**
Amortization expense	(3.7)	(7.2)	**(10.9)**
Disposals	-	-	-
Balances as at December 31, 2019	**(51.1)**	**(59.8)**	**(110.9)**
Amortization expense	(4.2)	(5.6)	**(9.8)**
Disposals	15.5	39.8	**55.3**
Balances as at December 31, 2020	(39.8)	(25.6)	(65.4)
Carrying amounts			
Balances as at December 31, 2019	**26.9**	**32.5**	**59.4**
Balances as at December 31, 2020	72.2	10.9	83.1

Projects in progress			
Included in *Carrying amounts* at December 31, 2019	14.8	18.3	**33.1**
Commitments at December 31, 2019	7.5	2.6	**10.1**
Included in *Carrying amounts* at December 31, 2020	33.7	0.9	34.6
Commitments at December 31, 2020	7.2	1.4	8.6

9. Right-of-use leased assets and lease liabilities

The Bank's leases primarily consist of leases for rental of data centre facilities in support of the Bank's business resilience posture and rental of office space for regional offices (Halifax, Montréal, Toronto, Calgary and Vancouver).

Accounting policy

At the inception of a contract, the Bank assesses whether a contract is, or contains, a lease based on whether the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

Right-of-use leased assets are depreciated over the lesser of the end of the useful life of the right-of-use leased asset or the lease term on a straight-line basis. The lease term includes periods covered by an option to extend if the Bank is reasonably certain to exercise that option. The right-of-use leased asset may be remeasured from time to time to reflect certain remeasurements in the related lease liability and impairment losses, if any.

Management has elected to apply the practical expedient not to recognize right-of-use leased assets and lease liabilities for short-term leases that have a term of 12 months or less and leases of low-value assets. The payments associated with these leases are recognized as an expense on a straight-line basis over the lease term.

Supporting information

Carrying amount of right-of-use leased assets

	Data centres	Offices	Other	Total
Cost				
Balances as at January 1, 2019	**36.1**	**16.6**	**1.7**	**54.4**
Additions	-	-	1.0	**1.0**
Disposals	-	-	-	-
Balances as at December 31, 2019	**36.1**	**16.6**	**2.7**	**55.4**
Additions	-	-	-	-
Disposals	(0.1)	(0.8)	-	**(0.9)**
Balances as at December 31, 2020	**36.0**	**15.8**	**2.7**	**54.5**
Accumulated depreciation				
Balances as at January 1, 2019	-	-	-	-
Depreciation expense	(3.1)	(1.1)	(0.3)	**(4.5)**
Disposals	-	-	-	-
Balances as at December 31, 2019	(3.1)	(1.1)	(0.3)	(4.5)
Depreciation expense	(3.1)	(1.2)	(0.3)	(4.6)
Disposals	-	-	-	-
Balances as at December 31, 2020	(6.2)	(2.3)	(0.6)	(9.1)
Carrying amounts				
Balances as at December 31, 2019	**33.0**	**15.5**	**2.4**	**50.9**
Balances as at December 31, 2020	29.8	13.5	2.1	45.4

Carrying amount of lease liabilities

	Data centres	Offices	Other	Total
Balances as at January 1, 2019	**36.1**	**16.6**	**-**	**52.7**
Finance charges	0.7	0.3	-	**1.0**
New lease liabilities	-	-	1.0	**1.0**
Lease payments	(3.0)	(0.9)	(0.2)	**(4.1)**
Other adjustments	-	-	-	-
Balance as at December 31, 2019	33.8	16.0	0.8	50.6
Finance charges	0.7	0.3	-	1.0
New lease liabilities	-	-	-	-
Lease payments	(3.4)	(1.1)	(0.2)	(4.7)
Other adjustments	(0.1)	(0.9)	-	(1.0)
Balance as at December 31, 2020	**31.0**	**14.3**	**0.6**	**45.9**

During the year, the Bank recognized $0.1 million in expenses related to leases of low-value assets for which the recognition exemption was applied ($0.2 million for the year ended December 31, 2019). The Bank does not have any short-term leases for which the recognition exemption was applied.

Maturity analysis for lease liabilities (undiscounted)

As at December 31, 2020	Data centres	Offices	Other	Total
Less than 5 years	17.2	4.9	0.7	22.8
Between 5 and 10 years	13.5	5.0	-	18.5
Between 10 and 15 years	3.7	4.9	-	8.6
More than 15 years	-	2.3	-	2.3
Total	**34.4**	**17.1**	**0.7**	**52.2**

10. Other assets

Other assets is composed of bank note inventory (production materials, including the polymer substrate and ink), any net defined-benefit asset related to the Bank of Canada Pension Plan (Pension Plan), and all other non-financial assets, which are primarily prepaid expenses.

Accounting policy

Bank note inventory is measured at the lower of the cost or the net realizable value. The cost to produce finished bank notes is expensed as incurred. Prepaid expenses are recorded at cost and expensed in the period which the services are received.

The accounting policy for the net defined-benefit asset related to the Bank of Canada Pension Plan is discussed in Note 14.

Supporting information

Composition of other assets

As at December 31	Note	2020	2019
Bank note inventory		14.8	8.5
Net defined-benefit asset	14	-	34.1
All other assets		26.7	24.1
Total other assets		**41.5**	**66.7**

11. Bank notes in circulation

Bank notes in circulation represents those bank notes that have been produced and issued for use in the economy. They are non-interest-bearing liabilities and are due on demand.

Accounting policy

Bank notes in circulation are recorded at face value. The fair value of bank notes in circulation approximates their carrying value. The Bank's assessment of related financial risks is discussed in Note 6.

Supporting information

In accordance with the *Bank of Canada Act*, the Bank has the sole authority to issue bank notes for circulation in Canada. Currently, bank notes are issued in denominations of $5, $10, $20, $50 and $100. Other bank notes, as described in the table below, are denominations that are still in circulation but are no longer issued.

The face value of notes in circulation, presented by denomination, is as follows:

As at December 31	2020	2019
$5	1,513.1	1,469.6
$10	1,727.0	1,665.6
$20	20,916.5	18,770.5
$50	20,784.0	17,456.5
$100	61,013.9	52,730.8
Other bank notes	970.5	1,001.3
Total bank notes in circulation	**106,925.0**	**93,094.3**

12. Deposits

Deposits from the Government of Canada consist of $60,559.0 million for operational balances and $20,000.0 million held for the prudential liquidity-management plan ($1,765.6 million and $20,000.0 million, respectively, as at December 31, 2019).

Other deposits is composed of deposits from financial market infrastructure institutions, other central banks, government institutions, foreign official institutions and unclaimed balances. Some of the deposits are interest bearing depending on the agreement between the Bank and the depositor. All balances are due on demand.

The Bank's policies on classifying and measuring financial instruments are discussed in Note 3A, and related financial risks are discussed in Note 6.

13. Other liabilities

Other liabilities consists of surplus payable to the Receiver General for Canada, the net defined-benefit liability for both the pension benefit plans and other employee benefit plans, lease liabilities, accounts payable, accrued liabilities, and provisions.

Accounting policy

The Bank's policies on classifying and measuring financial instruments (accounts payable and accrued liabilities, within the context of *Other liabilities*) are discussed in Note 3A, and related financial risks are discussed in Note 6. The Bank's accounting policy for the net defined-benefit liability of the Bank of Canada Pension Supplementary Arrangement and other employee benefit plans is discussed in Note 14. The Bank's accounting policy for the lease liabilities is discussed in Note 9.

A provision is recognized if, as a result of a past event, the Bank has a present legal or constructive obligation that can be estimated reliably as at the date of the statement of financial position and it is probable that an outflow of economic benefits will be required to settle the obligation.

Supporting information

Composition of other liabilities

As at December 31	Note	2020	2019
Surplus payable to the Receiver General for Canada		572.9	368.3
Net defined-benefit liability	14		
Pension benefit plans		283.8	97.3
Other benefit plans		210.9	190.5
Lease liabilities	9	45.9	50.6
All other liabilities		86.2	68.2
Total other liabilities		**1,199.7**	**774.9**

Surplus payable to the Receiver General for Canada

The following table reconciles the opening and closing balances of the *Surplus payable to the Receiver General for Canada*, which is based on the requirements of section 27 of the *Bank of Canada Act* and the Bank's remittance agreement with the Minister of Finance, as discussed in Note 16.

As at December 31	2020	2019
Opening balance at beginning of year	368.3	225.9
Surplus for the Receiver General for Canada	1,772.9	1,168.3
Remittance of surplus to the Receiver General for Canada	(1,568.3)	(1,025.9)
Closing balance at end of year	**572.9**	**368.3**

14. Employee benefits

The Bank provides employees with several employee benefit plans, consisting of short-term employee benefits, post-employment benefits, long-term employee benefits and termination benefits. The Bank of Canada Pension Plan (Pension Plan) was established under the provisions of the *Bank of Canada Act*, 1934, and has remained in accordance with the *Bank of Canada Act* as subsequently amended. The Pension Plan is a registered pension plan as defined in the *Income Tax Act* and, consequently, is not subject to income taxes. The Bank of Canada Supplementary Pension Arrangement (SPA) was created to pay pension benefits to Bank employees with annual earnings above the amount covered by the Pension Plan, as provided under the *Income Tax Act*. The Supplementary Trust Fund, which holds and invests the funds of the SPA, is a retirement compensation arrangement as defined in the *Income Tax Act*.

The Bank is the administrator of the pension plans. The Bank's Board of Directors has established a Pension Committee and has delegated to it the responsibility for carrying out the Bank's duties as administrator of the plans, including adherence to the guidelines established in the Statement of Investment Policy and Procedures (SIPP) for each plan, which are approved annually by the Board. A separate trust fund has been established for each plan to receive and invest contributions and pay benefits due under the plans. The assets cannot be used for any purpose other than payment of pension benefits and related administration fees.

The Bank also sponsors other benefit plans provided to employees, specifically the unfunded post-employment defined-benefit plans for life insurance and eligible health and dental benefits, the unfunded long-service benefit program for employees hired before January 1, 2003, and the long-term disability program.

Accounting policy

Employee benefits refer to all forms of consideration given by an entity in exchange for services rendered by employees or for the termination of employment as described in the following table:

Category	Description	Measurement and recognition
Short-term employee benefits	Benefits expected to settle wholly within 12 months of when the service was rendered. Refers to salary, bonus, annual leave, health benefits, dental care and statutory benefits.	The liability and related expense are recognized in the reporting period in which they occur and are measured on an undiscounted basis.
Post-employment benefits	Benefits payable after the completion of employment (pension plans and other benefits). Refers to the Pension Plan, the SPA, life insurance and eligible health and dental benefits, and the long-service benefit program.	The net asset or liability recognized is composed of the present value of the defined-benefit obligation less the fair value of plan assets, when applicable. The defined-benefit obligation is calculated by discounting estimated future cash flows using an appropriate interest rate.* The plan assets of funded benefit plans are measured at their fair value at the end of the reporting period. The expense recognized in net income for the reporting period consists of current service costs, past service costs, net interest on the net defined-benefit liability/asset, gains or losses arising on settlement (if applicable) and administrative costs. Net interest is calculated by applying the discount rate to the net defined-benefit liability/asset. Remeasurements† are recognized immediately in other comprehensive income in the reporting period in which they occur and are accumulated in *Equity*. Remeasurements comprise actuarial gains and losses, the return on plan assets and the effect of the asset ceiling (if applicable). They exclude amounts included in net interest on the net defined-benefit liability/asset. Past service costs are recognized at the earlier of when the plan amendment or curtailment occurs or when the Bank recognizes related restructuring costs or termination benefits.
Long-term employee benefits	Refers to the long-term disability program.	The liability recognized is the present value of the defined-benefit obligation, calculated by discounting estimated future cash flows using an appropriate interest rate.* The expense recognized in net income for the reporting period consists of current service costs, interest costs, remeasurement gains and losses, and past service costs. The current service costs and the benefit obligations of the plan are actuarially determined on an event-driven accounting basis.
Termination benefits	Benefits provided in exchange for termination.	The liability and related expense is recognized in net income at the earlier of when the Bank can no longer withdraw the offer of the termination benefit or when the Bank recognizes any related restructuring costs.

* The interest rate used is based on those of AA-rated Canadian corporate bonds with terms to maturity approximating the estimated duration of the obligation.

† The current service costs and the benefit obligations of the plans are actuarially determined using the projected unit credit method.

Accounting estimates and judgments

The cost of the defined-benefit pension plans, the cost of other benefit plans and the present value of the benefit obligations are determined using actuarial valuations. An actuarial valuation involves using various assumptions determined by management and reviewed annually by the actuary that may differ from future developments. The significant assumptions used are as follows (on a weighted-average basis):

As at December 31	Pension benefit plans 2020	2019	Other benefit plans 2020	2019
Defined-benefit obligation				
Discount rate*	2.60%	3.20%	2.53%	3.15%
Inflation rate†	2.00%	2.00%	n.a.	n.a.
Rate of compensation increase	2.75% + merit	3.00% + merit	2.75% + merit	3.00% + merit
Mortality table‡	CPM2014Publ (scale CPM-B)	CPM2014Publ (scale CPM-B)	CPM2014Publ (scale CPM-B)	CPM2014Publ (scale CPM-B)
Benefit plan expense				
Discount rate*	3.20%	4.00%	3.15%	3.90%
Inflation rate†	2.00%	2.00%	n.a.	n.a.
Rate of compensation increase	2.75% + merit	3.00% + merit	2.75% + merit	3.00% + merit
Assumed medical cost trend				
Initial medical cost trend rate	n.a.	n.a.	4.94%	5.07%
Ultimate medical cost trend rate	n.a.	n.a.	4.00%	4.00%
Year that the rate reaches the ultimate trend rate	n.a.	n.a.	2040	2040

* The parameter most subject to change is the discount rate, which is determined by reference to Canadian AA-rated corporate bonds with terms to maturity approximating the duration of the obligation. The weighted-average duration of the defined-benefit obligation is approximately 20 to 21 years for the pension benefit plans (18 to 20 years in 2019) and 5 to 25 years for the other benefit plans (6 to 23 years in 2019).

† *Other benefit plans* does not include an inflation rate adjustment since the adjustment is a component of the assumed medical cost trend.

‡ In 2020, the assumption for life expectancy for the plan valuations assumes that a male member reaching 60 will live for approximately 28 years (28 years in 2019) and a female member approximately 30 years (30 years in 2019).

The mortality assumptions used in the plan valuations are based on tables issued by the Canadian Institute of Actuaries. Actuarial adjustments to the tables are applied when recommended by the plan's actuaries.

The most recent actuarial valuation for the purposes of funding the pension plans was done as at January 1, 2020, and the next required valuation will be as at January 1, 2021. Benefits are based on years of service and the average full-time salary for the best five consecutive years. They are indexed to reflect changes in the consumer price index on the date payments begin and each January 1 thereafter.

Sensitivity analysis

Because of the complexities involved in the valuation and its long-term nature, a defined-benefit obligation is highly sensitive to changes in these assumptions.

The following table outlines the potential impact of changes in certain key assumptions used in measuring the defined-benefit obligations and benefit costs.

	Increase (decrease) in obligation*	
	Pension benefit plans	Other benefit plans
Discount rate		
Impact of 0.10% increase	(47.3)	(4.0)
Impact of 0.10% decrease	48.6	4.1
Rate of compensation increase		
Impact of 0.10% increase	10.4	0.4
Impact of 0.10% decrease	(10.2)	(0.4)
Mortality rate		
Impact of 10.00% increase	(59.4)	(3.6)
Impact of 10.00% decrease	66.6	4.3
Inflation rate		
Impact of 0.10% increase	41.1	n.a.
Impact of 0.10% decrease	(40.2)	n.a.
Medical cost trend rates		
Impact of 1.00% increase	n.a.	37.3
Impact of 1.00% decrease	n.a.	(28.8)

* The sensitivity analysis presented in this table is hypothetical and should be used with caution. The analysis is based on a change in assumptions while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated. The method and types of assumptions used in preparing the sensitivity analysis did not change compared with the previous year.

Supporting information

The changes to the net defined-benefit asset (liability) for the year are as follows:

	Pension benefit plans		Other benefit plans	
	2020	2019	2020	2019
Fair value of plan assets				
Fair value of plan assets as at January 1	2,038.6	1,826.1	-	-
Interest income	64.9	72.1	-	-
Remeasurement gains (losses)				
Return on plan assets*	115.3	175.5	-	-
Bank contributions	25.0	7.5	-	-
Employee contributions	21.5	20.9	-	-
Benefit payments and transfers	(61.9)	(60.5)	-	-
Administration costs	(2.9)	(3.0)	-	-
Fair value of plan assets as at December 31	**2,200.5**	**2,038.6**	**-**	**-**
Defined-benefit obligation				
Benefit obligation as at January 1	2,101.8	1,742.8	190.5	160.9
Current service cost	64.8	43.5	5.8	4.7
Interest cost	69.5	71.1	6.3	6.3
Past service cost	-	-	-	-
Employee contributions	21.5	20.9	-	-
Remeasurement (gains) losses				
Arising from changes in demographic and economic assumptions	19.2	-	-	-
Arising from changes in experience	5.4	12.8	-	-
Arising from changes in financial assumptions	264.0	271.2	18.0	26.4
Benefit payments and transfers	(61.9)	(60.5)	(9.7)	(7.8)
Defined-benefit obligation as at December 31	**2,484.3**	**2,101.8**	**210.9**	**190.5**
Net defined-benefit asset (liability)	**(283.8)**	**(63.2)**	**(210.9)**	**(190.5)**
Net defined-benefit asset	-	34.1	-	-
Net defined-benefit liability	(283.8)	(97.3)	(210.9)	(190.5)
Net defined-benefit asset (liability)	**(283.8)**	**(63.2)**	**(210.9)**	**(190.5)**
Benefit plan expenses recognized in net income	**72.3**	**45.5**	**12.1**	**12.6**
Remeasurement losses recognized in other comprehensive income	**173.3**	**108.6**	**18.0**	**24.8**

* The return on plan assets excludes interest income and includes a $2.5 million unrealized gain ($17.4 million unrealized loss in 2019) due to changes in foreign exchange rates.

The defined-benefit obligation, presented by membership category, is as follows:

	Pension benefit plans		Other benefit plans	
As at December 31	2020	2019	2020	2019
Membership category				
Active members	1,129.5	901.5	106.3	93.0
Pensioners	1,216.6	1,081.4	104.6	97.5
Deferred members	138.2	118.9	-	-
Total defined-benefit obligation	**2,484.3**	**2,101.8**	**210.9**	**190.5**

The cumulative remeasurement losses recognized in other comprehensive income are as follows:

As at December 31	Pension benefit plans 2020	2019	Other benefit plans 2020	2019
Cumulative remeasurement gains (losses), beginning of year	**(287.1)**	**(178.5)**	**(21.0)**	**3.8**
Remeasurement gains (losses) recognized in current year	(173.3)	(108.6)	(18.0)	(24.8)
Cumulative remeasurement gains (losses), end of year	**(460.4)**	**(287.1)**	**(39.0)**	**(21.0)**

Pension benefit plans asset mix

The pension plans' SIPPs require that investments be held in a diversified mix of asset types and also set out requirements for investment eligibility. The diversification of assets serves to decrease the variations in the expected return performance of the portfolio. For the Pension Plan, the current practice is to conduct an asset-liability modelling (ALM) study every three years. The ALM assists the Pension Committee in establishing an asset allocation that is consistent with the Pension Plan's objectives and the Bank's risk tolerance. The latest ALM report was prepared and presented to the Pension Committee in September 2018.

The pension plans' investments are subject to credit, liquidity and market risks, the latter being the most significant risk due to the volatility of the assets. The pension plans' liabilities are calculated using a discount rate determined by reference to Canadian AA-rated corporate bonds; a rate of return on plan assets inferior to the discount rate would result in a deficit. Requirements for asset diversification and investment eligibility serve as basic risk management tools for the investment portfolio.

The pension benefit plans assets consist of the following:

As at December 31	Quoted	Unquoted	Total	2020 %	Quoted	Unquoted	Total	2019 %
Money market instruments	17.2	-	**17.2**	0.8	22.3	-	**22.3**	1.1
Equity instruments								
Canadian equity funds	410.4	-	**410.4**	18.7	349.4	-	**349.4**	17.1
Foreign equity funds	591.7	-	**591.7**	26.9	556.4	-	**556.4**	27.3
Debt instruments*								
Securities issued or guaranteed by the Government of Canada	153.8	-	**153.8**	7.0	145.8	-	**145.8**	7.2
Securities issued or guaranteed by a provincial government	145.2	-	**145.2**	6.6	147.5	-	**147.5**	7.2
Fixed-income funds	467.6	-	**467.6**	21.2	430.7	-	**430.7**	21.1
Other securities	4.5	-	**4.5**	0.2	5.2	-	**5.2**	0.3
Real estate funds	-	358.4	**358.4**	16.3	-	343.2	**343.2**	16.8
SPA statutory deposit	-	51.7	**51.7**	2.3	-	38.1	**38.1**	1.9
Total	**1,790.4**	**410.1**	**2,200.5**	**100.0**	**1,657.3**	**381.3**	**2,038.6**	**100.0**

* Debt instruments consist of fixed-income securities and inflation-linked assets.

Total cash payments

Regulations governing federally regulated pension plans establish certain solvency requirements calculated under the assumption that the plans are terminated at the valuation date. In addition, actuarial valuations for funding purposes are required annually under the Pension Benefits Standards Act. The actuarial valuations of the Pension Plan completed as at January 1, 2020, reflect the Pension Plan's performance in 2019.

On a solvency basis (which assesses the Pension Plan on the assumption that it would be terminated on the date of the valuation), the funding status of the Pension Plan had a solvency ratio of 107 percent (112 percent as at January 1, 2019). The valuation reported a solvency surplus of $121.8 million and a three-year average solvency surplus of $151.7 million ($179.2 million and $130.2 million, respectively, for the valuation completed at January 1, 2019).

On a going-concern basis (which assesses the Pension Plan over the long term on the assumption that it will operate indefinitely), the Pension Plan had a funding ratio of 135 percent (140 percent as at January 1, 2019). The valuation reported a going-concern surplus of $479.7 million ($507.6 million for the valuation completed at January 1, 2019).

The funding requirements of the Pension Plan are determined by the going-concern and solvency valuation results. Given the Pension Plan's January 1, 2020, funding and solvency ratios, regulations under the ITA prohibited the Bank from making further contributions after June 2019. Bank contributions to the Pension Plan will resume depending on the results of actuarial valuations in subsequent years, with the next one scheduled for January 1, 2021. Contributions in 2021 will be based on the actuarial valuation as at January 1, 2021. The Bank anticipates that, if the results of 2020 are in line with actuarial assumptions, its contributions will resume in 2021. Employer contributions to the Pension Plan in 2021 are expected to be $33.3 million. The SPA is funded through both employer and employee contributions. Employer contributions are based on the actuarial determination of the Bank's accounting expense for the plan. Since January 1, 2020, the SPA's employer contribution is determined according to a going-concern valuation, which is the sum of the employer's share of the going-concern current service cost and the special payments necessary to amortize any deficit on the going-concern basis. Employer contributions to the SPA in 2021 are expected to be $25.0 million.

15. Commitments, contingencies and guarantees

Commitments

A commitment is an enforceable, legally binding agreement to make a payment in the future for the purchase of goods or services. These amounts are not recorded in the statement of financial position because the Bank has not yet received the goods or services from the supplier. The amounts below are what the Bank has committed to pay based on current expected contract prices.

Commitments related to *Property and equipment, Intangible assets* and *Lease liabilities* are discussed in Note 7, Note 8 and Note 9, respectively.

The Bank has a long-term contract with an outside service provider for retail debt services. The Bank signed an amended agreement effective November 1, 2019, until December 31, 2023. As at December 31, 2020, payments totalling $53.9 million remained. The contract is modular, with a flexible pricing framework.

The Bank has long-term contracts with outside service providers for business recovery and data centre services, which expire between 2022 and 2026. As at December 31, 2020, fixed payments totalling $22.6 million remained.

As at December 31, 2020, the total minimum payments for long-term contracts, other than right-of-use leased assets, property and equipment, and intangible assets, were as follows:

As at December 31	2020
Due within one year	120.6
Due within one to three years	49.8
Due within three to five years	7.1
Thereafter	0.5
Total minimum payments	**178.0**

Foreign currency swap facilities

The Bank is a counterparty to several foreign currency swap facilities as follows:

As at December 31, 2020	Denominated in	Expiry date	Maximum available
Bilateral liquidity swap facilities with other central banks			
Bank of England	British pounds	No expiry	Unlimited
Bank of Japan	Japanese yen	No expiry	Unlimited
Bank of Korea	South Korean won	No expiry	Unlimited
European Central Bank	euros	No expiry	Unlimited
Federal Reserve Bank of New York	US dollars	No expiry	Unlimited
Swiss National Bank	Swiss francs	No expiry	Unlimited
People's Bank of China	Chinese renminbi	January 7, 2026	200,000.0
Other swap facilities			
Exchange Fund Account of Canada	Canadian dollars	No expiry	Unlimited
Federal Reserve Bank of New York	US dollars	December 12, 2021	2,000.0
Banco de México	Canadian dollars	December 12, 2021	1,000.0
Bank for International Settlements	Canadian dollars	No expiry	100.0

Bilateral liquidity swap facilities with other central banks

The bilateral liquidity swap facilities were established to provide liquidity in each jurisdiction in any of their currencies, should market conditions warrant.

These facilities can be structured as either a Canadian-dollar liquidity swap or a foreign-currency liquidity swap arrangement and can be initiated by either party. The exchange rate applicable to the swap facilities is based on the prevailing market spot exchange rate as mutually agreed upon by the parties.

Other swap facilities

The other swap facilities established with the Federal Reserve Bank of New York and with the Banco de México expire on December 12, 2021, but are subject to annual renewal.

The Bank is party to a standing foreign currency swap facility with the Exchange Fund Account of Canada. There is no stated maximum amount under this agreement.

The Bank is also party to a swap facility with the BIS for operational purposes. Transactions executed under this agreement generally have a duration of one business day. The BIS swap was accessed for operational purposes in both 2020 and 2019.

None of the other liquidity or other swaps was accessed, by either party, in 2020 or 2019. No related commitments existed as at December 31, 2020 ($nil as at December 31, 2019).

Contingencies

Contingent liabilities are possible obligations that could result from uncertain future events outside the Bank's control, or present obligations not recognized because the amount cannot be adequately measured or payment is not probable. Contingent liabilities are not recognized in the financial statements but are disclosed if significant.

BIS shares

The 9,441 shares in the BIS have a nominal value of SDR5,000 per share, of which 25 percent (i.e., SDR1,250) is paid up. The balance of SDR3,750 is callable at three months' notice by a decision of the BIS Board of Directors. The Canadian equivalent of this contingent liability was $64.9 million as at December 31, 2020 ($63.6 million as at December 31, 2019) based on prevailing exchange rates.

Guarantees

LVTS guarantee

The LVTS is a large-value payment system, owned and operated by Payments Canada. Any deposit-taking financial institution that is a member of Payments Canada can participate in the LVTS, provided that it maintains a settlement account at the Bank of Canada, has the facilities to pledge collateral for LVTS purposes, and meets certain technical requirements. The system's risk-control features, which include caps on net debit positions and collateral to secure the use of overdraft credit, are sufficient to permit the system to obtain the necessary liquidity to settle in the event of the failure of the single LVTS participant with the largest possible net amount owing. The Bank guarantees to provide this liquidity, and, in the event of a single-participant failure, the liquidity loan will be fully collateralized.

In the extremely unlikely event that there were defaults by more than one participant during the LVTS operating day in an aggregate amount greater than the largest possible net amount owing by a single participant, there would not likely be enough collateral to secure the amount of liquidity that the Bank would need to provide to settle the system. This could result in the Bank having unsecured claims on the defaulting participants in excess of the amount of collateral pledged to the Bank to cover the liquidity loans. The Bank would have the right, as an unsecured creditor, to recover any amount of its liquidity loan that was unpaid.

Since the guarantee would be called upon only if a series of extremely low-probability events were to occur, the likelihood of the guarantee being executed is remote. Furthermore, the Bank's maximum exposure under this guarantee is not determinable because the extent of exposure would be based on the unique circumstances of the failure event. No amount has ever been paid as a result of this guarantee. For that reason, no amount is or has ever been provided for in the liabilities of the Bank.

Other indemnification agreements

In the normal course of operations, the Bank includes indemnification clauses within agreements with various counterparties in transactions such as service agreements, software licences, leases and purchases of goods. Under these agreements, the Bank agrees to indemnify the counterparty against loss or liability arising from acts or omissions of the Bank in relation to the agreement. The nature of the indemnification agreements prevents the Bank from making a reasonable estimate of the maximum potential amount that the Bank would be required to pay. No indemnification amount has ever been paid under such agreements.

Insurance

The Bank does not normally insure against direct risks of loss to the Bank, except for potential liabilities to third parties, and when there is a legal or contractual obligation to carry insurance.

Any costs arising from risks not insured are recognized in the financial statements if, due to a past event, the Bank has a present legal or constructive obligation that can be estimated reliably as at the reporting date and it is probable that an outflow of economic benefits will be required to settle the obligation.

16. Equity

The Bank manages its capital to ensure compliance with the *Bank of Canada Act*. There were no other externally imposed capital requirements at the end of the reporting year.

The Bank's equity is composed of the following elements, as shown below.

As at December 31	2020	2019
Share capital	5.0	5.0
Statutory reserve	25.0	25.0
Special reserve	100.0	100.0
Investment revaluation reserve	448.1	400.3
Retained earnings	-	-
Total equity	**578.1**	**530.3**

Share capital

The authorized capital of the Bank is $5.0 million divided into 100,000 shares with a par value of $50 each. The shares are fully paid and have been issued to the Minister of Finance, who holds them on behalf of the Government of Canada.

Statutory reserve

The statutory reserve was accumulated out of net income until it reached the stipulated maximum amount of $25.0 million in 1955, consistent with the requirement of section 27 of the *Bank of Canada Act*.

Special reserve

Following an amendment to section 27.1 of the *Bank of Canada Act*, the special reserve was created in 2007 to offset potential unrealized valuation losses due to changes in the fair value of the Bank's investment portfolio. An initial amount of $100 million was established at that time, and the reserve is subject to a ceiling of $400 million.

The amount held in the special reserve is reviewed regularly for appropriateness using value-at-risk analysis and scenario-based stress tests and may be amended, pursuant to a resolution passed by the Board of Directors.

Investment revaluation reserve

The investment revaluation reserve represents the net unrealized fair value gains of the Bank's financial assets classified and measured at FVOCI, which consist solely of the Bank's investment in the BIS. The total reserve was $448.1 million as at December 31, 2020 ($400.3 million as at December 31, 2019).

Retained earnings

The net income of the Bank, less any allocation to reserves, is considered ascertained surplus and is transferred to the Receiver General for Canada, consistent with the requirement of section 27 of the *Bank of Canada Act*. Changes to the ascertained surplus payable to the Receiver General for Canada are presented in Note 13.

The Bank's remittance agreement with the Minister of Finance was designed to enable the Bank to manage its equity requirements with consideration given to the volatility arising from fair value changes and remeasurements, which are recorded in other comprehensive income. This agreement allows the Bank to withhold from its remittance to the Receiver General for Canada any increase in cumulative net unrealized losses on financial assets that are classified and measured at FVOCI, unrealized remeasurements of the net defined-benefit liability/asset on defined-benefit plans, and other unrealized or non-cash losses arising from changes in accounting standards or legislation. Any decrease in previously withheld cumulative net unrealized non-cash losses is added to the remittance.

During 2020, the Bank withheld $191.3 million from its remittances to the Receiver General for Canada (in 2019, withheld $133.4 million). As at December 31, 2020, $379.5 million in withheld remittances was outstanding ($188.3 million as at December 31, 2019).

17. Related parties

Persons or entities are considered related parties to the Bank if they are:

- under common ownership to the Government of Canada;
- a post-employment benefit plan for the benefit of Bank employees; or
- a member of key management personnel, which includes members of the Executive Council, Senior Management Council or the Board of Directors, and their families.

Government of Canada

The Bank is related in terms of common ownership to all Government of Canada departments, agencies and Crown corporations. To achieve its monetary policy objectives, the Bank maintains a position of structural and functional independence from the Government of Canada through its ability to fund its own operations without external assistance, and through its management and governance.

In the normal course of its operations, the Bank enters into transactions with related parties, and material transactions and balances are presented in these financial statements. Not all transactions between the Bank and government-related entities have been disclosed, as permitted by the partial exemption available to wholly owned government entities in International Accounting Standard 24 *Related Party Disclosures* (IAS 24).

The Bank provides funds management, fiscal agent and banking services to the Government of Canada, as mandated by the *Bank of Canada Act*, and does not recover the costs of these services.

Bank of Canada Pension Plan

The Bank provides management, investment and administrative support to the Pension Plan. Services in the amount of $1.2 million ($1.0 million in 2019) were fully recovered from the Pension Plan in 2020. Disclosures related to the Bank’s post-employment benefit plans are included in Note 14.

Key management personnel and compensation

The key management personnel responsible for planning, directing and controlling the activities of the Bank are the members of the Executive Council, the Senior Management Council and the Board of Directors. The number of key management personnel as at December 31, 2020, was 28 (29 in 2019).

The compensation of key management personnel is presented in the following table. Short-term employee benefits and post-employment benefits apply to Bank employees only.

As at December 31	2020	2019
Salary and short-term employee benefits	6.2	6.4
Post-employment benefits	2.6	2.0
Directors' fees	0.3	0.3
Total compensation	**9.1**	**8.7**

There were no other long-term employee benefit costs or termination benefits related to key management personnel in 2020 ($nil in 2019).