FINANCIAL STATEMENTS OF

THE BANK OF CANADA PENSION PLAN

December 31, 2021

Financial reporting responsibility

The Bank of Canada (the Bank) is the sponsor and administrator of the Bank of Canada Pension Plan (the Plan) and has established and maintains a trust fund for the Plan. 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 Plan.

The accompanying financial statements of the Plan have been prepared by the Bank's management in accordance with Canadian accounting standards for pension plans and contain certain items that reflect estimates and the judgment of management. The integrity and reliability of the data in these financial statements are management's responsibility. Management is also responsible for ensuring that all information in the Plan's *Annual Report* is consistent with the financial statements.

In support of its responsibility for the integrity and reliability of these financial statements and for the accounting system from which they are derived, management has developed and maintains a system of internal controls to provide reasonable assurance that transactions are properly authorized and recorded, that financial information is reliable, that the assets are safeguarded and liabilities recognized, and that the operations are carried out effectively.

The Pension Committee is responsible for overseeing management of the Plan, and the Bank's Board of Directors has overall responsibility for approving the financial statements. The Pension Committee meets with management and with the external auditor to review the scope of the audit, to review their findings, and to confirm that their responsibilities have been properly discharged. In addition, Mercer (Canada) Limited, a firm of consulting actuaries, conducts a formal actuarial valuation of the Plan annually, as required under the *Pension Benefits Standards Act*.

Deloitte LLP, the Plan's external auditor appointed by the Pension Committee, has conducted an independent audit of the financial statements in accordance with Canadian generally accepted auditing standards, performing such tests and procedures as it considers necessary to express an opinion in its report to the Bank's Board of Directors. The external auditor has full, unrestricted access to the Pension Committee to discuss its audit and related findings as to the integrity of the Plan's financial reporting and the adequacy of internal control systems.

Carolyn Rogers
Senior Deputy Governor, and
Chair, Pension Committee

Coralia Bulhoes, CPA, CA,
Chief Financial Officer and Chief Accountant,
and Member, Pension Committee

Ottawa, Canada
June 16, 2022

Actuary's opinion

Mercer (Canada) Limited was retained by the Bank of Canada to perform an actuarial valuation of the going-concern assets and pension obligations of the Bank of Canada Pension Plan (the Plan) as of December 31, 2021, for inclusion in the Plan's financial statements.

The objective of the financial statements is to fairly present the financial position of the Plan as of December 31, 2021 on a going-concern basis, in accordance with Section 4600 *Pension Plans* (Section 4600) of the *Chartered Professional Accountants of Canada (CPA Canada) Handbook*. The assumptions used to estimate the pension obligations of the Plan are the same as those used for the Plan's funding valuation. While the actuarial assumptions used to estimate the pension obligations for the Plan's financial statements represent the Bank of Canada's best estimate of future events, and while in our opinion these assumptions are reasonable for the purposes of these statements, the Plan's future experience will inevitably differ, perhaps significantly, from the actuarial assumptions. Any differences between the actuarial assumptions and future experience will emerge as gains or losses in future valuations and will affect the financial position of the Plan at that time, as well as the contributions required to fund it.

As part of our valuation, we examined the Plan's recent experience relative to the economic and non-economic assumptions and presented our findings to management. In addition, we provided the Bank of Canada with other relevant information used to develop its long-term assumptions.

Our assessment of the Plan's going-concern assets and pension obligations was based on:

- the results of our January 1, 2022, actuarial valuation of the Plan's going-concern liabilities for funding purposes,
- pension fund data provided by the Bank of Canada as of December 31, 2021,
- methods prescribed under Section 4600 of the CPA Canada Handbook for pension plan financial statements, and
- assumptions about future events that have been developed by the Bank of Canada and Mercer (Canada) Limited.

We have tested the membership and pension fund data for reasonableness and consistency, and we believe it to be sufficient and reliable for the purposes of the valuation. Our valuation has also been performed in accordance with the requirements of the Canadian Institute of Actuaries. Our opinions have been given and our valuation performed in accordance with accepted actuarial practice.

F. Gendron
Fellow of the Canadian Institute of Actuaries
Fellow of the Society of Actuaries

S. J. Ramonat
Fellow of the Canadian Institute of Actuaries
Fellow of the Society of Actuaries

Mercer (Canada) Limited

Ottawa, Canada
May 11, 2022

Independent auditor’s report

To the Members of the Bank of Canada Board of Directors

Opinion

We have audited the financial statements of the Bank of Canada Pension Plan, which comprise the statement of financial position as at December 31, 2021, and the statements of changes in net assets available for benefits and changes in pension obligations for the year then ended, and notes to the financial statements, including a summary of significant accounting policies (collectively referred to as the ”financial statements”).

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Bank of Canada Pension Plan as at December 31, 2021, and the changes in its net assets available for benefits and changes in its pension obligations for the year then ended in accordance with Canadian accounting standards for pension plans.

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards (”Canadian GAAS”). Our responsibilities under those standards are further described in the *Auditor’s responsibilities for the audit of the financial statements* section of our report. We are independent of the Bank of Canada Pension Plan 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.

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

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian accounting standards for pension plans, 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 of Canada Pension Plan'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 of Canada Pension Plan or to cease operations, or has no realistic alternative but to do so.

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

Auditor’s 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 auditor's 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 GAAS 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 GAAS, 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 of Canada Pension Plan'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 of Canada Pension Plan's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's 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 auditor's report. However, future events or conditions may cause the Bank of Canada Pension Plan 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.

Deloitte LLP

Chartered Professional Accountants
Licensed Public Accountants

Ottawa, Ontario
June 16, 2022

Statement of financial position

(in thousands of Canadian dollars)

As at December 31	Note	2021	2020
Assets			
Investments	4	2,253,915	2,059,115
Accrued investment income		18,329	12,280
		2,272,244	**2,071,395**
Liabilities			
Accounts payable and accrued liabilities		1,357	1,682
Net assets available for benefits		**2,270,887**	**2,069,713**
Commitments	10		
Pension obligations	6	**1,543,281**	**1,479,786**
Pension plan surplus	6,9	**727,606**	**589,927**

On behalf of the Pension Committee and the Board of Directors of the Bank of Canada

Carolyn Rogers
Senior Deputy Governor, and
Chair, Pension Committee

Coralia Bulhoes, CPA, CA,
Chief Financial Officer and Chief Accountant, and
Member, Pension Committee

Greg Stewart,
Member, Board of Directors, and
Member, Pension Committee

(See accompanying notes to the financial statements.)

Statement of changes in net assets available for benefits

(in thousands of Canadian dollars)

For the year ended December 31	Note	2021	2020
Investment activities			
Investment income	4	130,637	83,619
Current-year change in fair value of investments	4	89,623	101,221
Net investment activities		**220,260**	**184,840**
Member service activities			
Employer contributions			
Current service	9	35,569	-
Employee contributions			
Current service	9	17,389	16,884
Past service		1,264	1,143
Transfers from other plans		3,456	1,995
		57,678	**20,022**
Benefit payments			
Retirement benefit payments		(51,729)	(50,264)
Termination benefit payments		(9,299)	(2,223)
Disability benefit payments		(324)	(377)
Death benefit payments		(5,018)	(4,766)
		(66,370)	**(57,630)**
Net member service activities		**(8,692)**	**(37,608)**
Administrative expenses	7	(10,394)	(9,888)
Net increase in net assets available for benefits		**201,174**	**137,344**
Net assets available for benefits, beginning of year		2,069,713	1,932,369
Net assets available for benefits, end of year		**2,270,887**	**2,069,713**

(See accompanying notes to the financial statements.)

Statement of changes in pension obligations

(in thousands of Canadian dollars)

For the year ended December 31	2021	2020
Increase in pension obligations		
Benefits earned	56,878	49,546
Interest cost	73,752	71,661
Loss on change of assumptions	-	63,133
Experience Loss	2,138	-
	132,768	**184,340**
Decrease in pension obligations		
Retirement benefit payments	51,729	50,264
Termination benefit payments	9,299	2,223
Disability benefit payments	324	377
Death benefit payments	5,018	4,766
Gain on change of assumptions	2,903	-
Experience gain	-	15,885
	69,273	**73,515**
Net increase in pension obligations	**63,495**	**110,825**
Pension obligations, beginning of year	1,479,786	1,368,961
Pension obligations, end of year	**1,543,281**	**1,479,786**

(See accompanying notes to the financial statements.)

Notes to the financial statements

1. Description of the Bank of Canada Pension Plan

The following description of the Bank of Canada Pension Plan (the Plan) is a summary only. For more complete information, refer to the text of the Plan (Bank By-law 15), available on the website of the Bank of Canada (the Bank).

General

The Plan was established under the provisions of the *Bank of Canada Act* (the Act) and has remained in accordance with the Act as subsequently amended. Responsibility for administration and investment of the Plan resides with the Pension Committee and includes adherence to the guidelines established in the *Statement of Investment Policies and Procedures* (SIPP) that is approved annually by the Bank's Board of Directors (the Board).

The Plan is a contributory defined-benefit pension plan covering substantially all employees of the Bank. The Plan provides for retirement pensions, survivors' pensions, and refunds occasioned by termination of employment or death. The Plan's registration number with the Office of the Superintendent of Financial Institutions (OSFI) is 55116.

The Plan is a registered plan as defined in the *Income Tax Act* (the ITA) and, consequently, is not subject to income taxes. The Plan's registration number for income tax purposes is 0349233.

The Plan is the sole shareholder of 9439897 Canada Inc., 12747533 Canada Inc., and 12747570 Canada Inc. (the Corporations), corporations registered under the *Canada Business Corporations Act*, whose purpose is to facilitate foreign investment.

In 1992, the Bank of Canada Supplementary Pension Arrangement (the SPA) was introduced to supplement the pensions of those employees who contribute toward pension benefits that are above the maximum prescribed for registered pension plans under the ITA. A separate trust fund has been established to support the SPA and, therefore, the net assets available for benefits and the pension obligations pertaining to the SPA are reported separately and not included in these financial statements and related note disclosures.

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

Benefits

A lifetime retirement pension is available to Plan members based on the number of years of credited service, the average salary of the five highest-paid continuous years of service and the member's age at retirement.

Death benefits are available on the death of an active member or of a retired member. The benefits may take the form of a transfer to the survivor's locked-in retirement vehicle, a survivor pension or a refund of the contributions plus interest.

Upon termination of employment, a Plan member has the option of taking a deferred pension for service rendered or of transferring the commuted value of the pension benefit to a locked-in retirement vehicle.

Pension benefits are indexed annually on January 1 to reflect the changes in the consumer price index.

Funding

Required contributions to the Plan are determined annually by actuarial valuations that are performed in accordance with legislative requirements and with the recommendations of the Canadian Institute of Actuaries (CIA) for the valuation of pension plans.

Plan members are required to contribute a percentage of their pensionable salary to the Plan each year, to a maximum of 35 years of credited service. The contribution rates are as follows:

Contribution rates by members	Salary below the YMPE *	Salary above the YMPE *
Per the pre-January 1, 2012 plan design	8.7%	11.5%
Per the post-January 1, 2012 plan design	8.0%	10.5%

* *The year's maximum pensionable earnings (YMPE) were $61,600 in 2021 and $58,700 in 2020.*

In accordance with maximums prescribed by the ITA, a member accrues benefits from the plan on a salary up to $177,678 in 2021 ($169,286 in 2020). Contributions on earnings above this maximum are made to the SPA.

2. Basis of preparation

The financial statements of the Plan are prepared in accordance with Canadian accounting standards for pension plans and present the financial position of the Plan, on a going-concern basis, as a separate financial reporting entity, independent of the sponsor and of Plan members. The financial statements are prepared in order to assist Plan members and others in reviewing the activities of the Plan for the fiscal period, but they do not portray the funding requirements of the Plan or the benefit security of individual Plan members.

These financial statements are prepared in accordance with Section 4600 *Pension Plans* (Section 4600) of the *Chartered Professional Accountants of Canada (CPA Canada) Handbook*. International Financial Reporting Standards (IFRS), as set out in Part I of the CPA Canada Handbook, have been chosen for accounting policies that do not relate to the Plan's investment portfolio or pension obligations, to the extent that those standards do not conflict with the requirements of Section 4600.

The Bank's Board of Directors approved the financial statements on June 16, 2022.

Significant accounting judgments, estimates and assumptions

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

Management based its assumptions and estimates on the information available when these financial statements were prepared. Existing circumstances and assumptions about future developments may change in response to market fluctuations or circumstances that are beyond the control of management, in which case 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, estimates and assumptions are used primarily in the valuation of real estate funds (Note 4), and in the calculation of the pension obligations (Note 6).

Functional and presentation currency

The Plan's functional and presentation currency is the Canadian dollar. The amounts in the notes to the financial statements of the Plan are in Canadian dollars, unless otherwise stated. The amounts in the tables of the notes to the financial statements have been rounded to the nearest thousand.

3. Significant accounting policies

Investments

Investments are recorded at fair value on the settlement date and are stated at fair value at the reporting date. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Transaction costs are expensed as incurred.

Accrual of income

Interest income, dividends, and other income are recognized on an accrual basis, net of withholding taxes.

Current-year change in the fair value of investments

The current-year change in the fair value of investments is the difference between the fair value and the cost of investments at the beginning and end of each year, adjusted for any realized gains and losses during the year.

Foreign currency translation and foreign exchange forward contracts

Monetary assets and liabilities denominated in foreign currencies are translated into Canadian dollars at the exchange rates prevailing at the reporting date. Foreign exchange forward contracts are measured at fair value as at the reporting date. Gains and losses from translation and foreign exchange forward contracts are included in the current-year change in the fair value of investments. Income and expenses are translated at the rate of exchange prevailing at the time of the transactions.

Pension obligations

Pension obligations are based on an actuarial valuation for funding purposes, which represents the best estimate assumptions, that is prepared on an annual basis by a firm of independent actuaries, as discussed in Note 6.

Contributions

Employer contributions for current service and special payments to fund any Plan deficits must meet the minimum contributions required based on the most recent actuarial funding valuation report (Note 9).

Employee contributions for current service are recorded in the year in which the related payroll costs are incurred. Contributions for past service are recorded in the year received.

Changes in accounting policies

There was no new or amended standard adopted by the Plan during 2021 that had a material impact on its financial statements.

Future changes in accounting standards

There are no anticipated new or amended standards that are expected to have a significant impact on the Plan's financial statements.

4. Financial instruments

Investments

The SIPP complies with the regulations of the *Pension Benefits Standards Act* (PBSA). The SIPP is updated by the Pension Committee and approved annually by the Board. Compliance with the SIPP is evaluated through ongoing review of investment valuations by management.

The Plan invests in Cash and cash equivalents, fixed-income securities, equity funds, inflation-linked assets and real estate funds in accordance with its SIPP. To comply with the SIPP, the asset mix must be maintained by asset type within the following ranges:

	% of total portfolio market value	
Asset type	**Minimum**	**Maximum**
Total return-seeking assets, of which:	50	70
Canadian equities	0	20
Foreign equities	5	35
Real estate	10	30
Infrastructure Equity*	0	25
Total liability-matching assets, of which:	30	50
Nominal bonds and mortgages	20	40
Price-index-linked assets	-	20
Cash and cash equivalents	-	10

** To accommodate the transition phase into infrastructure equity, the minimum for the infrastructure equity allocation has been set temporarily lower than its longer-term level of 5%, while the maximum for the foreign equities allocation has been set temporarily higher than its longer-term level of 25%.*

The following table shows the fair value and the cost of investments at the reporting date, as well as the current-year change in the fair value of investments and related income. Investment income includes interest, dividends, distributions from pooled funds, and income from real estate funds.

As at December 31, 2021	Fair value	Cost	Investment income	Current-year change in fair value of investments *	Total return
Cash and cash equivalents					
Cash	8,650	8,650	-	-	-
Short-term investments	12,399	12,398	13	(555)	(542)
	21,049	**21,048**	**13**	**(555)**	**(542)**
Fixed-income securities					
Bonds	40,826	37,097	918	(661)	257
Fixed-income funds	596,777	590,956	19,757	(34,369)	(14,612)
	637,603	**628,053**	**20,675**	**(35,030)**	**(14,355)**
Equity funds					
Canadian equity	357,723	309,942	54,488	28,707	83,195
Foreign equity †	613,601	453,210	34,808	58,458	93,266
	971,324	**763,152**	**89,296**	**87,165**	**176,461**
Inflation-linked assets					
Canadian marketable bonds	222,123	160,094	2,457	5,691	8,148
Corporate bonds	3,134	1,792	117	(147)	(30)
Mortgages	530	496	41	(38)	3
	225,787	**162,382**	**2,615**	**5,506**	**8,121**
Real estate funds					
Canadian real estate	112,028	95,566	3,354	11,121	14,475
Foreign real estate ‡	286,124	268,149	14,684	21,416	36,100
	398,152	**363,715**	**18,038**	**32,537**	**50,575**
Total	**2,253,915**	**1,938,350**	**130,637**	**89,623**	**220,260**

* The 2021 change in the fair value of investments includes $74,300 thousand of realized losses.

† Foreign equity funds include the fair value of foreign exchange forward contracts of ($54) thousand as at December 31, 2021, as described in the "Foreign exchange forward contracts" section.

‡ Foreign real estate funds include the fair value of foreign exchange forward contracts of ($4,729) thousand as at December 31, 2021, as described in the "Foreign exchange forward contracts" section.

As at December 31, 2020	Fair value	Cost	Investment income	Current-year change in fair value of investments *	Total return
Cash and cash equivalents					
Cash	1,277	1,277	8	-	8
Short-term investments	14,299	14,297	68	(82)	(14)
	15,576	**15,574**	**76**	**(82)**	**(6)**
Fixed-income securities					
Bonds	102,220	64,437	3,146	8,135	11,281
Fixed-income funds	458,738	419,448	23,031	27,399	50,430
	560,958	**483,885**	**26,177**	**35,534**	**61,711**
Equity funds					
Canadian equity	345,138	317,739	22,822	10,535	33,357
Foreign equity †	575,447	460,649	14,498	42,763	57,261
	920,585	**778,388**	**37,320**	**53,298**	**90,618**
Inflation-linked assets					
Canadian marketable bonds	196,766	138,344	2,5001	20,352	22,853
Corporate bonds	3,353	1,852	118	293	411
Mortgages	1,133	1,061	131	(53)	78
	201,252	**141,257**	**2,750**	**20,592**	**23,342**
Real estate funds					
Canadian real estate	92,818	87,477	3,471	(4,294)	(823)
Foreign real estate ‡	267,926	252,291	13,825	(3,827)	9,998
	360,744	**339,768**	**17,296**	**(8,121)**	**9,175**
Total	**2,059,115**	**1,758,872**	**83,619**	**101,221**	**184,840**

* The 2020 change in the fair value of investments includes $1,494 thousand of realized losses.

† Foreign equity funds include the fair value of foreign exchange forward contracts of $33 thousand as at December 31, 2020, as described in the "Foreign exchange forward contracts" section.

‡ Foreign real estate funds include the fair value of foreign exchange forward contracts of $4,553 thousand as at December 31, 2020, as described in the "Foreign exchange forward contracts" section.

Financial instrument measurement

The carrying values of accrued investment income, and accounts payable and accrued liabilities approximate their fair values due to their short-term nature and include no past due or impaired amounts.

Following are descriptions of the methodologies used by management to determine the fair-value measurements of investments held by the Plan.

Cash and cash equivalents consist of cash and treasury bills, which are valued using published market quotations.

Fixed-income securities consist of directly owned bonds and investments in bond funds. Directly owned bonds are valued using pricing information compiled by a third-party supplier. Valuations of the bond funds are received on a per unit basis from the asset manager. Valuations are derived from the sum of the fair value of bond fund assets less bond fund liabilities divided by the total number of units outstanding.

Equity funds consist of Canadian and foreign holdings. Foreign equity funds also include the fair value of foreign exchange forward contracts. Investment valuations for the funds are received from the various issuers and are calculated in accordance with their published valuation methodologies. Valuations are derived from the sum of the fair value of equity fund assets determined using published market quotations less equity fund liabilities divided by the total number of units outstanding. The fair value of foreign exchange forward contracts is determined by reference to the forward exchange rate available on a similar contract at the reporting date.

Inflation-linked assets consist mainly of Government of Canada bonds, corporate bonds and mortgages guaranteed by the Canada Mortgage and Housing Corporation. Directly owned bonds are valued using pricing information compiled by a third-party supplier which are derived from published market quotations. Mortgages are valued on an annual basis with reference to market yields on similar assets at the reporting date.

Real estate funds consist mainly of diversified pooled funds of commercial, industrial and office real estate in several major centres across Canada, the United States and Europe. They are valued at an estimated fair value and are subject to real estate appraisals by independent and accredited appraisers on at least an annual basis. Valuations use one or more of three commonly used methodologies to arrive at an indication of value: the replacement-cost approach, the income approach and the direct-comparison approach.

Fair value hierarchy

Financial instruments measured at fair value 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 due to inactive markets (e.g., market participant assumptions)

The fair value hierarchy requires the use of observable market inputs wherever such inputs exist. A financial instrument is classified at the lowest level of the hierarchy for which a significant input has been considered in measuring fair value.

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

As at December 31, 2021	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	21,049	-	-	**21,049**
Fixed-income securities				
Bonds	-	40,826	-	**40,826**
Fixed-income funds	-	596,777	-	**596,777**
Equity funds				
Canadian equity	-	357,723	-	**357,723**
Foreign equity	-	613,601	-	**613,601**
Inflation-linked assets				
Canadian marketable bonds	-	222,123	-	**222,123**
Corporate bonds	-	3,134	-	**3,134**
Mortgages	-	530	-	**530**
Real estate funds				
Canadian real estate	-	-	112,028	**112,028**
Foreign real estate	-	-	286,124	**286,124**
	21,049	**1,834,714**	**398,152**	**2,253,915**

As at December 31, 2020	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	15,576	-	-	**15,576**
Fixed-income securities				
Bonds	-	102,220	-	**102,220**
Fixed-income funds	-	458,738	-	**458,738**
Equity funds				
Canadian equity	-	345,138	-	**345,138**
Foreign equity	-	575,447	-	**575,447**
Inflation-linked assets				
Canadian marketable bonds	-	196,766	-	**196,766**
Corporate bonds	-	3,353	-	**3,353**
Mortgages	-	1,133	-	**1,133**
Real estate funds				
Canadian real estate	-	-	92,818	**92,818**
Foreign real estate	-	-	267,926	**267,926**
	15,576	**1,682,795**	**360,744**	**2,059,115**

There were no transfers of amounts between levels in 2021 (no transfers in 2020).

The following table reconciles the fair value of the real estate funds determined using Level 3 fair-value measurements:

As at December 31	2021	2020
Fair value at beginning of year	360,744	344,277
Increase (decrease) in unrealized gains included in net assets *	13,462	(4,435)
Purchases	35,354	28,228
Capitalized income	7,357	4,810
Sales †	(2,585)	(5,219)
Return of capital	(16,180)	(6,917)
Fair value at end of year	**398,152**	**360,744**

* The fair value gains are presented in *Current-year change in fair value of investments* in the statement of changes in net assets available for benefits.

† Sales are presented net of realized gains of $19,075 thousand (losses of $3,687 thousand at December 31, 2020).

Securities lending

The Plan lends securities as a means of generating incremental income or of supporting the normal practice with regard to investment strategies. Securities are loaned only against collateral representing at least 102% of the value of the securities. At December 31, 2021, the Plan's investments included loaned securities with a fair value of $131,423,533 ($44,437,277 as at December 31, 2020). The fair value of collateral received in respect of these loans was $144,574,868 ($48,571,860 as at December 31, 2020). The percentage of collateral held compared to the market value of loaned securities was 110.0% for 2021 (109.3% for 2020).

Foreign exchange forward contracts

The notional and fair values of foreign exchange forward contracts included in *Foreign equity funds* and *Foreign real estate funds* are summarized in the following table:

As at December 31		2021		2020
	Notional value	Fair value	Notional value	Fair value
Contracts related to *Foreign equity funds*				
US dollars	-	-	3,573	34
Euros	(23,537)	(54)	22,910	(1)
	(23,537)	**(54)**	**26,483**	**33**
Contracts related to *Foreign real estate funds*				
US dollars	166,013	(4,363)	161,886	5,166
Euros	96,060	(366)	99,077	(613)
	262,073	**(4,729)**	**260,963**	**4,553**
Total	**238,536**	**(4,783)**	**287,446**	**4,586**

Notional values refer to the face amount of the forward contract to which an exchange rate is applied. The notional value does not represent the total gain or loss to which the Plan will be a party but is the basis upon which the fair value is determined. Accordingly, the notional values are not recorded as assets or liabilities in the financial statements.

The foreign exchange forward contracts are all set to mature within 24 days of December 31, 2021 (within 26 days of December 31, 2020).

The Plan's investments, securities-lending activities and foreign exchange forward contracts are subject to various risks that can affect their fair value, recoverable amount or future cash flows. These risks are discussed in Note 5.

5. Financial risk management

The Plan's financial instruments consist of its investments, accrued investment income, and accounts payable and accrued liabilities. The Plan's investments are subject to credit, liquidity and market risks.

Requirements for asset diversification and investment eligibility serve as basic risk-management tools for the investment portfolio. The Plan's SIPP requires that its investments be held in a diversified mix of asset types and sets out investment eligibility requirements. The diversification of assets serves to decrease the variations in the expected return performance of the portfolio. Eligibility requirements serve to ensure that Plan assets, to the extent possible, are not placed at undue levels of risk and can meet the obligations of the Plan as necessary.

While the above policies aid in risk management, the Plan's investments and performance remain subject to risks, the extent of which is discussed below.

Credit risk

Credit risk is the risk that a counterparty to a financial contract will fail to discharge its obligations in accordance with agreed-upon terms.

The Plan is exposed to credit risk through its investments in Short-term Investments, fixed-income securities and inflation-linked assets, as well as its foreign currency hedging activities (presented in *Foreign equity funds* and *Foreign real estate funds*) and securities-lending transactions.

The Plan's credit risk on Short-term Investments, fixed-income securities and inflation-linked assets is managed by setting concentration limits on the exposure to any single issuer, as well as by setting minimum credit-rating criteria for investment. The maximum exposure to any one issuer cannot exceed 10% of the total fair value of bond holdings, other than securities issued by the federal or provincial governments. The minimum credit rating for any single security is based on a composite rating from three rating agencies. The minimum rating at the time of purchase must be the equivalent of BBB (low) as determined by the Dominion Bond Rating Service.

Credit risk arising from foreign currency hedging activities and securities-lending transactions is managed by entering into contracts with creditworthy counterparties subject to minimum credit-rating requirements and by setting limits on the allowable amount of exposure to each of these counterparties.

In addition to being fully collateralized with high-quality securities, securities-lending transactions take place under strict adherence to OSFI guidelines and are indemnified through a custodial agreement in the event of default. Securities are loaned only against collateral representing at least 102% of the value of the securities. As a result of the collateral on hand, the net credit exposure is considered insignificant.

The maximum exposure to credit risk in money market instruments, fixed-income securities and inflation-linked assets is estimated to be the fair value of those instruments.

Concentrations of credit risk

Concentrations of credit risk occur when a significant proportion of the portfolio is invested in securities subject to credit risk with similar characteristics or subject to similar economic, political or other conditions. The investment portfolio as a whole is subject to maximum exposure limits and asset-allocation targets that are designed to manage exposure to concentrated credit risk.

The investment portfolio contains concentrated credit risk in money market instruments, fixed-income securities and inflation-linked assets, as follows:

	Short-term instruments		Fixed-income securities		Inflation-linked assets	
As at December 31, 2021	$	%	$	%	$	%
Securities issued or guaranteed by:						
Government of Canada	12,399	100.0	34,287	5.4	178,606	79.1
Canadian provinces or municipalities	-	-	360,063	56.5	44,047	19.5
Corporations	-	-	252,099	39.5	3,134	1.4
Cash	-	-	836	0.1	-	-
Investment Liabilities*	-	-	(9,682)	(1.5)	-	-
	12,399	**100.0**	**637,603**	**100.0**	**225,787**	**100.0**
Credit rating						
AAA to AA	12,399	100.0	171,384	26.9	214,131	94.9
A	-	-	271,274	42.6	11,126	4.9
BBB	-	-	51,962	8.1	-	-
Not rated †, ‡	-	-	142,983	22.4	530	0.2
	12,399	**100.0**	**637,603**	**100.0**	**225,787**	**100.0**

As at December 31, 2020	Short-term Investments $	%	Fixed-income securities $	%	Inflation-linked assets $	%
Securities issued or guaranteed by:						
Government of Canada	14,299	100.0	33,324	5.9	154,892	77.0
Canadian provinces or municipalities	-	-	313,054	55.8	43,006	21.4
Corporations	-	-	222,140	39.6	3,354	1.6
Cash	-	-	2,588	0.5	-	-
Investment Liabilities*	-	-	(10,148)	(1.8)	-	-
	14,299	**100.0**	**560,958**	**100.0**	**201,252**	**100.0**
Credit rating						
AAA to AA	14,299	100.0	176,425	31.5	161,712	80.3
A	-	-	195,504	34.8	38,408	19.1
BBB	-	-	37,365	6.7	-	-
Not rated †, ‡	-	-	151,664	27.0	1,132	0.6
	14,299	**100.0**	**560,958**	**100.0**	**201,252**	**100.0**

* *Investment Liabilities include capital gains payable, income payable and other payables by the fund.*

† *Fixed-income securities* includes private placements that are considered equivalent to investment grade as per the asset manager's credit assessment but are not directly rated by a credit-rating agency.

‡ *Inflation-linked assets* includes mortgages that are guaranteed by the Canada Mortgage and Housing Corporation but are not directly rated by a credit-rating agency. These assets are considered equivalent to investment grade.

Liquidity risk

Liquidity risk is the risk that the Plan will encounter difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset.

The Plan's financial liabilities consist of accounts payable and accrued liabilities. These amounts are short term in duration and are set to mature within one year.

Liquidity risk is managed by ensuring that sufficient liquid assets are maintained to meet anticipated payments and investment commitments in general. With respect to the Plan's financial liabilities and the actuarial value of pension obligations, management believes that the Plan is not subject to any significant liquidity risk.

The actuarial value of pension obligations is not considered a financial liability; however, it is the most significant liability of the Plan in the statement of financial position. The Bank, as Plan sponsor, is required to contribute all funds necessary to meet any funding shortfalls of the Plan as they may arise from time to time.

Market risk

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: 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 market interest rates. The Plan is exposed to interest rate risk through its investment holdings in interest-bearing or fixed-income assets. These principally include money market instruments and fixed-income securities.

The Plan manages its exposure to interest rate risk by holding a diversified mix of assets, both interest-bearing and non-interest-bearing. This approach decreases the impact of variations in overall portfolio performance owing to factors arising from interest rate risk.

Investments subject to interest rate risk bear fixed rates of interest. Therefore, short-term fluctuations in prevailing interest rates would not normally subject the Plan to fluctuating cash flows. In the event of a sale or redemption prior to maturity, proceeds would be affected by the impact of prevailing interest rates on the fair value of the investment.

The fair value of the Plan's assets, specifically the fair value of fixed-income securities (excluding inflation-linked assets), is affected by changes in the nominal interest rate. A 25-basis-point increase/decrease in the nominal interest rate would have had the following impact on the fair value of implicated investments and the related change in fair value:

As at December 31		2021		2020
	Increase	Decrease	Increase	Decrease
Short-term investments	(3)	1	(6)	1
Fixed-income securities	(26,183)	26,183	(21,844)	21,844
Total	**(26,186)**	**26,183**	**(21,850)**	**21,845**

The actuarial value of pension obligations is not considered to be a financial instrument; however, these obligations are sensitive to changes in long-term interest rates. The Plan is exposed to interest rate risk because of mismatches between the impact of interest rates on the actuarial value of pension obligations and their corresponding impact on the investment portfolio as a whole. Given the nature of pension benefits, such risks cannot be eliminated but are addressed through the funding of the Plan and through regular review of the characteristics of the Plan's investment portfolio relative to the pension obligations liability.

A 10-basis-point increase/decrease in the interest rate assumption would have had the following impact on the value of pension obligations:

As at December 31		2021		2020
	Increase	Decrease	Increase	Decrease
Pension obligations	(23,082)	23,696	(22,104)	22,663

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 Plan is exposed to currency risk arising from its holdings of investments denominated in foreign currencies, as well as investments that, although not denominated in foreign currencies, have underlying foreign currency exposure. This exposure lies principally within foreign equity and foreign real estate funds.

The Plan manages these risks through its SIPP, which limits the proportion of foreign assets within the portfolio, and through off-balance-sheet commitments in the form of foreign exchange forward contracts for the sale of various currencies (Note 4). The purpose of these contracts is to partially preserve the fair value of Plan assets by offsetting the impact of increases in the Canadian dollar relative to the underlying foreign currency exposure. In the case of a decrease in the Canadian dollar relative to the underlying foreign currency exposure, the foreign exchange forward contracts in place decrease in value, while the relative value of the foreign currency funds increases.

The Plan's net foreign currency exposure in Canadian dollars, after giving effect to the notional value of foreign exchange forward contracts described in Note 4, is presented in the following table:

As at December 31	2021	2020
Net foreign currency exposure		
US dollars	386,938	327,112
Euros	67,694	20,454
Japanese yen	37,765	38,303
Pounds sterling	29,053	27,162
Hong Kong dollars	20,005	20,332
Swiss francs	16,882	14,371
Australian dollars	12,871	11,939
Swedish Krona*	9,969	6,482
Indian rupees	9,687	9,660
South Korean won	8,514	10,100
Taiwanese dollars	8,411	6,525
Chinese Yuan	7,810	7,818
Other currencies	50,374	51,885
Total exposure	**665,973**	**552,143**

* Swedish Krona was included in the *Other currencies* category in the 2020 financial statements

The fair value of Plan assets, specifically those denominated in foreign currencies, is affected by changes in foreign exchange rates.

The most significant concentrations of net foreign currency exposures are in US dollars, Euros, Japanese yen, Pounds sterling and Hong Kong dollars. A 1% increase (decrease) in the foreign exchange rate of a significant foreign currency in which investments are denominated relative to the Canadian dollar would have the following impact on the fair value of investments net of foreign currency hedges:

As at December 31		2021		2020
	Increase	Decrease	Increase	Decrease
US dollars	3,869	(3,869)	3,271	(3,271)
Euros	677	(677)	205	(205)
Japanese yen	378	(378)	383	(383)
Pounds sterling	291	(291)	272	(272)
Hong Kong dollars	200	(200)	203	(203)
Total	**5,415**	**(5,415)**	**4,334**	**(4,334)**

This calculation is based on the Plan's direct foreign currency holdings and does not contemplate the effect of any secondary impacts from changes in exchange rates.

Future cash flows relating to the sale or maturity of a financial instrument will vary, depending on the prevailing exchange rate at the time of the transaction.

Other price risk

Other price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices (other than those arising from interest rate or currency risk), whether those changes are caused by factors specific to the individual financial instrument or its issuer or by factors affecting all similar financial instruments traded in the market.

The Plan is exposed to other price risk through its equity and real estate holdings.

The Plan manages these risks through fair diversification, setting maximum allowable proportions of equities in its investment portfolio, and through concentration limits on investments in any one issuer, as outlined in its SIPP. The maximum exposure to any single security cannot exceed 10% of the total fair value of equity holdings, unless such a security is an investment in a pooled or index fund. The maximum exposure to a pooled or index fund can exceed 10% so long as no single security within it exceeds 10% of the market value of that fund.

The primary objective of the real estate funds is to provide diversification to the equity allocation while providing a level of return that, in the context of the entire portfolio, is expected to meet the long-term return objectives of the Fund.

A 1% increase (decrease) in the underlying market prices in the equity and real estate portfolios would have the following impact on the fair value of investments and the net increase in assets:

As at December 31		2021		2020
	Increase	Decrease	Increase	Decrease
Equity Funds				
Canadian equity funds	3,577	(3,577)	3,451	(3,451)
Foreign equity funds	6,136	(6,136)	5,755	(5,755)
	9,713	**(9,713)**	**9,206**	**(9,206)**
Real Estate Funds				
Canadian real estate	1,120	(1,120)	928	(928)
Foreign real estate	2,861	(2,861)	2,679	(2,679)
	3,981	**(3,981)**	**3,607**	**(3,607)**
Total	**13,694**	**(13,694)**	**12,813**	**(12,813)**

Future cash flows relating to the sale of an investment exposed to other price risk will vary, depending on market prices at the time of sale.

Concentration of other price risk

Concentration of other price risk occurs when a significant portion of the portfolio is invested in equities with similar characteristics or is subject to similar economic, market, political or other conditions.

The following table provides information on the industries in which the equity funds are invested, expressed as a percentage of total holdings:

	Canadian equity funds		Foreign equity funds *	
As at December 31, 2021	$	%	$	%
Consumer discretionary	27,005	7.5	87,109	14.2
Consumer staples	19,625	5.5	60,396	9.8
Energy	36,306	10.1	13,931	2.3
Financials	91,521	25.6	90,612	14.8
Health care	2,702	0.8	71,474	11.6
Industrials	58,378	16.3	54,626	8.9
Information technology	35,693	10.0	135,949	22.2
Materials	41,626	11.6	18,143	3.0
Real estate	13,891	3.9	15,438	2.5
Telecommunication services	10,066	2.8	56,380	9.2
Utilities	16,361	4.6	8,377	1.3
Other	4,549	1.3	1,220	0.2
Total	**357,723**	**100.0**	**613,655**	**100.0**

* The *Foreign equity funds* category excludes foreign exchange forward contracts of ($54) thousand at December 31, 2021.

	Canadian equity funds		Foreign equity funds *	
As at December 31, 2020	$	%	$	%
Consumer discretionary	23,532	6.8	83,534	14.5
Consumer staples	19,344	5.6	61,304	10.7
Energy	30,293	8.8	12,281	2.1
Financials	90,589	26.3	86,339	15.0
Health care	3,130	0.9	64,469	11.2
Industrials	56,689	16.5	52,235	9.1
Information technology	35,796	10.3	116,807	20.3
Materials	44,137	12.8	21,054	3.7
Real estate	11,489	3.3	9,949	1.7
Telecommunication services	10,629	3.1	54,708	9.5
Utilities	16,659	4.8	10,589	1.8
Other	2,851	0.8	2,145	0.4
Total	**345,138**	**100.0**	**575,414**	**100.0**

* The *Foreign equity funds* category excludes foreign exchange forward contracts of $33 thousand at December 31, 2020.

6. Pension obligations

Actuarial valuations for funding purposes are required annually under the PBSA. The most recent valuation was performed as at January 1, 2022, by Mercer (Canada) Limited, a firm of consulting actuaries. The economic assumptions used to determine the actuarial value of pension obligations were developed by referencing expected long-term market conditions.

The significant long-term economic actuarial assumptions used in the valuation are as follows:

As at December 31	2021	2020
Discount rate	5.25%	5.00%
Salary escalation rate	2.75% + merit (age)	2.75% + merit (age)
Inflation rate	2.00%	2.00%
Mortality (tables issued by the CIA)	CPM2014Publ (scale CPM-B))	CPM2014Publ (scale CPM-B))
Plan membership		
Active members	1,724	1,646
Pensioners	1,918	1,892
Deferred members *	493	505

* Deferred members are former employees of the Bank who are entitled to a pension starting in the future.

Funding surplus

The surplus for financial statement purposes differs from that calculated on a going-concern funding basis, owing to the use of a smoothed actuarial value of assets for funding purposes. The going-concern funding surplus is calculated in accordance with applicable legislation and actuarial standards.

The actuarial value of net assets available for benefits has been determined using a smoothing method that recognizes excess investment gains and losses occurring in a calendar year on a straight-line basis over five years. Excess gains and losses are determined by reference to the investment-return assumption for going-concern valuation purposes (5.00% and 5.25% for the year ended December 31, 2021, and 2020 respectively).

A reconciliation of the components of the measurement differences between the surplus on a going-concern funding basis and the surplus for financial statement purposes is as follows:

As at December 31	2021	2020
Funding surplus	564,000	475,000
Actuarial asset value adjustment	163,606	114,927
Surplus for financial statement purposes	**727,606**	**589,927**

7. Administrative expenses

As at December 31	Note	2021	2020
Investment management fees		7,430	6,880
Pension administration fees		666	670
Audit and actuarial fees		175	152
Other administration fees	8	2,123	2,186
Total		**10,394**	**9,888**

8. Related parties

Persons or entities considered related parties to the Plan are:

- entities under control of the Plan, including 9439897 Canada Inc., 12747533 Canada Inc., and 12747570 Canada Inc.;
- the Bank of Canada, the sponsor and administrator of the Plan; and
- members of key management personnel.

Throughout the year, the Plan transferred funds to the following related corporations for investment and tax management purposes.

9439897 Canada Inc.

During 2021, net cash transfers from the Plan to 9439897 Canada Inc. were $2,769,042 (nil in 2020).

12747533 Canada Inc.

During 2021, the Plan transferred provincial bonds at cost to 12747533 Canada Inc. in the amount of $294,839,189 (n/a in 2020).

12747570 Canada Inc.

During 2021, net cash transfers from the Plan to 12747570 Canada Inc. were $400,000 (n/a in 2020).

Bank of Canada

Transactions with the Bank were conducted in the normal course of operations during the year and measured at the exchange amount. Included in Administrative expenses is $1,219,799 ($1,189,951 in 2020) for administration services provided by the Bank to the Plan.

Key management personnel and compensation

Key management personnel of the Plan consist of the Pension Committee and the Board, and the Plan is not charged for the compensation of these individuals. If a reasonable allocation of the compensation for key management personnel was performed, the amount would not be significant.

9. Pension plan surplus and capital requirements

The capital of the Plan consists of the pension plan surplus. Excluding the impact of investment income, the Plan is funded through a combination of employee and employer contributions. The pension plan surplus represents the difference between the net assets available for benefits and the pension obligations on a going-concern basis. Actuarial valuations, which aid in the determination of the extent of Plan capital, are performed annually.

Pension plan surpluses or deficits, as they arise, as well as other relevant aspects of the Plan, are managed to comply with the externally imposed requirements of the ITA and the PBSA.

The Bank is responsible for contributing the amount needed above the employees' contributions in order to fund benefits accrued by members during the year ($34,768,633 in 2021 and nil 2020). In the case of a funding deficit on either a going-concern or solvency basis (calculated on an average over the previous 3 years), additional contributions are required in accordance with the PBSA to fund the deficit. There were no additional contributions in 2021 and 2020 to fund a deficit. The PBSA also requires additional contributions to cover transfer deficiencies for members electing to transfer the value of their benefit entitlement out of the Plan. These contributions were $800,000 in 2021 (nil in 2020).

In the case of a pension plan surplus, the ITA prohibits the making of contributions while the surplus exceeds 125% of the current value of the Plan's liabilities on a going-concern basis, if the Plan is also fully funded on a solvency basis (solvency ratio in excess of 105%). However, when the Plan is not fully funded on a solvency basis, the PBSA requires contributions from the plan sponsor and the ITA allows these contributions even if the surplus exceeds 125% of the current value of the Plan's liabilities on a going-concern basis. Last year, the January 1, 2021, actuarial results prepared by the Plan's independent actuaries concluded that the Plan had a strong funding position, both on a going-concern and a solvency basis. As a result, regulations under the ITA prohibited the Bank from contributing to the Plan after the actuarial valuation report was filed with the regulators in June 2021.

The January 1, 2022, actuarial valuations results prepared by the Plan's independent actuaries are as follows:

- On a going-concern basis, the Plan had an actuarial surplus of $564 million and a funding ratio of 137% (actuarial surplus of $475 million and a funding ratio of 132% as at January 1, 2021).
- On a solvency basis, the Plan had an actuarial deficit of $14 million and a solvency ratio of 99% (actuarial deficit of $123 million and a solvency ratio of 94% as at January 1, 2021).

Based on the actuarial valuations results, employer contributions for 2022 are expected to be $37 million.

During the year ended December 31, 2021, the Plan and its sponsor were not in violation of any externally imposed legal or regulatory requirements.

10. Commitments

The Plan has a commitment with an investment manager to fund real estate investments. The commitment can be called upon at the discretion of the investment manager in accordance with the agreed upon terms and conditions. As at December 31, 2021, the commitment amounted to $40,493,238 US dollars ($51,149,034 in Canadian dollar equivalent). The Plan has sufficient liquidity to meet this commitment as it comes due.

11. Events after the reporting period

The Plan holds stock in Russian entities via exchange-traded funds which are reported at fair value on the financial statements. As at December 31, 2021, the Plan held $5,586,864 in Canadian dollars. The fair value of the Russian holdings significantly declined after Russia's invasion of Ukraine in February 2022. Stock market trading is subject to significant restrictions and the estimate of the decline in value cannot be made at this time. The fair value will be reassessed as at December 31, 2022.