



BANK OF CANADA
BANQUE DU CANADA

Financial Statements of
THE BANK OF CANADA
PENSION PLAN

as at 31 December 2016

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 examination 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 of Canada 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 A. Wilkins
Senior Deputy Governor of the Bank of Canada, and Chair, Pension Committee



Carmen Vierula, CPA, CA
Chief Financial Officer and Chief Accountant of the Bank of Canada, and Member, Pension Committee

Ottawa, Canada
15 June 2017

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 31 December 2016, 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 31 December 2016 on a going-concern basis, in accordance with Section 4600 of the Chartered Professional Accountants of Canada Handbook ("Section 4600 of the 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 1 January 2017 actuarial valuation of the Plan's going-concern liabilities for funding purposes,
- pension fund data provided by the Bank of Canada as of 31 December 2016,
- 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.



J. Legault

Fellow of the Canadian Institute of Actuaries
Fellow of the Society of Actuaries



S. Crabtree

Fellow of the Canadian Institute of Actuaries
Fellow of the Society of Actuaries

Mercer (Canada) Limited

Ottawa
18 May 2017

INDEPENDENT AUDITOR'S REPORT

To the Members of the Bank of Canada Board of Directors

We have audited the accompanying financial statements of the Bank of Canada Pension Plan, which comprise the statement of financial position as at 31 December 2016, and the statements of changes in net assets available for benefits and changes in pension obligations for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these 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.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements 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 entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Bank of Canada Pension Plan as at 31 December 2016, 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.



Chartered Professional Accountants
Licensed Public Accountants

Ottawa, Canada
15 June 2017

Statement of Financial Position

(Canadian dollars)

	31 December 2016	As at 31 December 2015
Assets		
Investments (note 4)	\$ 1,619,589,832	\$ 1,524,740,960
Accrued investment income	760,889	906,485
	1,620,350,721	1,525,647,445
Liabilities		
Accounts payable and accrued liabilities	1,056,182	887,426
Net Assets Available for Benefits	1,619,294,539	1,524,760,019
Pension obligations (note 6)	1,157,783,000	1,118,963,000
Pension Plan Surplus (note 9)	\$ 461,511,539	\$ 405,797,019

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

Carolyn A. Wilkins
Senior Deputy Governor of the Bank of Canada, and Chair, Pension Committee

Carmen Vierula, CPA, CA
Chief Financial Officer and Chief Accountant of the Bank of Canada, and Member, Pension Committee

Colin Dodds
Member, Board of Directors of the Bank of Canada, and Member, Pension Committee

(See accompanying notes to the financial statements.)

Statement of Changes in Net Assets Available for Benefits

(Canadian dollars)

	31 December 2016	For the year ended 31 December 2015
Increase in Assets		
Investment income (note 4)	\$ 83,798,791	\$ 87,496,733
Current-year change in fair value of investments (note 4)	35,806,703	(35,445,642)
	119,605,494	52,051,091
Employer contributions		
Current service (note 9)	23,167,478	21,377,018
Employee contributions		
Current service	7,655,847	7,217,470
Past service	840,520	976,647
Transfers from other plans	1,661,541	4,443,068
	33,325,386	34,014,203
	152,930,880	86,065,294
Decrease in Assets		
Retirement benefit payments	42,555,113	40,974,027
Termination benefit payments	3,538,161	3,375,331
Disability benefit payments	105,843	104,577
Death benefit payments	3,940,733	3,894,703
Administrative expenses (note 7)	8,256,510	7,507,837
	58,396,360	55,856,475
Net increase in Net Assets Available for Benefits	94,534,520	30,208,819
Net Assets Available For Benefits, Beginning of Year	1,524,760,019	1,494,551,200
Net Assets Available For Benefits, End of Year	\$ 1,619,294,539	\$ 1,524,760,019

(See accompanying notes to the financial statements.)

Statement of Changes in Pension Obligations

(Canadian dollars)

	31 December 2016	For the year ended 31 December 2015
Increase in Pension Obligations		
Benefits earned	\$ 33,325,386	\$ 34,014,203
Interest cost	61,718,000	58,726,000
Experience loss	-	2,537,435
Loss on change of assumptions	1,721,000	-
	96,764,386	95,277,638
Decrease in Pension Obligations		
Retirement benefit payments	42,555,113	40,974,027
Termination benefit payments	3,538,161	3,375,331
Disability benefit payments	105,843	104,577
Death benefit payments	3,940,733	3,894,703
Experience gain	7,804,536	-
Gain on change of assumptions	-	2,878,000
	57,944,386	51,226,638
Net increase in Pension Obligations	38,820,000	44,051,000
Pension Obligations, Beginning of Year	1,118,963,000	1,074,912,000
Pension Obligations, End of Year	\$1,157,783,000	\$1,118,963,000

(See accompanying notes to the financial statements.)

Notes to the Financial Statements of the Bank of Canada Pension Plan

For the year ended 31 December 2016

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 Bank of Canada's website.

General

The Plan was established under the provisions of the Bank of Canada Act, 1934, 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 of Canada's Board of Directors (the Board).

The Plan is a contributory defined-benefit pension plan covering substantially all employees of the Bank of Canada (the Bank). The Plan provides for service 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 (Canada) (ITA) and, consequently, is not subject to income taxes. The Plan's registration number for income tax purposes is 0349233.

In 1992, the Bank of Canada Supplementary Pension Arrangement (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 not included in these financial statements.

On 15 September 2015, the Plan registered a corporation (9439897 Canada Inc.) (the Corporation) under the Canada Business Corporations Act to facilitate foreign investment. The Plan is the sole shareholder of the Corporation.

As of 23 January 2017, the address of the Plan sponsor's registered office has been updated to 234 Wellington Street, Ottawa, Ontario.

Benefits

A lifetime service 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 refund of the contributions plus interest, a transfer to the survivor's locked-in retirement vehicle or a survivor pension.

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 to reflect the changes in the consumer price index on the date that payment begins and each 1 January thereafter.

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 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. Contributions are based on plan membership as follows:

	Salary below the YMPE ¹	Salary above the YMPE ¹
Contributions by members according to:		
- the pre-1 January 2012 plan design	5.7%	7.5%
- the post-1 January 2012 plan design	5.0%	6.5%

¹ The year's maximum pensionable earnings (YMPE) were \$54,900 in 2016 and \$53,600 in 2015.

In accordance with maximums prescribed by the ITA, a member accrues benefits from the Plan on a salary up to \$158,225 in 2016 (\$154,345 in 2015). 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*, 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 of Canada's Board of Directors approved the financial statements on 15 June 2017.

Significant accounting estimates and judgments in applying accounting policies

The preparation of financial statements in accordance with Canadian accounting standards for pension plans requires management to make estimates and assumptions based on information available at the date of the financial statements. Actual results could differ from these estimates. The estimates and assumptions relate primarily to the valuation of certain real estate funds and to assumptions used in the calculation of the pension obligations.

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.

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, capital gains and other income are recognized on an accrual basis.

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 that is prepared on an annual basis by a firm of independent actuaries (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 were no new or amended standards adopted by the Plan during 2016 that had a material impact on its financial statements.

Future changes in accounting policies

IFRS 9 Financial instruments

In July 2014, the International Accounting Standards Boards (IASB) issued the final version of IFRS 9 *Financial Instruments* bringing together the classification and measurement, impairment and hedge accounting phases of the IASB's project to replace IAS 39, *Financial Instruments: Recognition and Measurement*. The IASB has set 1 January 2018 as the mandatory date for the adoption of IFRS 9, although early adoption is permitted. Management does not expect any 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 money market instruments, 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	
	Minimum	Maximum
Total equity, of which:	30	70
Canadian equities	10	60
Foreign equities	-	45
Real estate	-	30
Total bonds, of which:	20	70
Nominal bonds and mortgages	20	50
Price-index-linked assets	-	20
Cash and cash equivalents	-	10

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 and dividends earned during the year, as well as income from real estate.

As at 31 December 2016					
	Fair value	Cost	Investment income	Current-year change in fair value of investments ¹	Total return
Money market instruments					
Cash	902,012	902,012	-	-	-
Short-term investments	6,894,342	6,893,875	53,535	(613)	52,922
	7,796,354	7,795,887	53,535	(613)	52,922
Fixed-income securities					
Bonds	87,728,148	66,188,713	3,098,010	427,176	3,525,186
Fixed-income funds	344,464,975	360,929,466	18,337,027	(7,666,929)	10,670,098
	432,193,123	427,118,179	21,435,037	(7,239,753)	14,195,284
Equity funds					
Canadian equity	273,763,125	252,902,297	21,485,814	32,375,571	53,861,385
Foreign equity ²	540,235,682	474,347,852	30,755,020	6,311,670	37,066,690
	813,998,807	727,250,149	52,240,834	38,687,241	90,928,075
Inflation-linked assets					
Canadian marketable bonds	144,225,963	110,977,170	2,219,622	1,989,606	4,209,228
Corporate bonds	3,263,422	2,062,728	122,374	13,002	135,376
Mortgages	5,870,476	5,577,117	373,676	(211,863)	161,813
	153,359,861	118,617,015	2,715,672	1,790,745	4,506,417
Real estate funds					
Canadian real estate	79,616,466	75,848,281	4,401,404	(26,517)	4,374,887
Foreign real estate ³	132,625,221	131,129,565	2,952,309	2,595,600	5,547,909
	212,241,687	206,977,846	7,353,713	2,569,083	9,922,796
Total	1,619,589,832	1,487,759,076	83,798,791	35,806,703	119,605,494

¹ The 2016 change in the fair value of investments includes \$69,045,510 of realized gains.

² *Foreign equity funds* include the fair value of foreign exchange forward contracts of \$(2,597,315) as at 31 December 2016, as described in the *Foreign exchange forward contracts* section.

³ *Foreign real estate funds* include the fair value of foreign exchange forward contracts of \$411,922 as at 31 December 2016, as described in the *Foreign exchange forward contracts* section.

	As at 31 December 2015				
	Fair value	Cost	Investment income	Current-year change in fair value of investments ²	Total return
Money market instruments					
Cash	650,456	650,456	-	-	-
Short-term investments	2,997,737	2,997,618	66,311	3,212	69,523
	3,648,193	3,648,074	66,311	3,212	69,523
Fixed-income securities					
Bonds	84,354,177	63,241,918	2,944,482	842,923	3,787,405
Fixed-income funds	343,723,127	310,695,557	17,046,011	(4,798,302)	12,247,709
	428,077,304	373,937,475	19,990,493	(3,955,379)	16,035,114
Equity funds					
Canadian equity	271,901,740	278,991,936	21,015,199	(34,064,270)	(13,049,071)
Foreign equity ^{1 and 3}	598,844,089	517,575,996	38,214,071	2,847,933	41,062,004
	870,745,829	796,567,932	59,229,270	(31,216,337)	28,012,933
Inflation-linked assets					
Canadian marketable bonds	135,953,294	104,694,107	2,177,112	1,291,018	3,468,130
Corporate bonds	3,300,899	2,108,292	123,345	18,259	141,604
Mortgages	7,175,248	6,670,026	485,845	(215,499)	270,346
	146,429,441	113,472,425	2,786,302	1,093,778	3,880,080
Real estate funds					
Canadian real estate	75,840,193	72,045,491	5,424,357	(1,370,916)	4,053,441
	75,840,193	72,045,491	5,424,357	(1,370,916)	4,053,441
Total	1,524,740,960	1,359,671,397	87,496,733	(35,445,642)	52,051,091

¹ Amounts as at 31 December 2015 have been updated to realign the cost of *Foreign equity* funds and the amount of realized gains on investments figures, as described in footnote 2 below.

² The 2015 change in the fair value of investments includes \$22,949,078 of realized gains.

³ *Foreign equity funds* include the fair value of foreign exchange forward contracts of \$(4,438,327) as at 31 December 2015, as described in the *Foreign exchange forward contracts* section.

Financial instruments measured at fair value

The carrying values of accrued investment income, and accounts payable and accrued liabilities approximate their fair values owing to their short-term nature. There are 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.

Money market instruments 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. Bonds are valued using pricing information compiled by a third party supplier. 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 – quoted prices (unadjusted) in active markets for identical assets or liabilities;

Level 2 – inputs other than quoted prices included in Level 1 that are observable for the assets or liabilities, either directly (i.e., as prices) or indirectly (i.e., derived from prices); and

Level 3 – inputs for the assets or liabilities that are not based on observable market data (unobservable inputs).

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.

	As at 31 December 2016			
	Level 1	Level 2	Level 3	Total
Financial assets at fair value				
Money market instruments	7,796,354	-	-	7,796,354
Fixed-income securities				
Bonds	-	87,728,148	-	87,728,148
Fixed-income funds	-	344,464,975	-	344,464,975
Equity funds				
Canadian equity	-	273,763,125	-	273,763,125
Foreign equity	-	540,235,682	-	540,235,682
Inflation-linked assets				
Canadian marketable bonds	-	144,225,963	-	144,225,963
Corporate bonds	-	3,263,422	-	3,263,422
Mortgages	-	5,870,476	-	5,870,476
Real estate funds				
Canadian real estate	-	-	79,616,466	79,616,466
Foreign real estate	-	-	132,625,221	132,625,221
	7,796,354	1,399,551,791	212,241,687	1,619,589,832

There were no transfers of amounts between Level 1, Level 2 and Level 3 in 2016 (no transfers in 2015).

	As at 31 December 2015			
	Level 1	Level 2	Level 3	Total
Financial assets at fair value				
Money market instruments	3,648,193	-	-	3,648,193
Fixed-income securities				
Bonds	-	84,354,177	-	84,354,177
Fixed-income funds	-	343,723,127	-	343,723,127
Equity funds				
Canadian equity	-	271,901,740	-	271,901,740
Foreign equity	-	598,844,089	-	598,844,089
Inflation-linked assets				
Canadian marketable bonds	-	135,953,294	-	135,953,294
Corporate bonds	-	3,300,899	-	3,300,899
Mortgages	-	7,175,248	-	7,175,248
Real estate funds				
Canadian real estate	-	-	75,840,193	75,840,193
	3,648,193	1,445,252,574	75,840,193	1,524,740,960

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

	31 December 2016	31 December 2015
Fair value at beginning of year	75,840,193	69,615,734
Total unrealized gains (losses) included in net assets ¹	1,469,139	(1,614,100)
Purchases	129,906,836	3,999,989
Capitalized dividends	5,751,141	4,197,001
Sales ²	(725,622)	(358,431)
Return of capital	-	-
Transfers in/out of Level 3	-	-
Fair value at end of year	212,241,687	75,840,193

¹ The fair-value gains (losses) are presented in the *Current-year change in fair value of investments* in the Statement of Changes in Net Assets Available for Benefits

² Sales are presented net of realized gains of \$2,820 (\$152,716 loss at 31 December 2015).

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 per cent of the value of the securities. At 31 December 2016, the Plan's investments included loaned securities with a fair value of \$39,994,292 (\$15,272,917 as at 31 December 2015). The fair value of collateral received in respect of these loans was \$42,015,503 (\$16,043,796 as at 31 December 2015).

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:

	31 December 2016		31 December 2015	
	Notional value	Fair value	Notional value	Fair value
Contracts related to Foreign equity funds				
U.S. dollars	111,808,138	(2,484,378)	144,638,973	(2,677,533)
Euros	17,934,333	(165,390)	21,247,431	(569,781)
Japanese yen	17,485,514	(25,064)	18,760,346	(885,210)
Pounds sterling	15,709,694	156,520	18,003,101	(68,478)
Swiss francs	8,400,164	(94,765)	9,724,677	(188,315)
Australian dollars	1,691,701	15,762	1,589,067	(49,010)
	173,029,544	(2,597,315)	213,963,595	(4,438,327)
Contracts related to Foreign real estate funds				
U.S. dollars	41,952,664	(363,854)	-	-
Euros	22,677,024	775,776	-	-
	64,629,688	411,922	-	-
Total	237,659,232	(2,185,393)	213,963,595	(4,438,327)

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 90 days of 31 December 2016 (within 30 days of 31 December 2015).

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 instruments and risks

The Plan's financial instruments consist of its investments, accrued investment income, and accounts payable and accrued liabilities. The Plan's investments, which are considered financial instruments, 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 as a whole. The Plan's SIPP requires that its investments be held in a diversified mix of asset types and also 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 money market instruments (excluding cash), 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 money market instruments, 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 per cent 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 per cent 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 the *Money market instruments*, *Fixed-income securities* and *Inflation-linked assets* categories, as follows:

	Money market instruments		Fixed-income securities		31 December 2016 Inflation-linked assets	
	\$	%	\$	%	\$	%
Securities issued or guaranteed by:						
Government of Canada	6,894,342	100.0	17,388,026	4.0	129,878,662	84.7
Canadian provinces or municipalities	-	-	300,816,774	69.6	20,217,777	13.2
Corporations	-	-	113,988,323	26.4	3,263,422	2.1
	6,894,342	100.0	432,193,123	100.0	153,359,861	100.0
Credit rating						
AAA to AA	6,894,342	100.0	66,565,431	15.4	124,008,185	80.9
A	-	-	286,545,103	66.3	23,481,200	15.3
BBB	-	-	30,375,175	7.0	-	0.0
Not rated ^{1,2}	-	-	48,707,414	11.3	5,870,476	3.8
	6,894,342	100.0	432,193,123	100.0	153,359,861	100.0

¹ *Fixed-income securities* includes private placements that are considered equivalent to investment grade as per the manager's credit assessment but are not directly rated by a credit-rating agency.

² *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.

	Money market instruments		Fixed-income securities		31 December 2015 Inflation-linked assets	
	\$	%	\$	%	\$	%
Securities issued or guaranteed by:						
Government of Canada	2,997,737	100.0	89,617,173	20.9	130,054,432	88.8
Canadian provinces or municipalities	-	-	270,548,494	63.2	13,074,110	8.9
Corporations	-	-	67,911,637	15.9	3,300,899	2.3
	2,997,737	100.0	428,077,304	100.0	146,429,441	100.0
Credit rating						
AAA to AA	2,997,737	100.0	136,584,590	31.9	122,879,184	83.9
A	-	-	262,516,577	61.3	16,375,009	11.2
BBB	-	-	28,976,137	6.8	-	-
Not rated ¹	-	-	-	-	7,175,248	4.9
	2,997,737	100.0	428,077,304	100.0	146,429,441	100.0

¹ *Inflation-linked assets* include 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 fixed-income securities, 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 investments and the net increase in assets:

	31 December 2016		31 December 2015	
	Increase	Decrease	Increase	Decrease
Money market instruments	(3,263)	3,254	(1,266)	1,261
Fixed-income securities	(16,423,339)	16,423,339	(16,802,034)	16,802,034
	(16,426,602)	16,426,593	(16,803,300)	16,803,295

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:

	31 December 2016		31 December 2015	
	Increase	Decrease	Increase	Decrease
Pension obligations	(16,165,000)	16,552,000	(16,738,000)	16,632,000

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. To further limit currency risk, the Plan has entered into 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:

	31 December 2016	31 December 2015
Net foreign currency exposure		
U.S. dollars	169,482,760	162,156,198
Euros	46,004,433	21,067,856
Hong Kong dollars	34,465,955	36,405,542
Indian rupees	22,870,342	21,646,168
Pound sterling	21,876,338	19,421,844
Korean won	21,664,442	19,092,032
South African rand	16,003,736	15,681,916
Japanese yen	15,162,684	16,716,265
Taiwanese dollars	14,252,373	15,263,317
Swiss francs	9,601,083	9,383,944
Other currencies	66,002,917	52,483,739
	437,387,063	389,318,821

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 U.S. dollars, euros, Hong Kong dollars, Indian rupees and pounds sterling. A 1 per cent 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:

	31 December 2016		31 December 2015	
	Increase	Decrease	Increase	Decrease
U.S. dollars	1,694,828	(1,694,828)	1,621,562	(1,621,562)
Euros	460,044	(460,044)	210,679	(210,679)
Hong Kong dollars	344,660	(344,660)	364,055	(364,055)
Indian rupees	228,703	(228,703)	216,462	(216,462)
Pound sterling	218,763	(218,763)	194,218	(194,218)
	2,946,998	(2,946,998)	2,606,976	(2,606,976)

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 holdings in equities.

The Plan manages these risks through maximum 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 issuer cannot exceed 10 per cent of the total fair value of equity holdings other than pooled or index funds. Pooled or index funds are ineligible if any single security within that fund exceeds 10 per cent of the market value of that particular fund.

A 1 per cent increase/decrease in the underlying market prices in the equities portfolio would have the following impact on the fair value of investments and the net increase in assets:

	31 December 2016		31 December 2015	
	Increase	Decrease	Increase	Decrease
Canadian equity funds	2,737,631	(2,737,631)	2,719,017	(2,719,017)
Foreign equity funds	5,402,357	(5,402,357)	5,988,441	(5,988,441)
	8,139,988	(8,139,988)	8,707,458	(8,707,458)

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:

	31 December 2016			
	Canadian equity funds		Foreign equity funds ¹	
	\$	%	\$	%
Consumer discretionary	17,654,474	6.4	63,164,708	11.6
Consumer staples	17,648,754	6.4	55,982,834	10.3
Energy	51,880,681	19.0	36,974,943	6.8
Financials	86,652,895	31.7	98,882,315	18.2
Health care	1,636,415	0.6	42,261,060	7.8
Industrials	33,002,934	12.1	61,098,911	11.3
Information technology	15,865,958	5.8	96,229,607	17.7
Materials	27,869,013	10.2	36,718,085	6.8
Other	7,241,118	2.6	6,792,625	1.3
Real estate ²	5,110,211	1.9	12,367,255	2.3
Telecommunication services	3,059,741	1.1	18,531,728	3.4
Utilities	6,140,931	2.2	13,828,926	2.5
	273,763,125	100.0	542,832,997	100.0

¹ The *Foreign equity funds* category excludes foreign exchange forward contracts of \$(2,597,315) as at 31 December 2016.

² The *Real estate* category was segregated from the *Financials* category in the Global Industry Classification Standard on 1 September 2016.

	31 December 2015			
	Canadian equity funds		Foreign equity funds ¹	
	\$	%	\$	%
Consumer discretionary	26,484,734	9.7	77,989,577	12.9
Consumer staples	18,569,663	6.8	110,031,922	18.2
Energy	44,343,157	16.3	32,226,089	5.3
Financials	85,201,547	31.4	126,844,066	21.2
Health care	5,949,420	2.2	20,064,557	3.3
Industrials	33,876,540	12.5	65,576,286	10.9
Information technology	22,247,243	8.2	55,447,777	9.2
Materials	22,000,205	8.1	30,305,531	5.0
Other	6,071,683	2.2	55,678,825	9.2
Telecommunication services	5,390,448	2.0	11,756,149	1.9
Utilities	1,767,100	0.6	17,361,637	2.9
	271,901,740	100.0	603,282,416	100.0

¹ The *Foreign equity funds* category excludes foreign exchange forward contracts of \$(4,438,327) as at 31 December 2015.

6. Pension obligations

Actuarial valuations for funding purposes are required annually under the Pension Benefits Standards Act (PBSA). The most recent valuation was performed as of 1 January 2017 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:

	31 December 2016	31 December 2015
Discount rate	5.50%	5.50%
Salary-escalation rate	3.00% + merit	3.20% + merit
Inflation rate	2.00%	2.00%
Mortality (tables issued by the Canadian Institute of Actuaries)	CPM2014Publ (scale CPM-B)	CPM2014Publ (scale CPM-B)
Plan membership		
Active members	1,424	1,362
Pensioners	1,766	1,731
Deferred members ¹	519	529

¹ 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 5 years. Excess gains and losses are determined by reference to the investment-return assumption for going-concern valuation purposes (5.50 per cent at 31 December 2016 and 2015).

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:

	31 December 2016	31 December 2015
Funding surplus	410,000,000	341,248,000
Actuarial asset value adjustment	51,511,539	64,549,019
Surplus for financial statement purposes	461,511,539	405,797,019

7. Administrative expenses

	31 December 2016	31 December 2015
Investment management fees	6,219,177	5,491,564
Pension administration fees	587,526	549,757
Audit and actuarial fees	140,028	108,962
Other administration fees (note 8)	1,309,779	1,357,554
	8,256,510	7,507,837

8. Related parties

Transactions with the Bank were conducted in the normal course of operations during the year and measured at the exchange amount. Included in *Other administration fees* is \$873,749 (\$872,563 in 2015) for administration services provided by the Bank to the Plan.

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 surplus or deficit, as they arise, as well as other relevant aspects of the Plan, are managed in order to comply with the externally imposed requirements of the ITA and the PBSA.

In the case of a pension plan surplus, the ITA generally prohibits the Bank from making contributions while the surplus exceeds 125 per cent of the current value of the Plan's liabilities on a going-concern basis, if the Plan is also fully funded on a hypothetical windup basis.

The Bank is responsible for contributing the amount needed above the employees' contributions in order to fund benefits accrued by members during the year (\$23,167,478 in 2016; \$21,377,018 in 2015). In the case of a funding deficit on either a going-concern or solvency basis, additional contributions are required in accordance with the PBSA to overcome the deficiency to fund the solvency deficit. There were no additional contributions in 2016 and 2015.

Contributions in 2017 are based on the actuarial valuation as at 1 January 2017, and are estimated to be \$24.3 million, consisting solely of regular contributions to cover current service costs. In 2017, there is no requirement for additional contributions as projections indicate a solvency surplus on an average over the previous 3 years.

At 31 December 2016, the Plan and its sponsor are not in violation of any externally imposed legal or regulatory requirements.

10. Subsequent event

On 15 June 2017, the Board approved an amendment to Bank By-law 15 that will result in an increase in member contributions. The increase will be implemented in two increments starting on 1 April 2018.

The updated contribution rates based on plan membership will be as follows:

	Contribution rate at 1 April 2018		Contribution rate at 1 April 2019	
	Salary below the YMPE	Salary above the YMPE	Salary below the YMPE	Salary above the YMPE
Contributions by members according to:				
- the pre-1 January 2012 plan design	7.2%	9.5%	8.7%	11.5%
- the post-1 January 2012 plan design	6.5%	8.5%	8.0%	10.5%