



BANK OF CANADA  
BANQUE DU CANADA



# BANK OF CANADA **PENSION PLAN** ANNUAL REPORT 2018



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The *Pension Plan Annual Report* is available on the Bank of Canada's website at [bankofcanada.ca](http://bankofcanada.ca).

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## Your Plan at a glance

- The Bank of Canada Pension Plan (the Plan) had 3,849 members at the end of 2018 (Figure 1).
- Pension payments from the Pension Trust Fund (the Fund) continued to increase, reaching \$50.7 million in 2018 (Figure 2).
- The value of the Fund’s net assets decreased to \$1,734 million at the end of 2018, from \$1,780 million at the end of 2017 (Figure 3).
- The Fund’s rate of return was -1.0 per cent in 2018, in line with our benchmark return of -1.1 per cent.
- On a going-concern basis (which assesses the Plan over the long term on the assumption that it will operate indefinitely), the Plan had an actuarial surplus of \$508 million (Figure 4) and a funding ratio of 140 per cent as at December 31, 2018.
- On a solvency basis (which assesses the Plan on the assumption that it would be terminated on the date of the valuation), the Plan had an actuarial surplus of \$179 million (Figure 4) and a solvency ratio of 112 per cent as at December 31, 2018.
- The Bank contributed \$14 million to the Fund in 2018.

Figure 2: Payments from the Fund, 2016–18

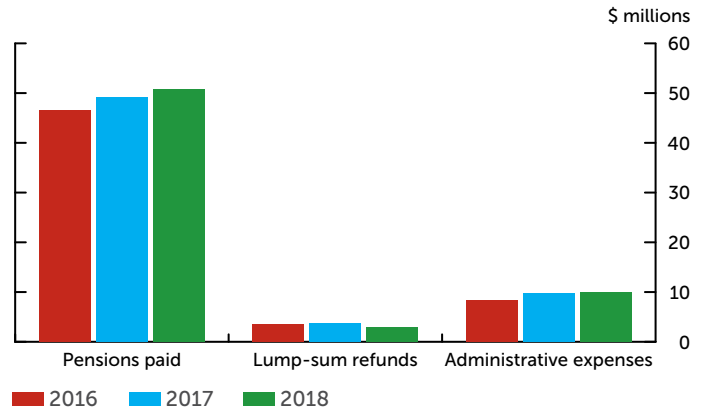


Figure 3: Net assets of the Fund, 2014–18  
(as at December 31)

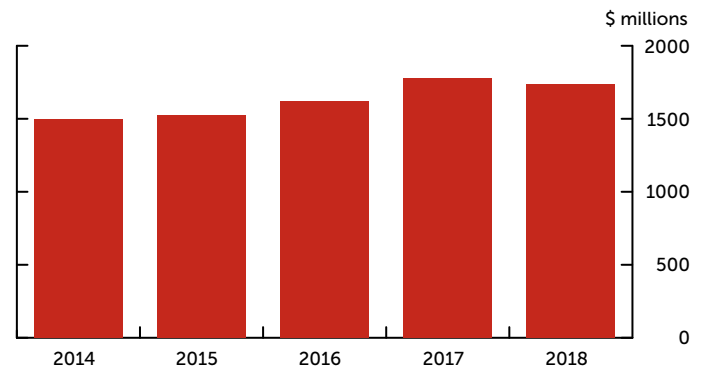


Figure 1: Membership  
(as at December 31, 2018)

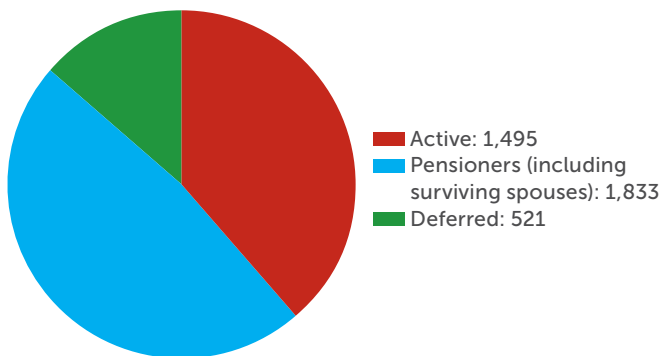
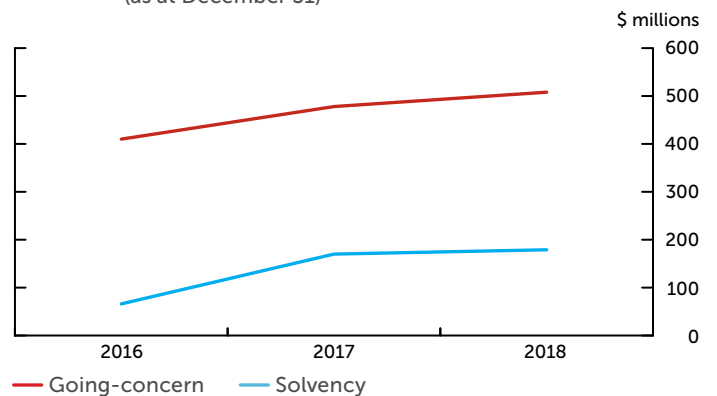


Figure 4: Funding position, 2016–18  
(as at December 31)





## Message from the Chair

I am pleased to provide this report on the performance of the Bank's Pension Plan in 2018.

The Plan remains in a strong position. At the end of 2018 it had a surplus of 40 per cent above its liabilities on a going-concern basis. This was despite a negative rate of return over the year, due largely to a downturn in equity

markets in the final quarter of the year. The Bank remains well able to meet its obligation to provide a secure retirement for its employees.

Our emphasis on reducing risk, while regularly examining and refining our asset mix, continues to ensure the Plan's good financial position.

### The Plan's position

The Bank's Pension Trust Fund generated an annual investment return of -1.0 per cent in 2018—lower than the previous year's return of 11.3 per cent and broadly in line with the policy benchmark, which returned -1.1 per cent. More information is provided in the "Pension assets and investment" section of this report.

As of the end of 2018 the Plan showed a \$508 million surplus on a going-concern basis, meaning there are more than enough assets to fund all pensions accrued or payable. This surplus brought the Plan's funding ratio to 140 per cent, or 40 per cent above the Plan's liabilities. This compares with a surplus of \$478 million at the end of 2017, which also equated to a funding ratio of 140 per cent.

On a solvency basis (which assumes that the Plan would be terminated on the date of the valuation), the Plan had a surplus of \$179 million at the end of 2018, compared with \$170 million at the end of 2017. The Plan had a solvency ratio of 112 per cent, or 12 per cent above the Plan's solvency liabilities, compared with 111 per cent the previous year.

## Bank pension contributions

Given the Plan's strong funding position in 2018, regulations under the *Income Tax Act* prohibit the Bank from making contributions to it in 2019.

Bank contributions to the Plan will resume depending on the results of actuarial valuations in subsequent years.

For more information, see the "Actuarial valuation" section (p. 10).

## Asset-liability modelling study

As we do every three years, in 2018 we worked with external pension experts on an 'asset-liability modelling' (ALM) study—a comprehensive review of the Fund's portfolio of assets. The study recommended that although the Plan's overall financial position is strong, adjustments could be considered to reduce risk for a similar level of expected return. We expect recommendations on resulting changes to the portfolio to be presented to the Pension Committee this year. See more in the "Pension assets and investments" section (p. 7).

## Acknowledgements

I wish to welcome several new members of the three Pension Plan committees.

Board of Directors members Paul Haggis, Raymond Ivany and Anne Whelan have joined the Pension Committee, replacing Norman Betts, Colin Dodds and Wes Scott.

Dale Alexander of the Communications Department is the newest member of the Pension Administration Committee.

Carol Brigham and Annick Demers have replaced Stéphane Lavoie and Miville Tremblay on the Pension Fund Investment Committee, while Ron Morrow took over as its Chair from Grahame Johnson. Kevin Dunn also joined the Committee.

Many thanks to those committee members who have stepped down for their invaluable contributions to the Plan over the years, and my appreciation to those who have volunteered to take their places.

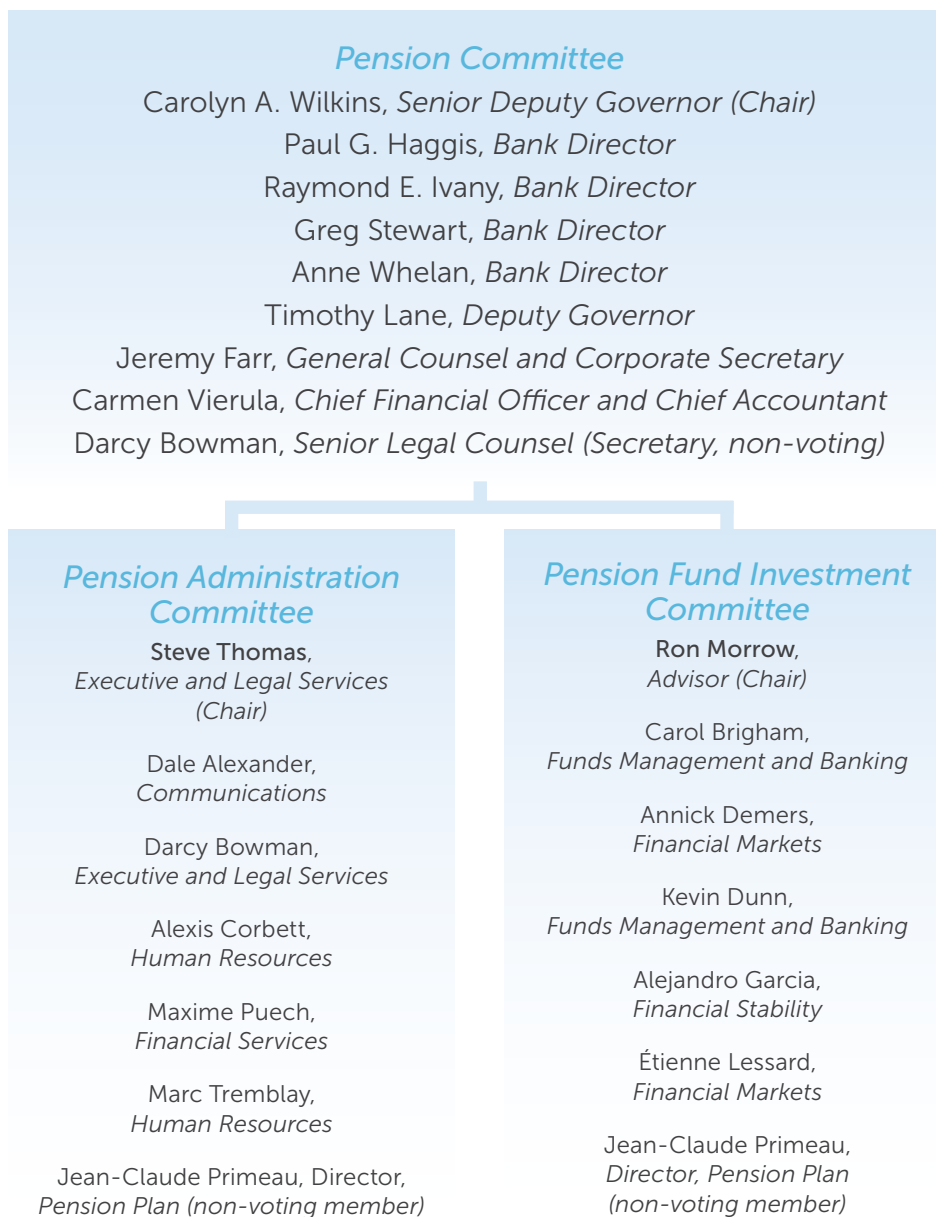


**Carolyn A. Wilkins**  
Senior Deputy Governor  
Chair, Pension Committee

## Pension governance

Under the *Pension Benefits Standards Act* and the terms of the Bank's Pension Plan (By-law 15), the Bank is the Plan administrator. Three committees oversee and make decisions related to the administration of the Plan and the investment of Plan assets. They also monitor investment services and performance. The Pension Committee was established by the Bank's Board of Directors to perform and report on the activities and functions of the Plan administrator. The Pension Committee has created two other committees—the Pension Administration Committee (PAC) and the Pension Fund Investment Committee (PFIC)—to assist it in carrying out its duties.

### Members of the three committees<sup>1</sup>



<sup>1</sup> As at May 31, 2018

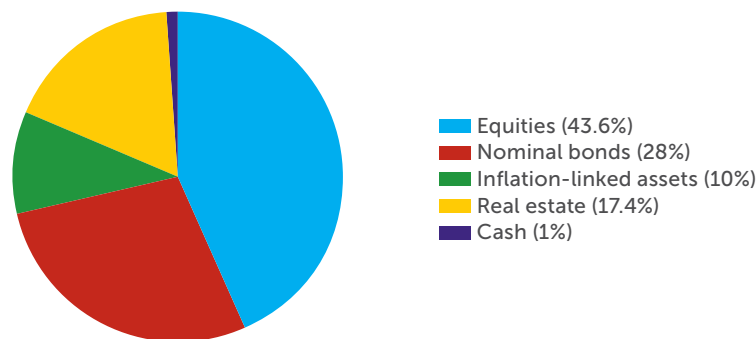
## Pension assets and investments

### Assets

The Fund continues to be invested in a diversified portfolio of equities, nominal bonds, inflation-linked assets, real estate and cash, consistent with its long-term investment principles (Figure 5).

Most of the Fund’s assets are invested using external managers chosen for their expertise in specific asset classes and for their investment strategies. Diversification across asset classes and investment styles is a prudent way to achieve the Fund’s long-term investment objectives while managing investment risks.

**Figure 5: The five main asset categories in the Fund’s portfolio, 2018<sup>a</sup>**  
 (as at December 31, 2018)



a. Policy allocation midpoints

### Asset-liability modelling study

Every three years we work with external pension experts to do a comprehensive review—known as an asset-liability modelling (ALM) study—which examines the Fund’s portfolio of assets in light of emerging economic, financial and investment trends. Any recommendations on the allocation of assets are considered in the context of our broader investment objectives:

- to keep the risk-return profile of the Fund aligned with the Pension Committee’s level of risk tolerance
- to improve the efficiency of the Fund by reducing the overall risk of the portfolio
- to maintain the current level of expected returns

The most recent ALM report was presented to the Pension Committee last September. It concluded that although the Plan’s overall financial position is strong, and the asset composition does balance expected returns and risks efficiently, adjustments could be considered to reduce risk for a similar level of expected return.

For return-seeking assets, the report recommended that we further diversify the asset mix by reducing exposure to publicly traded equities



and increasing exposure to alternative assets, such as private infrastructure equity and farmland. Generally, these assets should provide a lower risk profile than equities and do a better job of tracking inflation. However, this approach would require more governance resources and is dependent on identifying the right investment opportunities.

Regarding the portfolio's liability-matching assets, the report recommended that we lower our exposure to Government of Canada Real Return Bonds and increase our exposure to provincial Real Return Bonds, which are expected to deliver higher returns. Given the scarcity of provincial Real Return Bonds in the market, the report recommended a strategy to replicate the returns from these bonds using a combination of available financial instruments.

The Pension Fund Investment Committee (PFIC) is currently reviewing these proposals and will make a formal recommendation to the Pension Committee later this year.

## Investments

The Fund's day-to-day investment activity is overseen by the PFIC, which reports quarterly to the Pension Committee. The PFIC's actions are guided by the Plan's Statement of Investment Policies and Procedures and by the Pension Committee, which establishes the allocation ranges and performance benchmarks for each asset category.

The PFIC also monitors the performance of the Fund's external portfolio managers and leads an annual performance review on behalf of the Pension Committee.

## Equities

The Fund invests in Canadian, global and emerging-market equities. These holdings are managed by external portfolio managers.

## Fixed-income securities

### *Nominal bonds*

Nominal bond holdings are invested in a mix of Canadian-issued bonds and debentures, including publicly marketable securities and high-quality private infrastructure loans. Most of these holdings are managed externally. A small part of the portfolio is administered directly by the Bank to manage the duration of the Fund's fixed-income investments.

### *Inflation-linked assets*

These assets include inflation-linked bonds (primarily Government of Canada Real Return Bonds) and inflation-linked mortgages guaranteed by the Canada Mortgage and Housing Corporation.

## Real estate

The Fund is currently invested in a range of real estate instruments across different sectors and regions of Canada, the United States and Europe, managed by external managers.

## Cash

The Fund maintains sufficient cash deposits and Government of Canada treasury bills to meet anticipated payment obligations and investment commitments.

### *Supplementary Trust Fund*

The Supplementary Pension Arrangement (SPA) supplements the pensions of employees whose salary level results in pension benefits that are above the maximum prescribed by the Income Tax Act. The provisions of the SPA mirror the Plan, and a separate trust fund (the Supplementary Trust Fund (STF)) has been established to support it. STF investments are directed by the Pension Committee and the PFIC.

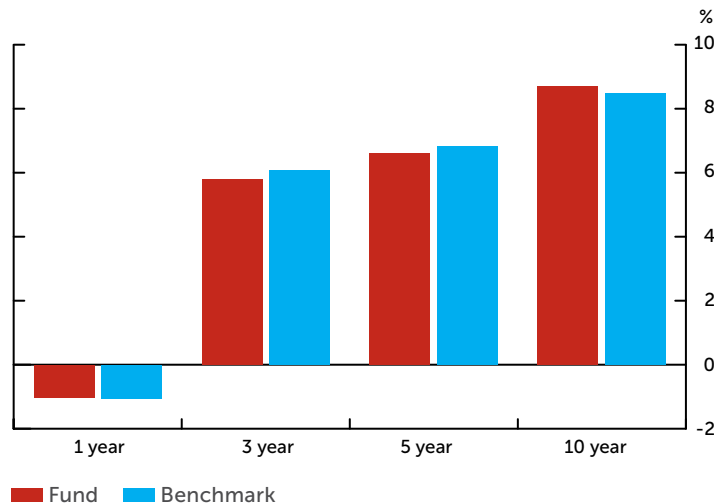
## Performance of the Fund

The Fund's one-year return, ending on December 31, 2018, was -1.0 per cent, in line with the benchmark return of -1.1 per cent.<sup>2</sup> Canadian and foreign equity markets, which had a challenging year especially in the final quarter, were key contributors to this lower rate of return compared to the previous year.

The Fund's overall benchmark is based on a mix of indexes, such as the S&P/TSX Composite Index and the MSCI World Index, weighted to reflect the asset-mix target of the Fund.

Plan benefits are indexed each year to keep pace with inflation. The current long-term investment objective is to achieve a rate of return of 5.5 per cent, which is equal to the Bank of Canada's 2.0 per cent inflation target plus a real return of 3.5 per cent, after expenses.

**Figure 6: Total fund rate of return**  
(as at December 31, 2018)



<sup>2</sup> In this report, rates of return are shown net of investment manager fees.

## Actuarial valuation

### Financial status of the Plan in 2018

The Bank has conducted annual actuarial valuations of the Plan since 2008, when a solvency deficit emerged during the financial crisis. The results of the valuation as at December 31, 2018 showed that the going-concern position of the Plan has remained strong, with a funding surplus of \$508 million and a funding ratio of 140 per cent. The Plan had a solvency surplus of \$179 million, compared with \$170 million in 2017, and a solvency ratio of 112 per cent, compared with 111 per cent the previous year (see **Table 1** and **Table 2**).<sup>3</sup>

**Table 1: Going-concern basis**  
(\$ millions, as at December 31)

	2014	2015	2016	2017	2018
Smoothed value of assets	1,358	1,460	1,568	1,688	1,772
Going-concern liabilities	1,075	1,119	1,158	1,210	1,264
Surplus	283	341	410	478	508
Funding ratio (assets as a percentage of liabilities)	126%	130%	135%	140%	140%

**Table 2: Solvency basis**  
(\$ millions, as at December 31)

	2014	2015	2016	2017	2018
Market value of assets	1,491	1,521	1,616	1,775	1,729
Solvency liabilities	1,455	1,501	1,550	1,605	1,550
Surplus (deficit) <sup>a</sup>	36	20	66	170	179
Solvency ratio (assets as a percentage of liabilities)	102%	101%	104%	111%	112%

a. Numbers may not add to total because of rounding.

The solvency valuation is based on the hypothetical (and very unlikely) event of Plan termination. It assumes, in this case, that the Bank would continue administering the Plan and managing Plan assets while honouring existing pension commitments to Plan members. These assets would be invested in an investment-grade fixed-income portfolio, in accordance with guidance issued by the Canadian Institute of Actuaries and the Office of the Superintendent of Financial Institutions, which supervises federally-regulated pension plans.

<sup>3</sup> The summary financial statements show a different amount of surplus from the actuarial valuation report because the assets in the financial statements are based on the market value rather than on the smoothed value.

The difference between the solvency ratio and the funding ratio reflects the different methodologies used to calculate each ratio's asset values and liabilities.

For solvency purposes, assets are measured at market value, while a smoothed value of assets is used for the going-concern valuation.

To calculate liabilities, the solvency valuation uses a discount rate based on fixed-income portfolio market rates as at December 31, 2018. In contrast, the going-concern valuation uses a longer-term average interest rate that reflects the investments of the Fund. The market interest rates used in the solvency valuation are currently well below the longer-term average, which largely explains why the solvency liabilities are greater than the going-concern liabilities.

## Plan contributions

The Bank made regular contributions of \$14 million in 2018 to cover the current service costs of the Plan, ending in June when last year's actuarial valuation report was filed with regulators; employees contribute in accordance with the formula set in the Plan's By-laws.

In 2019, the Bank is not allowed to make any contributions to the Fund. Regulations under the *Income Tax Act* prohibit the Bank from making contributions to the Plan, due to its strong funding position as discussed in the *Message from the Chair*.

Employer contributions are prohibited if a plan's going-concern funding ratio exceeds 125 per cent and the solvency ratio exceeds 105 per cent; at the end of 2018 the Bank's ratios were 140 per cent and 112 per cent respectively.

The strong position of the Plan results mainly from the effects of special contributions of \$125 million made from 2009 to 2014 when the Plan had a solvency deficit, and superior investment returns in the past several years.

Bank contributions to the Plan will resume depending on the results of actuarial valuations in subsequent years.

## Pension administration

### Administrative expenses

The expenses charged to the Fund are reviewed carefully to ensure that they are reasonable and meet the terms of the Plan and the Pension Trust Fund Expense Policy.

Table 3 shows the Fund's administrative expenses. Total expenses increased by \$0.2 million in 2018, primarily driven by an increase in initiative fees due to the asset-liability modeling study, which is normally performed every three years.

Asset management fees fell slightly in 2018, largely owing to a reduction in custodian fee schedules and the consolidation of the global equity portfolio implemented in the latter part of 2017. Pension administration fees decreased due to a lower volume of transactions.

All consumption taxes attributable to the Fund are charged to it rather than to the Bank since 2017. These taxes increased slightly in 2018.

Total administrative costs as a percentage of net Fund assets were 0.58 per cent, which is comparable to the costs for similar plans.

**Table 3: Administrative expenses**  
(\$ thousands)

	2016	2017	2018
Asset-management fees	6,219	7,238	7,186
Pension administration fees	588	640	611
Other administrative expenses	1,150	1,170	1,245
Initiatives	300	172	346
Consumption taxes	n/a	589	622
<i>Total expenses</i>	8,257	9,809	10,011
<i>Net assets as at December 31</i>	1,619,295	1,779,532	1,734,000
Total expenses (as a percentage of net assets)	0.51%	0.55%	0.58%

## Communications

To help streamline our communications to Plan members, this year for the first time we produced a shorter version of this report, highlighting its key content. The full version of the report remains available through the Bank's website at [www.bankofcanada.ca](http://www.bankofcanada.ca).

In addition, this report no longer includes Summary Financial Statements, but the full annual audited financial statements are available on the Bank's website.

The Bank also communicates with Plan members through its yearly newsletter, *Pension News*. Active employees can find electronic versions on the Bank's intranet site, Banque Centrale.

Active employees are entitled to receive annual pension statements. Since June 2017, pensioners and deferred members also receive annual statements.

Active employees can find additional information about the Plan on Banque Centrale. They can also use a tool on the Selection Centrale website to estimate the pension they will receive when they retire from the Bank. All Plan members can contact the Bank of Canada Benefits and Pension Administration Centre (Morneau Shepell) if they have questions. See page 14 for contact information.

## Pensioner information audit

The Bank continued its information audit in 2018, contacting a sample group of pensioners and asking them to confirm their name and contact information. This exercise is part of the due diligence required for the rigorous management of the Plan's assets.

A different sample group will be contacted for this audit each year. This process is consistent with the practices of other Crown agencies.

## Definitions of some common pension plan terms

### *Actuarial valuation*

An actuarial valuation estimates, at a given point in time, the total value of the benefits expected to be paid to members compared with the assets available to meet this obligation. The purpose of the valuation is to measure the funding status of the Plan. This can be done in two different ways:

**Going-concern basis**—The going-concern, or funding, basis assumes that the Plan will continue to operate indefinitely. Assumptions are based on a long-term perspective that accounts for such factors as salary increases and rates of interest, inflation, retirement and mortality.

**Solvency basis**—The solvency basis assumes that the Plan was terminated at the date of the valuation. This means that there is no need to project future salary increases or changes in membership. The assumptions used to calculate the solvency position, such as the interest rate employed to estimate liabilities, must meet the requirements of the *Pension Benefits Standards Act* and the standards of the Canadian Institute of Actuaries.

### *Discount rate*

The discount rate is the interest rate used to discount the future liabilities of a defined benefit pension plan to calculate the present value of the liabilities, often for the purpose of comparing them with the value of the plan's assets.

### *Funding ratio*

The funding ratio, which is applied in a going-concern valuation, is defined as the smoothed value of assets divided by the going-concern actuarial liabilities.

### *Smoothed value of assets*

The smoothed value of assets is used for the going-concern valuation, while the market value is used for the solvency valuation and in financial statements. Smoothing spreads the impact of investment losses or gains from any single year over a longer period, which makes contributions to the plan more stable.

### *Solvency deficiency*

Under pension legislation, the solvency deficiency is the amount that is used to calculate the required annual solvency special payments. The deficiency in any specific year is based on the average solvency position of the past three years. The Bank's special payments spread the deficiency amount over five years.

### *Solvency deficit*

The solvency deficit is the amount by which solvency liabilities exceed the market value of the Plan's assets at a point in time.

### *Solvency ratio*

The solvency ratio is the market value of assets divided by the solvency liabilities.

### *Solvency surplus*

The solvency surplus is the amount by which the market value of assets exceeds the solvency liabilities at a point in time.

## Additional information

The Bank of Canada Pension Plan is registered with the Office of the Superintendent of Financial Institutions for the purposes of the *Pension Benefits Standards Act*, which regulates the Plan's design, funding, investment policy and operations. The Plan is also registered with the Canada Revenue Agency for the purposes of the *Income Tax Act*, which regulates the maximum contributions payable to, and the maximum permissible defined benefits payable from, a tax-sheltered pension arrangement.

For pension or post-retirement questions and requests, contact the Bank of Canada Benefits and Pension Administration Centre:

### The Bank of Canada Benefits and Pension Administration Centre

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Monday to Friday

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