

Canada Post Corporation
Registered Pension Plan
2018 Financial Statements



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Management's Responsibility for Financial Reporting

The financial statements of the Canada Post Corporation Registered Pension Plan (the Plan) have been prepared by management, which is responsible for the integrity and fairness of the data presented therein. The accounting policies followed in the preparation of these financial statements conform to Canadian Accounting Standards for Pension Plans. Where appropriate, the financial statements include amounts based on management's best estimates and judgments.

In support of its responsibilities, management maintains systems of internal control and supporting procedures to provide reasonable assurance that transactions are authorized, assets are safeguarded and proper records are maintained. These controls include quality standards in hiring and training, the establishment of an organizational structure that provides a well-defined division of responsibilities and accountability for performance, and the communication of policies and guidelines. Internal Audit plans audits and reviews of pension activities as warranted through annual risk assessments.

Ultimate responsibility for the financial statements rests with the Canada Post Corporation Board of Directors. The Board of Directors ensures that management fulfills its responsibilities for financial reporting and internal control principally through the Audit Committee and the Pension Committee. The Audit Committee oversees the internal audit activities of the Plan, reviews the annual financial statements and the external auditors' report, and recommends them to the Board of Directors for approval. The Pension Committee, which is composed of the Chairperson of the Board of Directors of Canada Post Corporation and four directors who are not employees of the Corporation, meets regularly with management to satisfy itself that the delegated responsibilities are properly discharged.

The Plan's actuary, Mercer (Canada) Limited, completed an actuarial assessment of the assets and going-concern obligations of the Plan as of December 31, 2018, for inclusion in the Plan's financial statements. The results of the actuaries' assessment are set out in the actuaries' opinion. This assessment was performed in accordance with accepted actuarial practice. The actuarial assumptions used in these financial statements reflect management's best estimate of future economic events.

The Plan's external auditors, KPMG LLP, conducted an independent examination of the financial statements in accordance with Canadian generally accepted auditing standards and performed such tests and other procedures as they considered necessary to express an opinion. The external auditors have access to the Audit and Pension Committees to discuss their audit and related findings as to the fairness of the Plan's financial reporting and any internal control recommendations observed during the audit.



Doug Ettinger
President and Chief Executive Officer
March 21, 2019



Wayne Cheeseman
Chief Financial Officer
March 21, 2019

Actuaries' Opinion

Ottawa

March 21, 2019

Mercer (Canada) Limited was retained by Canada Post Corporation to perform an actuarial assessment of the assets and going-concern obligations of the Registered Pension Plan as of December 31, 2018, 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, 2018, as a going concern. While the actuarial assumptions used to estimate obligations for the Plan's financial statements reflect management's expectations of future events, and while in our opinion these assumptions are reasonable, 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 assessment, 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 management with statistical, survey and other information used to develop its long-term assumptions.

Our assessment of the Plan's actuarial assets and obligations was based on:

- an extrapolation to December 31, 2018, of the results of our December 31, 2017, actuarial valuation of the Plan's going-concern obligations;
- pension fund data provided by Canada Post Corporation as of December 31, 2018;
- standards prescribed by the Chartered Professional Accountants of Canada for pension plan financial statements; and
- Assumptions about future events that have been developed by management and Mercer (Canada) Limited, which reflect management's expectations of these events.

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. We also believe that the assumptions and methods employed in the valuation and extrapolation are, on the whole, appropriate. Our opinions have been given and our valuation performed in accordance with accepted actuarial practice.



Cory Skinner

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



Frédéric Gendron

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

Mercer (Canada) Limited

Independent Auditors' Report

To the Board of Directors of Canada Post Corporation:

Opinion

We have audited the financial statements of the Canada Post Corporation Registered Pension Plan (the "Plan"), which comprise:

- the statement of financial position as at December 31, 2018
- the statement of changes in net assets available for benefits for the year then ended
- the statement of changes in pension obligations for the year then ended
- the statement of changes in surplus for the year then ended
- and notes to the financial statements, including a summary of significant accounting policies

(Hereinafter referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Plan as at December 31, 2018, and the changes in net assets available for benefits and changes in the 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. Our responsibilities under those standards are further described in the "Auditors' Responsibilities for the Audit of the Financial Statements" section of our auditors' report.

We are independent of the 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 Entity'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 Entity or to cease operations, or have no realistic alternative but to do so.

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

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

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

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the 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 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 auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the 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.
- 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.



Chartered Professional Accountants, Licensed Public Accountants
March 21, 2019
Ottawa, Canada

Financial Statements

Statement of Financial Position

As at December 31 (in millions of dollars)

2018

2017

Net assets available for benefits

Assets

Investments (note 5)	\$ 24,662	\$ 24,910
Investment related receivables (note 5)	149	255
Contributions and other receivables (note 7)	103	112
	<u>24,914</u>	<u>25,277</u>

Liabilities

Investment related liabilities (note 5)	152	148
Accounts payable and accrued liabilities (notes 8 and 18)	47	47
	<u>199</u>	<u>195</u>

Net assets available for benefits

	<u>\$ 24,715</u>	<u>\$ 25,082</u>
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Pension obligations and surplus

Pension obligations (note 14)	\$ 21,574	\$ 20,827
Surplus	3,141	4,255

Pension obligations and surplus

	<u>\$ 24,715</u>	<u>\$ 25,082</u>
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See accompanying notes to the financial statements.

Approved on behalf of the Board



Jessica L. McDonald

Chairperson of the Board of Directors



Claude Germain

Chairperson of the Audit Committee

Statement of Changes in Net Assets Available for Benefits

For the year ended December 31 <i>(in millions of dollars)</i>	2018	2017
Net assets available for benefits, beginning of year	\$ 25,082	\$ 23,192
Increase in assets		
Investment income (note 10)	766	702
Changes in fair values of investment assets and liabilities (note 10)	–	1,737
Sponsor contributions (note 11)	284	303
Members contributions (note 11)	239	239
	1,289	2,981
Decrease in assets		
Changes in fair values of investment assets and liabilities (note 10)	523	–
Retirement and survivor pension benefits (note 12)	928	887
Commuted value transfers, lump sum death benefits and refunds (note 12)	79	89
Administration expenses (notes 13 and 18)	126	115
	1,656	1,091
Increase (decrease) in net assets available for benefits	(367)	1,890
Net assets available for benefits, end of year	\$ 24,715	\$ 25,082

See accompanying notes to the financial statements.

Statement of Changes in Pension Obligations

For the year ended December 31 <i>(in millions of dollars)</i>	2018	2017
Pension obligations, beginning of year	\$ 20,827	\$ 20,301
Increase in pension obligations		
Interest on pension obligations	1,128	1,101
Benefits accrued	502	511
Changes in actuarial assumptions (note 14.b)	129	–
	1,759	1,612
Decrease in pension obligations		
Retirement and survivor pension benefits (note 12)	928	887
Commuted value transfers, lump sum death benefits and refunds (note 12)	79	89
Changes in actuarial assumptions (note 14.b)	–	4
Experience gains (note 14.c)	5	106
	1,012	1,086
Net increase in pension obligations	747	526
Pension obligations, end of year	\$ 21,574	\$ 20,827

Statement of Changes in Surplus

For the year ended December 31 <i>(in millions of dollars)</i>	2018	2017
Surplus, beginning of year	\$ 4,255	\$ 2,891
Increase (decrease) in net assets available for benefits	(367)	1,890
Net increase in pension obligations	(747)	(526)
Surplus, end of year	\$ 3,141	\$ 4,255

See accompanying notes to the financial statements.

Notes to the Financial Statements

1. Plan description

The following description of the Canada Post Corporation Registered Pension Plan (the Plan) is a summary only. An exact and complete description of the Plan provisions can be found in the official Plan document. If there is any conflict between this summary and the official Plan document, the official Plan document will govern.

a) General

The Plan is registered with the Canada Revenue Agency (CRA) under registration number 1063874. The Plan is a registered pension plan as defined in the *Income Tax Act* (ITA) and as such is not subject to income taxes on contributions or investment income received. The Plan is also registered with the Office of the Superintendent of Financial Institutions Canada (OSFI) under registration number 57136, and is subject to the *Pension Benefits Standards Act, 1985* (PBSA), and the regulations thereunder. Canada Post Corporation (the Corporation) sponsors and administers the Plan.

The Plan is comprised of both a defined benefit (DB) component and a defined contribution (DC) component. The DB component was established by the Corporation effective October 1, 2000, and covered all eligible employees. Effective January 1, 2010, the Corporation established the DC component for all newly hired Management and Exempt employees, along with those newly hired unionized employees who later transfer to a Management and Exempt position. As of June 1, 2014, all newly hired Union of Postal Communication Employees (UPCE) along with those newly hired unionized employees who later transfer to a UPCE position joined the DC component.

As of March 1, 2015, all newly hired Association of Postal Officials of Canada (APOC) employees along with those newly hired unionized employees who later transfer to an APOC position joined the DC component. As of September 1, 2016, all newly hired Canadian Postmasters and Assistants Association (CPAA) employees along with those newly hired unionized employees who later transfer to a CPAA position joined the DC component. Employees actively participating in the Canada Post Group RSP joined the DC component of the Plan on March 1, 2018.

The Plan is domiciled in Canada. The address of the Plan's registered office is 2701 Riverside Drive, Ottawa, Ontario.

A separate Supplementary Retirement Arrangement (SRA) has been established by the Corporation to provide for benefits that exceed the maximum amount allowable under the ITA for registered pension plans.

b) Benefits

i. Defined benefit component

Retirement pensions

A member is eligible for pension benefits immediately upon joining the Plan. A retirement pension is available based on pensionable service, the highest average pensionable earnings for five consecutive years of employment, and the age of the member at retirement. Members are eligible for an early retirement pension within 10 years of pensionable age. An unreduced retirement pension is available at pensionable age.

For members represented by the Canadian Union of Postal Workers (CUPW), Urban Postal Operations (UPO) or Rural and Suburban Mail Carriers (RSMC), who become eligible to join the Plan on or after December 21, 2012, pensionable age is defined as (a) the later of age 65 or the age at which a member has completed two years of eligibility service or the age at which a member would have completed two years of Plan membership assuming that a member's Plan membership continues, or (b) age 60 if a member has at least 30 years of eligibility service.

For all other members, pensionable age is defined as (a) the later of age 60 or the age at which a member has completed two years of eligibility service or the age at which a member would have completed two years of Plan membership assuming that a member's Plan membership continues, or (b) age 55 if a member has at least 30 years of eligibility service.

Benefits payable on termination of employment

Benefits payable on termination of employment depend on a member's years of pensionable service and age and may include a lump sum amount equivalent to the commuted value of the pension or a deferred pension.

Bridge benefits

A bridge benefit is a temporary benefit in addition to a retirement pension. It is payable from retirement until the member reaches age 65, unless death or payment of Canada Pension Plan or Quebec Pension Plan disability benefits occurs first.

Disability pensions

A disability pension is an immediate pension payable on an unreduced basis. It is available to qualified members prior to pensionable age.

Death benefits

Death benefits may include on-going financial support to survivors and dependent children, lump sum payments equal to the commuted value of the pension benefit, and a minimum payment guarantee on the death of the member.

Indexing of benefits

Pension and survivor benefits are automatically indexed for inflation in January by a percentage that reflects the average increase in the consumer price index.

ii. Defined contribution component

Retirement benefits

Retirement benefits are based on the accumulation of contributions and investment income allocated to the member's account. For DC members who commenced employment before January 1, 2013, the Corporation contributes 4% of the member's pensionable earnings. For DC members who commenced employment on or after January 1, 2013, the Corporation contributes 2% of the member's eligible earnings. Member contributions are optional up to a maximum of 4%. Additional matching contributions of up to 5% can be made by the Corporation based upon each member's age, years of eligible service and member's contributions. These contributions are invested as directed by each member from a selection of investment options authorized by the Plan's Pension Committee.

Benefits payable on termination of employment and death

Benefits payable on termination of employment and death would result in a return of the accumulation of contributions and investment income allocated to the member's account.

c) Funding

i. Defined benefit component

Plan benefits are funded by contributions and investment earnings. Contributions are required from both the Corporation and the employee. These contributions, along with investment earnings, are designed to ensure the financial security of member benefits. The Plan's funding policy is reviewed annually and continually aims to achieve long-term stability in contribution rates for both the Corporation and Plan members. Contribution rates are established through actuarial funding valuations that are conducted annually to determine the funded position of the Plan. Employees, who are members of the Plan, are required to contribute a percentage of their pensionable earnings to the Plan at rates set by the Board of Directors. In 2018, employee contributions were 9.0% (8.5% from January to June 2017 and 9.0% from July to December 2017) of earnings up to the year's maximum pensionable earnings (YMPE) (defined by the Canada Pension Plan and Quebec Pension Plan as \$55,900 in 2018) and 12.5% (12.0% for January to June 2017 and 12.5% for July to December 2017) of earnings in excess of this maximum.

Beginning in January 2019, the employee contribution rate for members of the Defined Benefit component will increase by 0.2% of pensionable earnings: Employees will contribute 9.2% up to the YMPE and 12.7% over the YMPE.

ii. Defined contribution component

Plan benefits are funded by contributions and investment earnings. Contributions include minimum automatic contributions by the Corporation and optional employee contributions matched by additional employer contributions. Employees make their own investment choices from a menu of funds. The Corporation periodically reviews the performance of the funds and proposes changes, if required.

2. Summary of significant accounting policies

a) Presentation

These financial statements are prepared in Canadian dollars, the Plan's functional currency, in accordance with the accounting standards for pension plans in Part IV of the Chartered Professional Accountants Canada Handbook (CPA Canada Handbook).

The Plan has elected to comply on a consistent basis with International Financial Reporting Standards (IFRS) for its accounting policies that do not relate to its investment portfolio or its pension obligations. To the extent that the IFRS in Part I of the CPA Canada Handbook is inconsistent with CPA Canada Handbook Part IV Section 4600, then CPA Canada Handbook Section 4600 takes precedence.

These financial statements are prepared on a going-concern basis and present the information of the Plan as a separate financial reporting entity independent of the sponsor and Plan members.

In accordance with CPA Canada Handbook Part IV Section 4600, investments assets, including those over which the Plan has control or significant influence, are measured at fair value and presented on a non-consolidated basis.

b) Investments

Valuation of investments

Investments are stated at fair value. Fair value is an estimate of the amount of consideration that would be agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act. In an active market, fair value is best evidenced by an independent quoted market price. In the absence of an active market, fair value is determined by valuation techniques that make maximum use of inputs observed from markets. The calculations of fair value are based on market conditions at a specific point in time and may not be reflective of future fair value.

Fair values of investments are determined as follows:

1. Short-term securities, which include short-term government securities and bank notes, are valued at cost or amortized cost that, together with accrued interest or discounts earned, approximate fair value.
2. Fixed income securities quoted in an active market are valued at quoted closing market prices. Where a quoted year-end price in an active market is not available, an estimated value is calculated using discounted cash flows based on current market yields, comparable securities, and financial analysis, as appropriate.
3. Equities quoted in an active market are valued at quoted closing market prices. Where a quoted price in an active market is not available for an equity, a suitable method of valuation is used by management to determine fair value using appropriate valuation techniques. In making such valuations, consideration is given to the use of bid and ask prices, previous transaction prices, discounted cash flows, earnings multiples, prevailing market rates for instruments with similar characteristics and other valuation techniques that are judged relevant to the specific situation.
4. Pooled funds are valued at year-end net asset values, as provided by the pooled fund manager, using the closing market prices of underlying securities held in the pooled fund.
5. Derivative financial instruments, including foreign exchange forward contracts are valued at year-end quoted market prices, where available. Where quoted market prices are not readily available, appropriate alternative valuation techniques are used to determine fair value, such as discounted cash flows using current market yields or rates.
6. Real estate investments are comprised of investments in limited partnership pooled funds and direct ownership of properties. Limited partnership pooled fund values are based on fair value provided by the funds' General Partners. Real estate direct ownership values are presented net of all third-party financing. Income producing properties are valued by independent accredited appraisers at each year-end. The fair value of the mortgages are estimated using mark to market costs to current market yields at each year-end. Direct and pooled fund investments are typically measured at cost in the year of acquisition, as an approximation of fair value, unless specific and conclusive reasons exist to change the value.
7. Investments in private equity and infrastructure include investments held directly and through ownership in limited partnership funds. These investments are valued using market quotes, values provided by the funds' general partners under limited partnership agreements or through the use of appropriate valuation techniques. In determining such valuations, consideration is given to previous transaction prices, discounted cash flows, earnings multiples, prevailing market rates for instruments with similar characteristics and other valuation techniques that are judged relevant to the specific situation.
8. Investments in private debt are through ownership in limited partnership funds. Limited partnership funds value is based on financial information provided by the funds' General Partners under limited partnership agreements.

Investment transactions and income

All investment transactions are recorded when the risks and rewards of ownership are transferred. Purchases and sales of publicly traded investments are recognized on a trade-date basis. Real estate investment transactions are recognized on the date of closing for direct investments. Real estate and private equity pooled fund investment transactions are recognized on the cash call date. Investment income, including interest income, is recorded on an accrual basis. Dividend income is recognized on the ex-dividend date. Real estate, private equity, infrastructure and private debt income is recognized when dividends or distributions are declared. Realized gains and losses on the sale of investments and the close of derivative contracts are recognized as gains and losses on disposition.

Unrealized gains and losses on investments represent the change in the difference between the cost and fair value of investments at the beginning compared to the end of each year. Unrealized gains and losses on derivative contracts represent the changes in fair values of the contracts from previously reported amounts or since the inception of the contracts if they were entered into during the year.

Securities Lending

The Plan may enter into securities lending transactions. These securities lending activities are fully collateralized by securities, and the securities loaned continue to be accounted for as investments on the Statement of Financial Position. Income from securities lending activities is included in investment income.

Investment transaction costs

Transaction costs are incremental costs incurred in the purchase and sale of investments. Transaction costs are expensed and included in administration expenses in the statement of changes in net assets available for benefits.

Management fees

Management fees for private equity funds, infrastructure, real estate, private debt and external portfolio management are expensed and included in administration expenses in the statement of changes in net assets available for benefits. Management fees for pooled funds where the Plan's investment return from the fund is net of fees are expensed in investment income as incurred in the statement of changes in net assets available for benefits.

c) Pension obligations

Pension obligations for the DB component are determined based on actuarial valuations prepared by an independent firm of actuaries using the projected accrued benefit actuarial cost method and management's estimate of future events. The year-end value of pension obligations is based on the most recent going-concern actuarial valuation prepared for funding purposes extrapolated to the year-end reporting date using management's best estimate assumptions.

Pension obligations for the DC component are the sum of the accumulated value of contributions and net investment income allocated to members' accounts.

d) Contributions

Contributions for current service are recorded in the year in which the related payroll costs are incurred. Elective service contributions are recorded in the year in which the member commits to purchase elective service. Contributions for approved leaves of absence without pay are recorded in the year in which the leave without pay occurred. Special payments and transfer deficiency payments are recorded in the year to which they relate.

e) Foreign currency translation

Assets and liabilities denominated in foreign currencies are translated into Canadian dollars at exchange rates in effect at year's end. Income and expenses are translated at the rate of exchange prevailing at the time of the transaction. The realized and unrealized gains and losses arising from these translations are included in the change in fair values of investment assets and liabilities.

f) Use of estimates

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amount of assets, liabilities and pension obligations as at the date of the financial statements and the reported amounts of income and expenses during the reporting period. Significant estimates are used primarily in the determination of the pension obligations and the valuation of real estate, private equity and infrastructure investments. Actual results may differ from these estimates and the differences could be material.

g) Benefits

Benefits include payments to retired members made during the year and accruals for due but unpaid benefits at December 31. Commuted value payments and transfers to other pension plans are recorded in the period in which the Plan is notified and any remaining unpaid amounts are included in accounts payable and accrued liabilities. Accrued benefits for members of the Plan are recognized as part of the pension obligations.

h) Approval of the financial statements

These financial statements were approved by the Board of Directors of the Corporation on March 21, 2019.

3. New standards, amendments and interpretations adopted January 1, 2018

On March 21, 2018, Canada Post Pension Committee approved the following amendment to the RPP text, effective December 3, 2017.

As a result of legislated changes to maternity and parental leave benefits, the Plan was amended with regard to current service contributions during leave of absence. The period of absence following the day of birth or the day of adoption of a child, for which an active member can pay contributions at the normal rate during active employment, was amended from fifty-two weeks to seventy-eight weeks.

4. Future changes in accounting standards

There are no significant impacts from any future changes in accounting standards issued by the IASB but not yet effective.

5. Investments

Summary of investments

As at December 31 <i>(in millions of dollars)</i>	2018		2017	
	Fair value	Cost	Fair value	Cost
Cash and short-term securities	\$ 306	\$ 304	\$ 467	\$ 469
Fixed income				
Canadian	6,349	6,366	6,266	6,230
United States	437	437	473	467
International	301	302	229	225
Real return bonds	2,668	2,646	2,268	2,171
	9,755	9,751	9,236	9,093
Public equities				
Canadian	3,027	2,452	3,669	2,490
United States	3,385	2,425	3,797	2,500
International	2,970	2,831	3,443	2,732
	9,382	7,708	10,909	7,722
Real estate (note 9.a) ¹				
Canadian	2,317	1,716	2,086	1,607
United States	458	379	286	266
International	120	115	59	55
	2,895	2,210	2,431	1,928
Private equity (note 9.c)				
Canadian	147	117	125	97
United States	566	449	418	347
International	360	214	288	151
	1,073	780	831	595
Infrastructure (note 9.e)				
Canadian	181	134	167	136
United States	130	113	80	79
International	636	514	549	474
	947	761	796	689
Private debt (note 9.g)				
Canadian	258	258	203	199
	258	258	203	199
Defined contribution plan assets	46	47	37	34
Investments	24,662	21,819	24,910	20,729
Accrued investment income	67	66	62	63
Investment trades to settle	76	76	140	140
Derivatives	6	–	53	–
Investment related receivables	149	142	255	203
Investment trades to settle	(70)	(70)	(134)	(134)
Derivatives	(82)	–	(14)	–
Investment related liabilities	(152)	(70)	(148)	(134)
Net investment assets	\$ 24,659	\$ 21,891	\$ 25,017	\$ 20,798

1. Real estate assets are net of mortgage liabilities incurred in entities where the Plan has effective control or significant influence with a fair value of \$591 million (2017 – \$730 million).

a) Fair value measurements

i. Fair value hierarchy

Investment assets and investment related liabilities, recognized at fair value in the statement of financial position, must be classified in three fair value hierarchy levels, based on the transparency of the inputs used to measure the fair value as follows:

Level 1: Fair value is based on unadjusted quoted market prices in active markets for identical assets or liabilities.

Level 2: Fair value is based on observable inputs other than level 1 prices, such as quoted market prices for similar assets or liabilities in active markets, quoted market prices for identical assets or liabilities in markets that are not active and other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3: Fair value is based on valuation methods where inputs that are based on non-observable market data have a significant impact on valuation. Non-observable inputs are supported by little or no market activity.

The classification of net investment assets by fair value hierarchy, as at December 31, 2018, is as follows:

<i>(in millions of dollars)</i>	Level 1	Level 2	Level 3	Total
Cash and short-term securities	\$ 216	\$ 90	\$ –	\$ 306
Defined contribution pooled funds	–	46	–	46
Fixed income	–	9,807	–	9,807
Public equities	9,371	29	3	9,403
Real estate	–	–	2,895	2,895
Private equity	–	–	1,073	1,073
Infrastructure	–	–	947	947
Private debt	–	–	258	258
Derivatives	–	(76)	–	(76)
	\$ 9,587	\$ 9,896	\$ 5,176	\$ 24,659

The classification of net investment assets by fair value hierarchy, as at December 31, 2017, is as follows:

<i>(in millions of dollars)</i>	Level 1	Level 2	Level 3	Total
Cash and short-term securities	\$ 215	\$ 252	\$ –	\$ 467
Defined contribution pooled funds	–	37	–	37
Fixed income	4	9,285	–	9,289
Public equities	10,809	110	5	10,924
Real estate	–	–	2,431	2,431
Private equity	–	–	831	831
Infrastructure	–	–	796	796
Private debt	–	–	203	203
Derivatives	–	39	–	39
	\$ 11,028	\$ 9,723	\$ 4,266	\$ 25,017

ii. Significant transfers between level 1 and level 2

Changing market conditions during the year may result in transfers between the various fair value hierarchy levels particularly if there is a change in the availability of quoted market prices or observable market inputs. In 2018, there were no significant transfers from level 1 to level 2 (2017 – fixed income investments \$15 million). In 2018, there were no significant transfers from level 2 to level 1 (2017 – no significant transfers). Transfers between levels of the fair value hierarchy, for the purpose of preparing the above table, are deemed to have occurred at the beginning of the period.

iii. Changes in level 3 fair value measurements

Level 3 investments include real estate, infrastructure, private equity, private debt, certain public equities and some derivative contracts. For these investments, trading activity is infrequent and fair values are derived using valuation techniques. The significant inputs used in the pricing models, such as occupancy rates, capitalization rates and discount rates are either non-observable or based on significant assumptions.

Changes in the fair value of level 3 investments during 2018 are as follows:

<i>(in millions of dollars)</i>	Balance		Proceeds received	Gains (Losses)		Balance December 31, 2018
	December 31, 2017	Contributed capital		Realized	Unrealized	
Public equities*	\$ 5	\$ 3	\$ (5)	\$ –	\$ –	\$ 3
Real estate	2,431	408	(198)	71	183	2,895
Private equity	831	306	(275)	155	56	1,073
Infrastructure	796	142	(107)	36	80	947
Private debt	203	62	(2)	–	(5)	258
	\$ 4,266	\$ 921	\$ (587)	\$ 262	\$ 314	\$ 5,176

Changes in the fair value of level 3 investments during 2017 are as follows:

<i>(in millions of dollars)</i>	Balance		Proceeds received	Gains (Losses)		Balance December 31, 2017
	December 31, 2016	Contributed capital		Realized	Unrealized	
Public equities*	\$ 3	\$ 5	\$ (3)	\$ –	\$ –	\$ 5
Real estate	2,024	503	(254)	24	134	2,431
Private equity	637	261	(161)	49	45	831
Infrastructure	499	327	(78)	19	29	796
Private debt	72	128	(1)	–	4	203
	\$ 3,235	\$ 1,224	\$ (497)	\$ 92	\$ 212	\$ 4,266

* Contributed capital and proceeds received for Public Equities include assets transferred from and to other levels.

Level 3 investments are based on valuation models that use non-observable inputs such as capitalization rates. The following analysis illustrates the sensitivity of real estate investments valuations to reasonably possible alternative capitalization rate assumptions. Direct real estate investments used capitalization rates that vary from 2.1% (multi-residential) to 9.1% (industrial) (2017 – 3.8% to 7.0%). An increase of 25 basis points in the capitalization rate would decrease the total value of the real estate investment by \$151 million (2017 – \$154 million) and a decrease of 25 basis points in the capitalization rate would increase the total value of the real estate investment by \$167 million (2017 – \$172 million). The impact on the valuation from changes to the capitalization rate has been calculated independently of the impact of changes in other key variables. In actual experience, the factors that would cause a change in the capitalization rate would also cause changes in other valuation assumptions, which could amplify or reduce the impact on the valuation.

b) Derivative financial instruments

Derivative financial instruments are financial contracts, the value of which is derived from the value of the underlying assets, indices, interest rates or currency rates. The Plan uses derivatives to manage financial risk and to enhance returns. Derivative contracts are transacted either in the over-the-counter (OTC) market or on regulated exchanges. Derivative financial instruments held by the Plan consist of foreign exchange forward contracts.

Foreign exchange forward contracts are negotiated agreements that are transacted between counterparties in the OTC market. Foreign exchange forward contracts are contractual obligations to exchange one currency for another currency at a specified price at a predetermined future date based on the notional amount specified in the contract.

Notional amounts of derivative contracts represent the contracted amount to which a rate or price is applied for computing the cash flows to be exchanged. Notional amounts are the basis upon which the returns from, and the fair value of, the contract is determined. They are not recorded as assets or liabilities in these financial statements and they do not necessarily indicate the amount of future cash flow or the current fair value of the derivative contracts. Accordingly, notional amounts do not indicate the Plan's exposure to credit or market risks.

Derivative contracts are recorded in the statement of financial position at fair value. Derivative contracts become favourable (assets) or unfavourable (liabilities) as a result of fluctuations in market rates or prices relative to their terms. Fair values of derivative contracts can fluctuate significantly.

The aggregate notional amount and fair value of derivative contracts, as at December 31, 2018, are as follows:

<i>(in millions of dollars)</i>	Notional amount		Fair value	
	Long	Short	Assets	Liabilities
Foreign exchange forward contracts	\$ 291	\$ (2,761)	\$ 6	\$ (82)

The aggregate notional amount and fair value of derivative contracts, as at December 31, 2017, is as follows:

<i>(in millions of dollars)</i>	Notional amount		Fair value	
	Long	Short	Assets	Liabilities
Foreign exchange forward contracts	\$ 269	\$ (2,662)	\$ 53	\$ (14)

The net fair value of derivative contracts as at December 31, 2018, was a \$76 million liability position (2017 – \$39 million asset position).

As at December 31, 2018, the foreign exchange forward contracts' terms to maturity was within one year.

c) Securities lending

The Plan participates in a securities lending program where it lends securities it owns to approved borrowers for a fee. All securities lent are callable on demand at the option of the Plan.

The fair value of loaned securities and the securities collateral received in respect of these securities on loan, as at December 31, are as follows:

<i>(in millions of dollars)</i>	2018		2017	
	Fair value	Collateral	Fair value	Collateral
Securities Lending	\$ 6,586	\$ 6,717	\$ –	\$ –

The collateral value is composed of \$4,716 million of public equities and \$2,001 million of fixed income.

6. Risk management

Funding risk

One of the main risks that the Plan faces is funding risk, the risk that the Plan's investment asset growth and contribution rates will not be sufficient to cover the Plan's pension obligations, resulting in an unfunded liability.

The Plan's net funded position can change relatively quickly if there are changes in the value of the Plan's investment assets or pension obligations. Either can result in a mismatch between the Plan's assets and its liabilities. The most significant contributors to funding risk are declines in discount rates and investments failing to achieve expected returns. In addition, the Plan's pension obligations are affected by non-economic factors like changes in member demographics.

The Board manages funding risk by monitoring and reviewing the funded ratio on an ongoing basis and ensuring that investment decisions are made in accordance with the Statement of Investment Policies and Procedures (SIPP). The SIPP is designed to provide the Plan with a long-term rate of return, net of expenses, of 4.5% above inflation. Achieving the 4.5% target will assist the Plan in meeting its funding objectives and the ongoing growth of its pension obligations. Asset-liability studies are conducted periodically to ensure that the Plan's investment strategy remains appropriate in challenging economic environments.

In 2015, an asset liability study was concluded with a primary focus of minimizing the volatility between net investment assets and pension obligations. Liability-driven investing (LDI) was introduced, which is an investment strategy that manages the Plan's assets relative to its liabilities and is considered a form of de-risking. The intent is to minimize funding volatility, which is done primarily by attempting to better match the Plan's assets with the liabilities. As a first step, the fixed income target allocation would be increased. Secondly, long duration bonds (i.e. bonds with a duration of 14-15 years) would also be increased – better matching the Plan's liabilities. Thirdly, the target allocation to alternative assets (real estate, private equity and infrastructure) would be increased gradually to potentially enhance long-term returns while diversifying risk. The timing for full implementation is not optimal in that interest rates are low relative to historical rates. If de-risking occurs too quickly it will not allow the Plan's funded position to improve as interest rates normalize. Therefore, a 10 step dynamic investment de-risking glidepath was established. The approved approach makes automatic shifts in asset allocations as the specified solvency ratio increases. This will ensure a gradual movement toward the ultimate target asset mix which will enable the funded position to improve with rising interest rates. The Plan will perform an asset mix study every three years or when the funding ratio trigger of 90.5% is reached, if sooner, in order to assess and possibly adjust the investment strategy. The plan has undertaken an asset-liability study that will assess and possibly adjust the investment strategy.

Financial risk management

The Plan is subject to a variety of financial risks as a result of its investment activities that could adversely affect its cash flows, financial position and investment income. The objective of investment risk management is to minimize the potential adverse effect of these risks and to optimize the gains over the entire portfolio.

The Board, with the assistance of the Pension Committee, staff, agents and advisors, is responsible for prudently managing, investing and administering the Plan in order to secure the pension benefit for Plan members. This requires the Board's oversight of the assets and liabilities to help ensure they are being managed in the best interest of the members. The Board has established an investment risk management framework, which outlines the Board's tolerance for risk and guides the development of investment strategies to meet the Plan's overall objectives.

Risk management for the Plan is performed by the Investment Management team through compliance with various processes and policies. Some of the policies in place include the SIPP and each of the fund manager mandates. The SIPP, approved by both the Pension Committee and the Board, prescribes a long-term debt-equity asset mix policy, requires portfolio investment diversification, sets guidelines on investment categories, and limits exposure to individual investments and major asset classes.

Risk assessment analysis for each risk category is performed and monitored regularly against the strategy and actions taken, when appropriate, according to the Plan's approved policies. In addition, as required, these risks are reviewed by the Investment Advisory Committee, the Pension Committee and the Board.

a) Credit risk

Credit risk is the risk of loss should the counterparty to a transaction default or otherwise fail to perform under the terms of the contract. The Plan is exposed to direct credit risk through its short-term securities, fixed income securities, derivative contracts and real estate rental income. Credit risk on short-term securities is mitigated by only transacting with highly rated counterparties and establishing limits on the amount and term of short-term investments.

Credit risk on fixed income securities is mitigated by establishing limits on exposure to individual counterparties, monitoring credit ratings, and adhering to the investment criteria as set out in the Plan's SIPP.

The Plan's fixed income investment credit risk exposure as at December 31 is as follows:

<i>(in millions of dollars)</i>	2018		2017	
Credit rating				
AAA/AA	\$ 5,560	57%	\$ 5,403	59%
A	2,595	27%	2,309	25%
BBB	1,175	12%	1,053	11%
<BBB	425	4%	471	5%
	\$ 9,755	100%	\$ 9,236	100%

Credit risk on OTC derivative foreign exchange forward contracts is mitigated through the use of master netting agreements with counterparties.

Credit risk associated with the program is mitigated through receipt of non-cash security collateral with a minimum value of 102% of the fair value of the securities lent and is monitored on a daily basis. In addition, a full indemnity is provided by the Royal Bank of Canada, the Agent providing securities lending services to the Plan.

Credit risk on the Plan's real estate investments arises from the possibility that tenants may be unable to fulfill their lease commitments. The Plan mitigates this risk by diversifying investments by property type and geographic location and ensuring investments are managed by professional property managers.

b) 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, whether these changes are caused by factors specific to an individual investment or factors affecting all securities traded in the market. Market risk comprises interest rate risk, currency risk and other price risk.

i. Interest rate risk

Interest rate risk is the risk that the fair value or future cash flow of the Plan's investments will fluctuate due to changes in market interest rates. It arises primarily on interest-bearing financial instruments held in the Plan's short-term securities and fixed income portfolio. Interest rate risk indirectly affects equities as earnings multiples change with changes in interest rates and the relative attractiveness of equities also changes with changes in interest rates. Excess cash is invested in short-term securities.

To properly manage the Plan's interest rate risk, guidelines on the weighting, term to maturity and duration for the short-term securities and fixed income securities are set and monitored. In addition, to further mitigate interest rate risk the Plan may enter into interest rate futures and interest rate swap contracts.

The terms to contractual maturity of the Plan's fixed income securities as of December 31, are as follows:

<i>(in millions of dollars)</i>	2018				2017	
	Terms to maturity				Total	Total
Interest-bearing financial instruments	Within 1 year	1 to 5 years	> 5 to 10 years	Over 10 years	Total	Total
Fixed income – Bonds						
Government of Canada	\$ 8	\$ 133	\$ 323	\$ 602	\$ 1,066	\$ 1,629
Canadian Corporate	9	916	514	1,152	2,591	3,084
United States Corporate	3	108	285	41	437	473
International Government	–	1	1	–	2	4
International Corporate	11	36	191	61	299	225
Provincial and municipal	–	9	427	2,256	2,692	1,553
Real return – Canada	–	140	301	1,698	2,139	1,673
Real return – Provincial	–	176	42	183	401	462
Real return – Corporate	–	–	–	128	128	133
	\$ 31	\$ 1,519	\$ 2,084	\$ 6,121	\$ 9,755	\$ 9,236

As at December 31, 2018, an increase or decrease of 1% in the prevailing interest rates, assuming a parallel shift in the yield curve, with all other variables remaining constant, would decrease or increase the value of net assets available for benefits by approximately \$1,054 million (2017 – \$895 million). The Plan's interest rate sensitivity was determined based on the weighted duration of the Plan's fixed income securities. In practice, actual results may differ from this sensitivity analysis and the difference could be material.

ii. Currency risk

Currency risk is the risk that the value of the Plan's investments will fluctuate due to changes in foreign exchange rates. It arises from Plan investments that are denominated in a currency other than the Canadian dollar, which is the Plan's functional currency. The Plan is exposed to the risk that the value of securities denominated in other currencies will fluctuate due to changes in foreign currency exchange rates.

The Plan does not speculate in currencies or hold net short positions. To mitigate its overall currency exposure, the Plan enters into derivative contracts for the purchase or sale of foreign currency, to adjust the exposure to a particular currency. To mitigate counterparty risk, all transactions settle on a net basis. The Plan hedges between 15% and 45% of its total foreign currency exposure. No single foreign currency exposure can exceed 25% of Plan assets. All current contracts expire within one year. The Plan only deals with highly-rated counterparties, typically major financial institutions, with a minimum credit rating of A as reported by a recognized credit rating agency.

The Plan's net investment asset exposure, net of foreign exchange forward contracts, by geographical location of the issuer and by currency, as at December 31, is as follows:

<i>(in millions of dollars)</i>	Geographical location		Currency	
Currency – Canadian \$ equivalent, net of foreign exchange forward contracts	2018	2017	2018	2017
Net investment assets				
Canadian dollar	\$ 17,656	\$ 17,689	\$ 17,888	\$ 17,870
United States dollar	3,247	3,402	4,181	4,286
Euro	867	894	855	831
Other European	985	948	630	664
Japanese yen	278	291	278	291
Other Pacific	390	379	479	509
Emerging markets	1,236	1,414	348	566
	\$ 24,659	\$ 25,017	\$ 24,659	\$ 25,017

Based on the Plan's net exposure as at December 31, 2018, if the Canadian dollar strengthened or weakened by 10% in relation to all foreign currencies, with all other factors remaining constant, net assets available for benefits would have decreased or increased by approximately \$677 million (2017 – \$715 million). In practice, actual results may differ from this sensitivity analysis and the difference could be material.

The Plan's foreign currency forward contracts by currency as of December 31 are as follows:

<i>(in millions of dollars)</i>	2018				2017			
	Notional amount Long	Notional amount Short	Fair value	Average rate	Notional amount Long	Notional amount Short	Fair value	Average rate
United States	\$ 183	\$ (2,000)	\$ (60)	\$ 1.32	\$ 223	\$ (1,952)	\$ 45	\$ 1.28
Euro	85	(495)	(9)	1.53	21	(383)	(3)	1.50
Japanese yen	–	(81)	(4)	0.01	–	(110)	3	0.01
British pound	23	(185)	(3)	1.71	25	(217)	(6)	1.66
	\$ 291	\$ (2,761)	\$ (76)		\$ 269	\$ (2,662)	\$ 39	

iii. 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 risk or currency risk. Changes in market prices may be caused by factors specific to an individual financial instrument or its issuer, or factors affecting all similar financial instruments traded in the market. The Plan is subject to other price risk primarily through its public equity investments.

The Plan moderates other price risk through its policy of diversifying its investments across asset classes and geographical locations based on criteria established in the SIPP. Fund managers and investment staff regularly monitor the portfolio by sector, country, market capitalization and trading liquidity.

The Plan's exposure to other price risk as at December 31 is as follows:

<i>(in millions of dollars)</i>	2018		2017	
	Effective other price risk exposure	% of total other price risk exposure	Effective other price risk exposure	% of total other price risk exposure
Public equities				
Canadian	\$ 3,027	32%	\$ 3,669	34%
United States	3,385	36%	3,797	35%
International	2,970	32%	3,443	31%
	\$ 9,382	100%	\$ 10,909	100%

As at December 31, 2018, 38% (2017 – 44%) of the Plan's investments were in public equities. If public equity prices increased or decreased by 10% as at year-end, with all other factors remaining constant, net assets available for benefits would have increased or decreased by approximately \$936 million (2017 – \$1,083 million). In practice, actual results may differ from this sensitivity analysis and the difference could be material.

c) Liquidity risk

Liquidity risk is the risk that the Plan will not be able to meet its financial obligations as they fall due. Liquidity risk also includes the risk of not being able to liquidate assets in a timely manner at a reasonable price. The financial liabilities of the Plan include investment related liabilities, all of which will become due within the next year. The Plan is also exposed to the settlement of derivatives and pension related payments. Note 5.b provides the terms to contractual maturity of the Plan's derivative contracts.

The Plan forecasts its cash requirement over the short and long-term to determine whether sufficient funds will be available. The Plan's primary sources of liquidity are funds generated from investments and employer and employee contributions. The Plan primarily invests in securities that are traded in active markets and can be readily sold. Real estate, private equity, infrastructure and private debt investments are also subject to liquidity risk, which is mitigated by managing the overall amount invested in those asset classes and by limiting the amount invested in any one real estate property or pooled fund. The Plan retains sufficient cash and short-term security positions to maintain a reasonable level of liquidity.

The Plan's primary future liabilities include the pension obligations (note 14). In the normal course of operations, the Plan enters into mortgages and contracts that give rise to commitments (note 19) which may also impact liquidity.

7. Contributions and other receivables

<i>(in millions of dollars)</i>		2018	2017
Current service contributions	– Sponsor	\$ 30	\$ 34
	– Members	10	10
Other contributions ¹	– Leave of absence	32	33
	– Elective service	19	21
	– Special Sponsor	2	2
Other		10	12
		\$ 103	\$ 112

1. Leave of absence contribution receivables for approved leave of absence without pay are generally payable over a period equal to twice the period of leave of absence. Elective service contribution receivables for eligible service are payable over a maximum payment period of 20 years for members 45 years or older at the date of election, or to age 65 for members less than age 45 at the date of election.

8. Accounts payable and accrued liabilities

<i>(in millions of dollars)</i>	2018	2017
Accounts payable and accrued liabilities	\$ 29	\$ 29
Accrued benefits payable	18	18
	\$ 47	\$ 47

9. Investment in real estate, private equity, infrastructure and private debt

a) Investment in real estate

The investment in real estate as at December 31 is as follows:

<i>(in millions of dollars)</i>	2018		2017	
	Fair value	Cost	Fair value	Cost
Direct investments	\$ 1,661	\$ 1,214	\$ 1,509	\$ 1,144
Pooled funds	1,234	996	922	784
	\$ 2,895	\$ 2,210	\$ 2,431	\$ 1,928

b) Real estate net investment income

Real estate net investment income for the year ended December 31 is as follows:

<i>(in millions of dollars)</i>	2018	2017
Investment income	\$ 131	\$ 105
Net realized gains	71	24
Changes in net unrealized gains	183	134
	\$ 385	\$ 263

c) Investment in private equity

The investment in private equity as at December 31 is as follows:

<i>(in millions of dollars)</i>	2018		2017	
	Fair value	Cost	Fair value	Cost
Direct investments	\$ 35	\$ 26	\$ 41	\$ 32
Pooled funds	1,038	754	790	563
	\$ 1,073	\$ 780	\$ 831	\$ 595

d) Private equity net investment income

Private equity net investment income for the year ended December 31 is as follows:

<i>(in millions of dollars)</i>	2018	2017
Investment income	\$ 7	\$ 5
Net realized gains	155	49
Changes in net unrealized gains	56	45
	\$ 218	\$ 99

e) Investment in infrastructure

The investment in infrastructure as at December 31 is as follows:

<i>(in millions of dollars)</i>	2018		2017	
	Fair value	Cost	Fair value	Cost
Direct investments	\$ 224	\$ 171	\$ 254	\$ 205
Pooled funds	723	590	542	484
	\$ 947	\$ 761	\$ 796	\$ 689

f) Infrastructure net investment income

Infrastructure net investment income for the year ended December 31 is as follows:

<i>(in millions of dollars)</i>	2018	2017
Investment income	\$ 41	\$ 39
Net realized gains	36	19
Changes in net unrealized gains	80	29
	\$ 157	\$ 87

g) Investment in private debt

The investment in private debt as at December 31 is as follows:

<i>(in millions of dollars)</i>	2018		2017	
	Fair value	Cost	Fair value	Cost
Pooled funds	\$ 258	\$ 258	\$ 203	\$ 199
	\$ 258	\$ 258	\$ 203	\$ 199

h) Private debt net investment income

Private debt net investment income for the year ended December 31 is as follows:

<i>(in millions of dollars)</i>	2018	2017
Investment income	\$ 9	\$ 5
Changes in net unrealized gains	(5)	4
	\$ 4	\$ 9

10. Net investment income

Net investment income by primary financial instrument type for the year ended December 31 is as follows:

<i>(in millions of dollars)</i>	2018	2017
Interest income		
Cash and short-term securities	\$ 5	\$ 3
Canadian fixed income	276	248
United States fixed income	26	28
International fixed income	1	1
Dividend income		
Canadian equities	114	103
United States equities	86	86
International equities	68	79
Real estate income (note 9.b)	131	105
Private equity income (note 9.d)	7	5
Infrastructure income (note 9.f)	41	39
Private debt income (note 9.h)	9	5
Security lending income (note 5.c)	2	–
Investment Income	766	702
Net realized gains (losses) on investment assets and liabilities		
Cash and short-term securities	1	–
Canadian fixed income	(84)	(54)
United States fixed income	(13)	38
International fixed income	–	–
Canadian equities	190	230
United States equities	402	559
International equities	170	224
Real estate (note 9.b)	71	24
Private equity (note 9.d)	155	49
Infrastructure (note 9.f)	36	19
	928	1,089
Changes in net unrealized gains	(1,451)	648
Changes in fair values of investment assets and liabilities	(523)	1,737
	\$ 243	\$ 2,439

11. Contributions

<i>(in millions of dollars)</i>	2018	2017
Sponsor – Current service	\$ 254	\$ 269
– Special payments	30	34
	\$ 284	\$ 303
Members – Current service	\$ 234	\$ 234
– Past service	5	5
	\$ 239	\$ 239

Contributions consist of both DB and DC components.

12. Benefits

<i>(in millions of dollars)</i>	2018	2017
Retirement and survivor pension benefits	\$ 928	\$ 887
Commuted value transfers	64	73
Lump sum death benefits	9	12
Refunds	1	1
Defined contribution termination payments	5	3
	\$ 1,007	\$ 976

13. Administration expenses

<i>(in millions of dollars)</i>	2018	2017
Plan administration	\$ 17	\$ 17
Investment management fees	93	78
Transaction costs	5	11
Professional fees	4	3
Custodial fees	3	2
Other	4	4
	\$ 126	\$ 115

14. Pension obligations

<i>(in millions of dollars)</i>	2018	2017
DB obligations	\$ 21,528	\$ 20,790
DC obligations	46	37
	\$ 21,574	\$ 20,827

a) Actuarial methodology

The actuarial present value of the pension obligations is an estimate of the value of pension obligations of the Plan in respect of benefits accrued to date for all active and inactive members. The obligation is measured using the same actuarial assumptions and methods used for the Plan's going-concern funding valuation as required by OSFI and the PBSA, and reflect management's best estimate. The most recent actuarial valuation for funding purposes, prepared by Mercer (Canada) Limited as at December 31, 2017, was extrapolated to determine the pension obligations as at December 31, 2018. The valuation used the projected accrued benefit actuarial cost method with respect to benefits, and assumes that the Plan will continue on a going-concern basis. The next valuation for funding purposes will be prepared as of December 31, 2018.

b) Actuarial assumptions

The actuarial assumptions used in determining the pension obligations reflect management's best estimate of future economic events and involve both economic and demographic assumptions. The demographic assumptions include considerations such as mortality, withdrawals and retirement rates. The primary economic assumptions include the discount rate, salary escalation rate and the inflation rate. The discount rate is based on the long-term expected fund return, less a margin for adverse deviations. The inflation rate is based on the consumer price index and the salary escalation rate incorporates the most recent collective agreements, the inflation rate assumption and the long-term expectation of growth in wages. Each of the assumptions is updated periodically based on a detailed review of the Plan's actual results and expectations for future trends.

A summary of the primary economic assumptions as at December 31 is as follows:

	2018	2017
Discount rate	5.5%	5.5%
Salary escalation rate		
– Union groups	Per the most recent collective agreement	Per the most recent collective agreement
– Following expiry of collective agreements and non-unionized groups – average of	2.0% per year through 2021, 2.25% per year in 2022 and 2023, and 2.5% per year from 2024	2.0% per year through 2019 2.25% per year from 2020 through 2023, and 2.5% per year from 2024
Consumer price index	2.0%	2.0%

Changes in long-term economic assumptions and recognition of new collective agreements resulted in a net increase in the pension obligation of \$129 million (2017 – net increase of \$10 million). Changes to demographic assumptions resulted in no change in the pension obligation (2017 – net decrease of \$14 million).

The life expectancy used in determining the mortality rates, as at December 31 is as follows:

	2018	2017
Life expectancy at age 60 at December 31, 2018, and 2017 (in years)		
Males	28	28
Females	30	30
Life expectancy at age 60 at December 31, 2038, and 2037 (in years)		
Males	29	29
Females	30	30

c) Experience gains and losses

Experience gains and losses represent the change in the pension obligation due to the difference between the expected experience and the actual results. During 2018, the experience gains were \$5 million (2017 – gains of \$106 million).

d) Sensitivity analysis

The discount rate used to estimate the present value of the pension obligations has a significant effect on the pension obligations at the end of the year. A decrease of 50 basis points in the discount rate would have increased the pension obligations by \$1,504 million and an increase of 50 basis points in the discount rate would have decreased the pension obligation by \$1,403 million. The pension obligation is sensitive to changes in mortality rates. An increase in the assumed base mortality rates by 10% at every age would have decreased the pension obligation by \$358 million and a decrease in the assumed base mortality rates by 10% at every age would have increased the pension obligation by \$364 million.

15. Supplementary Retirement Arrangement (SRA)

The SRA provides Plan members and their survivors with benefits that, because of limitations imposed by the ITA, cannot be provided under a registered pension plan. The SRA, together with the Plan, provides overall pension benefits to eligible members.

The SRA is registered with the CRA as a Retirement Compensation Arrangement under registration number RC4102229 and is administered in accordance with the applicable requirements of the ITA. Because the assets of the SRA are held in a separate fund, the net assets available for benefits and the pension obligations of the SRA are not included in these financial statements.

16. Funding valuation

In accordance with the PBSA and the ITA, an actuarial valuation is required to be filed every year, unless the funded status is greater than 120%, to estimate the Plan's surplus or deficit on a going-concern and solvency basis, and to determine the Plan's minimum funding requirements. The last actuarial valuation filed with OSFI and the CRA, as at December 31, 2017, disclosed a going-concern surplus of \$2,961 million and a solvency deficit to be funded of \$6,446 million.

The current extrapolated estimate of the financial position of the Plan as at December 31, 2018, based on existing rules and regulations, is a going-concern surplus of approximately \$3,317 million and a solvency deficit to be funded of approximately \$5,735 million. Actual results may differ significantly from these estimates as actuarial assumptions are being finalized.

Over the past few years, low solvency discount rates increased the pension plans' solvency obligations and deficits significantly. In 2011 the Government of Canada implemented changes to pension legislation to provide defined benefit plans subject to the *Pension Benefits Standards Act, 1985*, including Crown corporations, with relief from the need to make special solvency payments if certain conditions were met. Under these regulations, the aggregate amount of the relief used by the Corporation was limited to 15% of the fair value of plan assets. In 2017, these regulations were amended to change the solvency reduction limit applicable to pension plans of Crown corporations from 15% of plan assets to 15% of the plan's solvency liabilities; beyond that threshold, Canada Post, as plan sponsor, would be required to make special payments to eliminate the deficit over five years on a solvency basis.

In February 2014, the Government of Canada introduced the Canada Post Corporation Pension Plan Funding Regulations. Under these regulations, the Corporation was exempt from making special contributions into its Registered Pension Plan from 2014 to 2017. This temporary measure recognized the operational challenges encountered by the Corporation and provided immediate relief on its liquidities.

In 2018, Canada Post Corporation reverted back to the regulations in the *Pension Benefits Standards Act, 1985*. Canada Post did not have to make special payments in 2018 under the regulations. Without this source of pension relief, the Corporation would have had to make special payments of an estimated \$1.3 billion in 2018 (including special payments of \$30 million that are required to be made in order to cover transfer deficiencies). As at December 2018, the aggregate amount of the funding relief used by the Corporation was \$3,520 million. Canada Post expects to make no special payments in 2019 other than what are required to be made to cover transfer deficiencies.

Under CPA Canada Section 4600, the actuarial asset value adjustment is not included in the valuation methodology for accounting purposes. Therefore, the Plan surplus in these financial statements is different from the surplus (deficit) determined by the funding valuation. The following table provides a reconciliation between the surplus recorded in the valuation for funding purposes to the amount recorded in these financial statements.

<i>(in millions of dollars)</i>	Extrapolation	Filed valuation
	2018	2017
Surplus per valuation for funding purposes	\$ 3,317	\$ 2,961
Actuarial asset value adjustment	(176)	1,322
Other	-	(28)
Surplus per financial statement	\$ 3,141	\$ 4,255

17. Capital

Management of the Plan defines its capital as the funded status [surplus/(deficit)] as determined annually based on the fair value of the investment assets less the pension obligations as determined by an actuarial valuation prepared by an independent actuary. The funding surplus or deficit is used to measure the long-term health of the Plan to meet its obligations to its members and their survivors.

Management's objective, when managing the Plan's capital, is to ensure the Plan is fully funded to meet its benefit obligations over the long term through the management of investments, contribution rates and benefits.

Management has adopted a SIPP for the Plan, which sets investment objectives, guidelines and benchmarks used in investing the Plan's assets, permitted categories of investments, asset mix diversification and rate of return expectations. The Plan's SIPP was last amended on November 21, 2018. The Pension Committee is responsible for ensuring that the Plan assets are managed in accordance with the SIPP and the objectives and goals outlined therein.

18. Related party transactions

The Plan had the following transactions with related parties:

a) Transactions with the Corporation

Transactions with the Corporation were conducted in the normal course of activities and measured at the exchange amount. Included in administration expenses is \$13 million (2017 – \$12 million) for administration services provided by the Corporation to the Plan. Included in accounts payable and accrued liabilities is \$14 million (2017 – \$14 million) due to the Corporation for administration services provided to the Plan which are unsecured and will be settled in cash.

b) Key management personnel compensation

The Plan defines its key management personnel (KMP) as Canada Post Corporation's Board of Directors and senior executives responsible for planning, controlling and directing the activities of the Plan. As the Plan's KMP are employees of Canada Post Corporation, the remuneration, which includes short-term and post-employment benefits, is paid by the Corporation and the Plan reimburses the Corporation for a portion of these expenses.

The reimbursement for 2018 and 2017 for certain senior executives was \$1,061 thousand and \$1,001 thousand respectively and is included in the amount disclosed in note 18a. No remuneration is charged from the Corporation to the Pension Plan for the services provided by the Board of Directors of Canada Post Corporation and other senior executives. Full disclosure of the Board of Directors' remuneration can be found in the Canada Post Corporation consolidated financial statements.

19. Commitments and guarantees

In addition to derivative contracts (note 5b), the Plan enters into commitments and guarantees related to the funding of investments. Future commitments to fund investments include investments in infrastructure, real estate, private equity and private debt limited partnership agreements. The future commitments are generally payable on demand based on the capital needs of the investment. As at December 31, 2018, these future commitments amounted to \$1,898 million (2017 – \$1,779 million). There was no other future contractual commitments as at December 31, 2018 (2017 – nil). There was no payable under guarantees provided as part of investment transactions as at December 31, 2018 (2017 – \$nil). Guarantees and commitments are often provided as part of developing or holding an investment and as such often have no fixed expiration date.