

## FINANCIAL REPORTING

The Financial Reporting section highlights sections of the financial statements that management views as key to understanding the financial position of the plan.

Included in the pages preceding the consolidated financial statements are three letters that describe the responsibility of management, the auditors and the actuaries:

- Management's Responsibility for Financial Reporting – identifies that management is responsible for preparation of the financial statements. The financial statements are prepared according to Canadian accounting standards for pension plans. The board, which is independent from management, has ultimate responsibility for the financial statements and is assisted in its responsibility by the Audit & Actuarial Committee.
- Auditor's Report to the Administrator – the formal opinion issued by an external auditor on the consolidated financial statements.
- Actuaries' Opinion – identifies that valuation methods are appropriate, data is sufficient and reliable and the assumptions are in accordance with accepted actuarial practices. The actuarial valuation is based on membership data, actuarial and accounting standards, and long-term interest rates.

## FINANCIAL STATEMENT VALUATION

The financial statement valuation measures the fair value of the plan's net assets available for benefits and pension liabilities at a point in time. The financial statement valuation provides a snapshot of the financial health of the plan as it does not assume any future contributions and does not project the cost of benefits that current members have not yet earned. The financial statement valuation is therefore not considered an indicator of the long-term sustainability of the plan and not used by the plan sponsors to set contribution rates and benefit levels.

### Methods and assumptions used for the financial statement valuation

The financial statement valuation is prepared in accordance with guidance from Chartered Professional Accountants of Canada (CPA Canada). The pension liabilities, prepared by an independent actuary, take into account pension credit earned to date by all plan members and contributions already received by the plan. Valuation techniques, estimates and pension liabilities are described further in the notes to the consolidated financial statements.

The actuarial assumptions used in determining the pension liabilities reflect best estimates of future economic and non-economic factors proposed by management and approved by the plan's board. Actual experience typically differs from these assumptions, and the differences are recognized as experience gains and losses in future years.

The discount rate for the financial statements is based on market rates, as at the valuation date, of bonds issued by the Province of Ontario, which have characteristics similar to the Plan's liabilities. The discount rate is determined by using a cash flow-based estimation methodology which applies a weighted average discount rate that reflects the estimated timing and amount of benefit payments. The discount rate used is 2.95% (3.25% in 2016). Further details on the methods and assumptions used can be found in note 4 of the plan's consolidated financial statements.

## FINANCIAL POSITION AS AT DECEMBER 31, 2017

The plan ended 2017 with a financial statement deficit of \$14.8 billion, up from the deficit of \$13.8 billion at the end of 2016. The deficit represents the difference between net assets available for benefits of \$189.5 billion and accrued pension benefits of \$204.3 billion at year end.

### YEAR-END FINANCIAL POSITION

As at December 31 (Canadian \$ millions)	2017	2016
Net assets available for benefits	\$ 189,478	\$ 175,570
Accrued pension benefits	204,322	189,397
Deficit	\$ (14,844)	\$ (13,827)

During 2017, net assets available for benefits increased by \$13.9 billion. Net investment income of \$17.0 billion and contributions of \$3.4 billion increased net assets available for benefits, while benefits of \$5.9 billion and administrative expenses of \$0.5 billion decreased the net assets available. Net investment income of \$17.0 billion was due to gains across all asset classes with the largest gains from equities (public and private and infrastructure (investment returns are discussed in the Investments section of the MD&A).

### NET ASSETS AVAILABLE FOR BENEFITS

As at December 31 (Canadian \$ millions)	2017	2016
Net assets available for benefits, beginning of year	\$ 175,570	\$ 171,440
Net investment income	16,980	6,998
Contributions	3,385	3,363
Benefits	(5,932)	(5,725)
Administrative expenses	(525)	(506)
Increase in net assets available for benefits	13,908	4,130
Net assets available for benefits, end of year	\$ 189,478	\$ 175,570

Accrued pension benefits increased by \$14.9 billion during the year to \$204.3 billion. Changes in actuarial assumptions and methods increased the accrued pension benefits amount by \$6.7 billion. Benefits paid during 2017 of \$5.9 billion include the addition of 5,128 retirement and disability pensions and 1,017 survivor pensions during 2017, as well as a 1.3% cost-of-living increase.

### ACCRUED PENSION BENEFITS

As at December 31 (Canadian \$ millions)	2017	2016
Accrued pension benefits, beginning of year	\$ 189,397	\$ 173,266
Interest on accrued pension benefits	6,156	5,679
Benefits accrued	6,268	5,303
Benefits paid	(5,927)	(5,725)
Changes in actuarial assumptions and methods	6,653	9,394
Changes in level of conditional indexing	1,207	1,674
Experience losses/(gains)	568	(194)
Net increase in accrued pension benefits	14,925	16,131
Accrued pension benefits, end of year	\$ 204,322	\$ 189,397

### FAIR VALUE HIERARCHY

The plan's investments and investment-related liabilities are stated at fair value. The objective of fair value determination is to estimate an exit price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants. Valuation techniques are employed in order to measure fair value. As described in note 1c of the plan's consolidated financial statements, these techniques utilize inputs such as prices for market transactions, discount rates, contractual or expected future cash flows and other relevant factors that impact the assessment of fair value.

As required under Canadian accounting standards, the plan has classified and disclosed its fair value measurements into one of three categories based upon the degree of observable inputs used in their determination. Level 1 inputs consist of quoted prices in active markets for identical assets or liabilities; Level 2 inputs are derived from observable prices but do not meet the Level 1 criteria, while Level 3 inputs are unobservable. If different levels of inputs are used to measure the fair value of an investment, the classification within the hierarchy is based upon the lowest level input that is significant to the fair value measurement.

Level 1 net investments comprise the majority of the plan's government bonds and publicly traded equities, including these securities that are sold but not yet purchased, which are valued using quoted prices. Examples of Level 2 net investments include marketable corporate bonds that are valued using quoted prices from less actively traded markets and securities purchased under agreements to resell and securities sold under agreements to repurchase, which are valued using discounted cash flows and observable market yields. Examples of Level 3 investments include real assets such as real estate and infrastructure, non-publicly traded equities, and natural resource investments, which are valued using appropriate techniques

that involve the use of significant unobservable inputs such as forecasted cash flows or other information that is specific to the entity.

The table below shows the plan's net investments based on the fair value hierarchy. Further details of each category can be found in note 2a of the plan's consolidated financial statements.

As at December 31, 2017 (Canadian \$ millions)	Level 1	Level 2	Level 3	Total
Equity	\$ 24,536	\$ 158	\$ 34,864	\$ 59,558
Fixed income	87,868	9,612	14,390	111,870
Inflation sensitive	—	—	6,553	6,553
Real assets	3,083	329	45,305	48,717
Investment-related receivables	2,396	27,932	97	30,425
Investment-related liabilities	(14,136)	(55,805)	(1,830)	(71,771)
Net investments	\$ 103,747	\$ (17,774)	\$ 99,379	\$ 185,352

## EFFECTIVE OVERSIGHT AND CONTROLS

### Disclosure and financial reporting controls

We take guidance from National Instrument 52-109, Certification of Disclosure in Issuers' Annual and Interim Filings, issued by the Canadian Securities Administrators, as part of our commitment to good governance practices. The President and CEO, and the Chief Financial Officer are responsible for establishing and maintaining disclosure controls and procedures, and internal control over financial reporting.

We have designed disclosure controls and procedures to provide reasonable assurance that material information related to the plan is gathered and reported to management in order to allow timely decisions regarding public disclosure. We evaluated our disclosure controls and procedures and concluded as at December 31, 2017, that they are effective.

We have also designed internal control over financial reporting, using the Integrated Framework issued in 2013 by the Treadway Commission's Committee of Sponsoring Organizations (the COSO Framework), to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with Canadian Generally Accepted Accounting Principles. We have evaluated the effectiveness of the plan's internal control over financial reporting and concluded they are effective as at year-end.

### Protecting audit quality and integrity

A key oversight activity of audit committees is annually assessing the effectiveness of the external auditor. This helps audit committees meet their responsibility to make informed recommendations to the board on whether or not to reappoint the external auditor. Ontario Teachers' has conducted assessments annually. Ontario Teachers' Audit & Actuarial Committee recommended, and the board approved, the reappointment of the external auditor for 2017.

Ontario Teachers' and other corporate governance advocates have expressed concern over the years about accounting firms that audit public companies and also earn substantial revenue from those companies for non-audit consulting services. We believe that such consulting fees can compromise, or appear to compromise, the integrity of the audit function.

We strive to minimize our own use of consulting services involving the plan's auditor and we disclose the total amount paid for such services. In 2017, fees paid to Deloitte Touche Tohmatsu Limited (of which the Canadian firm is the plan's auditor) totalled \$14.2 million (\$11.1 million in 2016, of which \$13.6 million was for audit activities and \$585,000 was for non-audit services. Of the \$585,000 paid for non-audit services, approximately \$405,000 related to the plan, \$75,000 related to subsidiaries audited by Deloitte and the balance of \$105,000 was for subsidiaries not audited by Deloitte. Of the \$75,000 paid by the subsidiaries, \$10,000 was paid to Deloitte (Canada) and \$65,000 was paid to Deloitte firms outside of Canada, which are considered to have lower risk of impairing the independence of the plan's auditor.

## MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

The consolidated financial statements of the Ontario Teachers' Pension Plan have been prepared by management, which is responsible for the integrity and fairness of the data presented, including the many amounts which must, of necessity, be based on estimates and judgments. The accounting policies followed in the preparation of these consolidated financial statements conform to Canadian accounting standards for pension plans. Financial information presented throughout the annual report is consistent with the consolidated financial statements.

Systems of internal control and supporting procedures are maintained to provide assurance that transactions are authorized, assets safeguarded and proper records maintained. These controls include quality standards in hiring and training of employees, a code of conduct, 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 through the organization.

Ultimate responsibility for the consolidated financial statements rests with the members of the Board. The Board is assisted in its responsibilities by the Audit & Actuarial Committee (the Committee), consisting of seven Board members who are not officers or employees of the Plan Administrator. In addition, the Committee reviews the recommendations of the internal and external auditors for improvements in internal control and the action of management to implement such recommendations. In carrying out its duties and responsibilities, the Committee meets regularly with management and with both the external and internal auditors to review the scope and timing of their respective audits, to review their findings and to satisfy itself that their responsibilities have been properly discharged. This Committee reviews the consolidated financial statements and recommends them for approval by the Board.

The Plan's external auditor, Deloitte LLP, is directly accountable to the Audit & Actuarial Committee and has full and unrestricted access to the Committee. They discuss with the Committee their audit and related findings as to the integrity of the Plan's financial reporting and the adequacy of internal control systems. The Plan's external auditor has conducted an independent examination of the consolidated financial statements in accordance with Canadian generally accepted auditing standards, performing such tests and other procedures as they consider necessary to express the opinion in their Report to the Administrator.



**Ron Mock**

President and Chief Executive Officer

March 1, 2018



**David McGraw**

Chief Financial Officer

## AUDITOR'S REPORT TO THE ADMINISTRATOR

We have audited the accompanying consolidated financial statements of Ontario Teachers' Pension Plan Board which comprise the consolidated statement of financial position as at December 31, 2017, and the consolidated statement of changes in net assets available for benefits, consolidated statement of changes in accrued pension benefits and consolidated statement of changes in deficit for the year then ended and a summary of significant accounting policies and other explanatory information.

### MANAGEMENT'S RESPONSIBILITY FOR THE CONSOLIDATED FINANCIAL STATEMENTS

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

### AUDITOR'S RESPONSIBILITY

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

### OPINION

In our opinion, the financial statements present fairly, in all material respects, the financial position of Ontario Teachers' Pension Plan Board as at December 31, 2017, and the changes in its net assets available for benefits, changes in accrued pension benefits and changes in deficit for the year then ended in accordance with Canadian accounting standards for pension plans.

The image shows the signature of Deloitte LLP in a cursive, handwritten style.

**Chartered Professional Accountants**

Licensed Public Accountants

Toronto, Canada

March 1, 2018

## ACTUARIES' OPINION

Mercer (Canada) Limited was retained by the Ontario Teachers' Pension Plan Board (the Board) to perform an actuarial valuation of the going concern liabilities of the Ontario Teachers' Pension Plan (the Plan) as at December 31, 2017, for inclusion in the Plan's consolidated financial statements. As part of the valuation, we examined the Plan's recent experience with respect to the non-economic assumptions and presented our findings to the Board.

The valuation of the Plan's actuarial liabilities was based on:

- membership data provided by the Ontario Teachers' Pension Plan Board as at August 31, 2017;
- methods prescribed by Section 4600 of the Chartered Professional Accountants Canada Handbook for pension plan financial statements;
- real and nominal interest rates on long-term bonds at the end of 2017;
- assumptions about future events (for example, future rates of inflation and future retirement rates) which have been communicated to us as the Board's best estimate of these events; and
- information obtained from the Ontario Ministry of Labour and other published data, where applicable, on wage rate changes.

The objective of the consolidated financial statements is to fairly present the financial position of the Plan on December 31, 2017, as a going concern. This is different from the statutory valuation (the actuarial valuation required by the Pension Benefits Act (Ontario)), which establishes a prudent level for future contributions.

While the actuarial assumptions used to estimate liabilities for the Plan's consolidated financial statements represent the Board's best estimate of future events and market conditions at the end of 2017, 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.

We have tested the 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 methods employed in the valuation are appropriate for the purposes of the valuation, and that the assumptions used in the valuation are in accordance with accepted actuarial practice. Our opinions have been given, and our valuation has been performed, in accordance with accepted actuarial practice in Canada.



Scott Clausen, F.C.I.A., F.S.A.

March 1, 2018



Lise Houle, F.C.I.A., F.S.A.

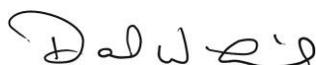
## CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

As at December 31 (Canadian \$ millions)	2017	2016
<b>Net assets available for benefits</b>		
<b>ASSETS</b>		
Cash	\$ 515	\$ 241
Receivable from the Province of Ontario (note 3)	3,314	3,273
Receivable from brokers	1,001	907
Investments (note 2)	257,123	255,716
Premises and equipment	65	57
	<b>262,018</b>	<b>260,194</b>
<b>LIABILITIES</b>		
Accounts payable and accrued liabilities	420	382
Due to brokers	349	608
Investment-related liabilities (note 2)	71,771	83,634
	<b>72,540</b>	<b>84,624</b>
<b>Net assets available for benefits</b>	<b>\$ 189,478</b>	<b>\$ 175,570</b>
<b>Accrued pension benefits and deficit</b>		
Accrued pension benefits (note 4)	\$ 204,322	\$ 189,397
Deficit	(14,844)	(13,827)
<b>Accrued pension benefits and deficit</b>	<b>\$ 189,478</b>	<b>\$ 175,570</b>

On behalf of the Plan administrator:



Chair



Board Member

## CONSOLIDATED STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

For the year ended December 31 (Canadian \$ millions)	2017	2016
<b>Net assets available for benefits, beginning of year</b>	<b>\$ 175,570</b>	<b>\$ 171,440</b>
<b>Investment operations</b>		
Net investment income (note 6)	16,980	6,998
Administrative expenses (note 11a)	(467)	(451)
Net investment operations	16,513	6,547
<b>Member service operations</b>		
Contributions (note 9)	3,385	3,363
Benefits (note 10)	(5,932)	(5,725)
Administrative expenses (note 11b)	(58)	(55)
Net member service operations	(2,605)	(2,417)
<b>Increase in net assets available for benefits</b>	<b>13,908</b>	<b>4,130</b>
<b>Net assets available for benefits, end of year</b>	<b>\$ 189,478</b>	<b>\$ 175,570</b>

## CONSOLIDATED STATEMENTS OF CHANGES IN ACCRUED PENSION BENEFITS

For the year ended December 31 (Canadian \$ millions)	2017	2016
<b>Accrued pension benefits, beginning of year</b>	<b>\$ 189,397</b>	<b>\$ 173,266</b>
<b>Increase in accrued pension benefits</b>		
Interest on accrued pension benefits	6,156	5,679
Benefits accrued	6,268	5,303
Changes in actuarial assumptions and methods (note 4a)	6,653	9,394
Changes in level of conditional indexing (note 4b)	1,207	1,674
Experience losses (note 4c)	568	—
	<b>20,852</b>	<b>22,050</b>
<b>Decrease in accrued pension benefits</b>		
Benefits paid (note 10)	5,927	5,725
Experience gains (note 4c)	—	194
	<b>5,927</b>	<b>5,919</b>
<b>Net increase in accrued pension benefits</b>	<b>14,925</b>	<b>16,131</b>
<b>Accrued pension benefits, end of year</b>	<b>\$ 204,322</b>	<b>\$ 189,397</b>

## CONSOLIDATED STATEMENTS OF CHANGES IN DEFICIT

For the year ended December 31 (Canadian \$ millions)	2017	2016
<b>Deficit, beginning of year</b>	<b>\$ (13,827)</b>	<b>\$ (1,826)</b>
Increase in net assets available for benefits	13,908	4,130
Net increase in accrued pension benefits	(14,925)	(16,131)
<b>Deficit, end of year</b>	<b>\$ (14,844)</b>	<b>\$ (13,827)</b>

# NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2017

## DESCRIPTION OF PLAN

The following description of the Ontario Teachers' Pension Plan (the Plan) is a summary only. For more complete information, reference should be made to the *Teachers' Pension Act (Ontario)* (the TPA) as amended.

### (a) General

The Plan is governed by the TPA. It is a contributory defined benefit pension plan co-sponsored by the Province of Ontario (the Province) and Plan members, represented by Ontario Teachers' Federation (OTF) (the co-sponsors). The terms of the Plan are set out in Schedule 1 to the TPA.

The Plan is registered with the Financial Services Commission of Ontario (FSCO) and under the *Income Tax Act (Canada)* (the ITA) (registration number 0345785) as a Registered Pension Plan which is not subject to income taxes in Canada. The Plan may be liable for taxes in other jurisdictions where full tax exemptions are not available.

The Plan is administered and the investments are managed by the Ontario Teachers' Pension Plan Board (the Board). Under the TPA, the Board is constituted as a corporation without share capital to which the *Corporations Act (Ontario)* does not apply.

### (b) Funding

Plan benefits are funded by contributions and investment earnings. Contributions are made by active members of the Plan and are matched by either the Province or designated employers. The determination of the value of the accrued pension benefits and required contributions is made on the basis of periodic actuarial valuations.

### (c) Retirement pensions

A retirement pension is available based on the number of years of credited service, the average of the best five annual salaries and the age of the member at retirement. A member is eligible for a reduced retirement pension from age 50. An unreduced retirement pension is available at either age 65 or when the sum of a member's age and qualifying service equals 85.

### (d) Disability pensions

A disability pension is available at any age to a disabled member with a minimum of 10 years of qualifying service. The type of disability pension is determined by the extent of the disability.

### (e) Death benefits

Death benefits are available on the death of an active member and may be available on the death of a retired member. The benefit may take the form of a survivor pension, lump-sum payment or both.

### (f) Escalation of benefits

Pension benefits are adjusted in January each year for inflation, subject to an upper limit of 8% and a lower limit of 0% in any one year with any excess above or below those limits carried forward. For credited service earned up to December 31, 2009, inflation protection is 100% of the change in the Consumer Price Index. Credited service earned after December 31, 2009, is subject to conditional inflation protection. For credited service earned between January 1, 2010, and December 31, 2013, the minimum indexation level is set at 50% of the change in the Consumer Price Index. There is no minimum level of inflation protection for credited service earned after 2013. The indexation level stated in the most recent funding valuation filing remains in effect until a subsequent filing updates the amount. Inflation protection of up to 100% for credited service earned after 2009 can be restored on a go-forward basis, depending on the Plan's funded status.

### (g) Retirement Compensation Arrangement

Restrictions in the ITA and its regulations on the payment of certain benefits from the registered pension plan for periods of service after 1991 may impact some Plan members. To address affected members, the Retirement Compensation Arrangement (the RCA) was established by agreement between the co-sponsors as a supplementary plan to provide for these benefits.

Examples of these benefits include: (1) members of the Plan who retired with average earnings above \$157,755 (CPP-exempt members \$145,722) in 2017 and \$156,299 (CPP-exempt members \$144,500) in 2016; and (2) members whose pensions would require a larger reduction for early retirement to comply with the ITA limitations than the Plan would impose. Because the RCA

is a separate trust, the net assets available for benefits and accrued benefits and deficit of the RCA are not included in these consolidated financial statements.

## **NOTE 1.**

### **SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

#### **(a) Basis of presentation**

These consolidated 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 (CPA) Canada Handbook (Section 4600). Section 4600 provides specific accounting guidance on investments and pension obligations. For accounting policies that do not relate to either investments or pension obligations, the Plan must consistently comply with either International Financial Reporting Standards (IFRS) in Part I or accounting for private enterprises in Part II of the CPA Canada Handbook. The Plan has elected to comply with IFRS in Part I of the CPA Canada Handbook. To the extent that IFRS in Part I is inconsistent with Section 4600, Section 4600 takes precedence.

The Plan's real estate investments are either owned or managed on behalf of the Plan by The Cadillac Fairview Corporation Limited (CFCL), a wholly owned subsidiary that is consolidated. The Plan also consolidates Ontario Teachers' Finance Trust (OTFT) and Ontario Teachers' Cadillac Fairview Properties Trust (CFPT), two special purpose entities created to support the Plan's financing activities, and wholly owned investment holding companies managed by either the Plan or CFCL. Investment holding companies that are managed by external parties are recognized as the Plan's investment assets. Under Section 4600, investment assets, including those over which the Plan has control or significant influence, are measured at fair value and presented on a non-consolidated basis.

The consolidated financial statements for the year ended December 31, 2017 were authorized for issue through a resolution of the Board on March 1, 2018.

#### **(b) Future changes in accounting policies**

The relevant new guidance issued by the International Accounting Standards Board not yet adopted by the Plan includes:

- IFRS 9, Financial Instruments. The new standard will replace IAS 39, Financial Instruments: Recognition and Measurement and includes guidance on recognition and derecognition of financial assets and financial liabilities, impairment and hedge accounting. The new standard will come into effect January 1, 2018, with early application permitted.

Management does not expect any significant impact on either the Plan's financial position or its investment income upon adoption of the new standard.

#### **(c) Investments**

##### **Valuation of investments**

Investments are either directly or indirectly owned by the Plan. Investment-related liabilities are incurred by the Plan directly. Details of investments and investment-related liabilities are presented in note 2a and are stated at fair value. Fair value is the price that would either be received to sell an asset or be paid to transfer a liability in an orderly transaction (i.e., an exit price) between market participants at the measurement date. 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.

Fair values of investments are determined as follows:

- a. Short-term investments and commercial paper are valued using either quoted closing mid-market prices or discounted cash flows based on current market yields, when quoted closing mid-market prices are unavailable.
- b. Bonds, including both nominal and real return, are valued on the basis of quoted closing mid-market prices. If quoted closing mid-market prices are not available, estimated values are calculated using discounted cash flows based on current market yields and comparable securities, as appropriate.
- c. Securities sold under agreements to repurchase and securities purchased under agreements to resell are valued using discounted cash flows based on current market yields.
- d. Public equities are valued at quoted closing mid-market prices. When the market for a public equity is not active, management assesses whether the quoted prices represent fair value. If not, management adjusts the quoted prices or estimates the fair value by using appropriate techniques including valuation models.
- e. Real estate, private equities, infrastructure, timberland, and natural resources are valued based on estimated fair values determined by using appropriate techniques and best estimates by either management, appraisers, or both. Where external appraisers are engaged to perform the valuation, management ensures the appraisers are independent and compares the assumptions used by the appraisers with management's expectations based on current market conditions and industry practice to ensure the valuation captures the business and economic conditions specific to the investment. At least 70% of the value of the rental property portfolio covering all product types and geographic regions is independently appraised annually. Properties with a value of over \$250 million will be valued independently every year. Private equity funds are recorded at fair value based on net asset values obtained from each of the funds' administrators. These net asset values are reviewed by management.
- f. Derivative financial instruments are recorded at fair value using market prices where available. Where quoted market values are not readily available, appropriate alternative valuation techniques are used to determine fair value. In determining fair value, consideration is also given to the credit risk of the counterparty through the calculation of a credit valuation adjustment.
- g. Alternative investments, comprised primarily of hedge funds and managed futures accounts, are recorded at fair value based on net asset values obtained from each of the funds' administrators. These net asset values are reviewed by management.

The Plan uses a number of valuation techniques to determine the fair value of investments for which observable prices in active markets for identical investments are not available. These techniques include: valuation methodologies based on observable prices for similar investments; present-value approaches where future cash flows generated by the investment are estimated and then discounted using a risk-adjusted interest rate; and option-pricing models. The principal inputs to these valuation techniques are listed below. Values between and beyond available data points may be obtained by interpolation and extrapolation.

- Bond prices – quoted prices are generally available for government bonds, certain corporate bonds and some other debt-related products.
- Credit spreads – where available, credit spreads are derived from prices of credit default swaps or other credit-based instruments, such as debt securities. For others, credit spreads are obtained from pricing services.
- Interest rates – principally derived from benchmark interest rates such as quoted interest rates from central banks and in swap, bond and futures markets. Benchmark interest rates are considered when determining discount rates used in the present-value approaches.
- Foreign currency exchange rates – there are observable markets, both spot and forward, and in futures in all major currencies.
- Public equity and equity index prices – quoted prices are generally readily available for equity shares listed on the stock exchanges and for indices on such shares.
- Commodity prices – many commodities are actively traded in spot, forward and futures markets.
- Price volatilities and correlations – volatility is a measure of the tendency of a specific price to change over time. Correlation measures the degree to which two or more prices or other variables are observed to have moved together historically. Volatility is an input in valuing options and certain products such as derivatives with more than one underlying variable that is correlation-dependent. Volatility and correlation values are either obtained from broker quotations, from pricing services, or are derived from quoted option prices.
- Forecasts on operating cash flows of real estate, private equities, infrastructure, and natural resources – forecasts include assumptions on revenue, revenue growth, expenses, capital expenditures, and capital structure. They are generally provided by either management of the companies in which the Plan invests or external managers. Additional assumptions from external parties, for example, external appraisers, may also be used in the forecast.

The Plan refines and modifies its valuation techniques as markets and products develop and the pricing for individual products becomes more transparent.

While the Plan believes its valuation techniques are appropriate and consistent with other market participants, the use of different techniques or assumptions could result in different estimates of fair value at the balance sheet date. Management has assessed and determined that using possible alternative assumptions will not result in significantly different fair values.

### **Fair value hierarchy**

Investment assets and investment-related liabilities are classified and disclosed in one of the following categories reflecting the significance of inputs used in making the fair value measurement:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 – inputs other than quoted prices included within Level 1 that are observable for the assets or liabilities, either directly or indirectly; and
- Level 3 – unobservable inputs.

If different levels of inputs are used to measure the fair value of an investment, the classification within the hierarchy is based on the lowest level input that is significant to the fair value measurement.

### **Trade-date reporting**

Purchases and sales of investments and derivative contracts are recorded as of the trade date.

### **Net investment income**

Dividend income is recognized based on the ex-dividend date, and interest income and real estate income are recognized on the accrual basis as earned. Net investment income also includes both realized and unrealized gains and losses. Unrealized gains and losses are recognized only when the fair value of the investment is based on a quoted market price in an active market or a valuation using appropriate valuation techniques is performed and approved by management.

### **Transaction costs**

Transaction costs are incremental costs directly attributable to the acquisition, issue or disposal of a financial asset or financial liability. Transaction costs are expensed as incurred. Any transaction amounts received by the Plan that are directly attributable to the acquisition of an investment are netted against transaction costs paid.

### **Management fees**

Management and performance fees for external investment managers and administrators are expensed as incurred when directly invoiced or information is otherwise available from capital notices or other manager communications. Fees related to other externally managed investments are offset against investment income.

### **(d) Foreign currency translation**

Assets and liabilities denominated in foreign currencies are translated into Canadian dollars at the exchange rates prevailing on the year-end date. Income and expenses are translated into Canadian dollars at the exchange rates prevailing on the dates of the transactions. The realized and unrealized gains and losses arising from these translations are included within net realized and unrealized gains on investments in investment income.

### **(e) Accrued pension benefits**

The value of accrued pension benefits and changes therein during the year are based on an actuarial valuation prepared by Mercer (Canada) Limited, an independent firm of actuaries. The valuation is performed annually as at August 31 and then extrapolated to year end. It uses the projected benefit method pro-rated on service and management's best estimate, as at the valuation date, of various economic and non-economic assumptions.

As described in paragraph (f) of the Description of Plan note, the inflation protection level for credited service earned after December 31, 2009 is conditional, depending on the Plan's funded status. For the financial statement valuations, future pension payments are indexed at the levels stated in the most recent funding valuation filing.

### **(f) Contributions**

Contributions from the members, the Province and designated employers are recorded on an accrual basis. Cash received from members for credited service and cash transfers from other pension plans are recorded when received.

**(g) Benefits**

Benefit payments to members and others, commuted value payments and refunds to former members, and transfer payments to other plans are recorded in the period in which they are paid. Any benefit payment accruals not paid are reflected in accrued pension benefits.

**(h) Premises and equipment**

Premises and equipment are recorded at cost and amortized on a straight-line basis over their estimated useful lives.

**(i) Use of estimates**

In preparing these consolidated financial statements, management uses estimates and assumptions that primarily affect the reported values of assets and liabilities, and related income and expenses. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable and relevant under the circumstances. The effect of a change in an estimate or assumption is recognized in the period in which the estimate or assumption is revised. Significant estimates and assumptions are used primarily in the determination of accrued pension benefits and the fair value of investments and investment-related receivables and liabilities. Note 4 explains how estimates and assumptions are used in determining accrued pension benefits and note 1c explains how estimates and assumptions are used to derive the fair value of investments and investment-related receivables and liabilities.

**(j) Contingencies**

A contingent liability is a possible obligation that depends on the occurrence or non-occurrence of one or more future events not controlled by the Plan. Contingent liabilities are not recognized but the nature and extent are disclosed in the notes to the consolidated financial statements. A provision for a present obligation is recognized when a reliable estimate can be determined and the settlement of the obligation is probable.

## NOTE 2. INVESTMENTS

The Plan invests, directly or through derivatives, in equities, fixed income, inflation sensitive and real asset investments in accordance with the Board's policy of asset diversification.

### (a) Investments<sup>1</sup> before allocating the effect of derivative contracts

The schedule below summarizes the Plan's investments and investment-related liabilities, including net accrued interest and dividends of \$626 million (2016 – \$527 million, before allocating the effect of derivative contracts):

As at December 31 (Canadian \$ millions)	2017		2016	
	Fair Value	Cost	Fair Value	Cost
<b>Equity</b>				
Publicly traded				
Canadian	\$ 2,233	\$ 2,134	\$ 2,075	\$ 2,053
Non-Canadian	23,849	17,809	27,423	22,081
Non-publicly traded				
Canadian	3,676	2,527	2,786	2,480
Non-Canadian	29,800	22,605	25,110	19,704
	59,558	45,075	57,394	46,318
<b>Fixed income</b>				
Bonds	57,187	56,273	52,355	51,050
Short-term investments	7,813	7,809	9,521	9,504
Alternative investments <sup>2</sup>	12,665	10,648	11,727	8,862
Canadian real-rate products	19,570	14,804	20,381	14,993
Non-Canadian real-rate products	14,635	12,310	16,011	12,866
	111,870	101,844	109,995	97,275
<b>Inflation sensitive</b>				
Timberland	2,250	1,301	2,442	1,356
Natural resources	4,303	4,286	3,831	3,802
	6,553	5,587	6,273	5,158
<b>Real assets</b>				
Real estate (note 5)	29,982	18,613	30,923	19,064
Infrastructure	18,735	13,384	17,826	13,832
	48,717	31,997	48,749	32,896
	226,698	184,503	222,411	181,647
<b>Investment-related receivables</b>				
Securities purchased under agreements to resell	24,633	24,792	27,910	27,621
Cash collateral deposited under securities borrowing arrangements	2,239	2,239	1,967	1,967
Cash collateral paid under credit support annexes	59	59	121	121
Derivative-related, net	3,494	1,662	3,307	1,761
	30,425	28,752	33,305	31,470
<b>Investments</b>	\$ 257,123	\$ 213,255	\$ 255,716	\$ 213,117

<sup>1</sup> For additional details, refer to the Major Investments on page 92.

<sup>2</sup> Comprised primarily of hedge funds and managed futures accounts.

As at December 31	2017		2016	
(Canadian \$ millions)	Fair Value	Cost	Fair Value	Cost
<b>Investment-related liabilities</b>				
Securities sold under agreements to repurchase	\$ (38,842)	\$ (39,164)	\$ (47,422)	\$ (47,131)
Securities sold but not yet purchased				
Equities	(2,230)	(2,128)	(1,947)	(1,752)
Fixed income	(11,177)	(10,569)	(19,108)	(17,656)
Real estate (note 5)	(4,432)	(4,171)	(3,196)	(2,876)
Commercial paper	(8,938)	(9,014)	(9,120)	(8,935)
Term debt	(2,167)	(2,134)	—	—
Cash collateral received under credit support annexes	(419)	(419)	(163)	(163)
Derivative-related, net	(3,566)	(959)	(2,678)	(845)
	<b>(71,771)</b>	<b>(68,558)</b>	<b>(83,634)</b>	<b>(79,358)</b>
<b>Net investments (note 2d)</b>	<b>\$ 185,352</b>	<b>\$ 144,697</b>	<b>\$ 172,082</b>	<b>\$ 133,759</b>

### (b) Fair value hierarchy

The schedule below presents the Plan's investments and investment-related liabilities within the fair value hierarchy as outlined in note 1c:

	December 31, 2017			
(Canadian \$ millions)	Level 1	Level 2	Level 3	Total
Equity	\$ 24,536	\$ 158	\$ 34,864	\$ 59,558
Fixed income	87,868	9,612	14,390	111,870
Inflation sensitive	—	—	6,553	6,553
Real assets	3,083	329	45,305	48,717
Investment-related receivables	2,396	27,932	97	30,425
Investment-related liabilities	(14,136)	(55,805)	(1,830)	(71,771)
<b>Net investments</b>	<b>\$ 103,747</b>	<b>\$ (17,774)</b>	<b>\$ 99,379</b>	<b>\$ 185,352</b>

	December 31, 2016			
(Canadian \$ millions)	Level 1	Level 2	Level 3	Total
Equity	\$ 27,785	\$ 248	\$ 29,361	\$ 57,394
Fixed income	83,706	12,051	14,238	109,995
Inflation sensitive	—	—	6,273	6,273
Real assets	3,271	295	45,183	48,749
Investment-related receivables	2,146	30,922	237	33,305
Investment-related liabilities	(21,343)	(60,284)	(2,007)	(83,634)
<b>Net investments</b>	<b>\$ 95,565</b>	<b>\$ (16,768)</b>	<b>\$ 93,285</b>	<b>\$ 172,082</b>

The schedule below presents a reconciliation of investments and net investment-related receivables/(liabilities) measured at fair value using significant unobservable inputs (Level 3) during the year. Realized and unrealized gains/(losses) are included in investment income.

								2017
(Canadian \$ millions)	Equity	Fixed Income	Inflation Sensitive	Real Assets	Investment-Related Receivables	Investment-Related Liabilities	Total	
Balance, beginning of year	\$ 29,361	\$ 14,238	\$ 6,273	\$ 45,183	\$ 237	\$ (2,007)	\$ 93,285	
Purchases	6,033	4,912	504	5,269	48	98	16,864	
Sales	(5,001)	(4,555)	(76)	(8,219)	(40)	(99)	(17,990)	
Transfers in <sup>3</sup>	—	—	—	—	(5)	3	(2)	
Transfers out <sup>3</sup>	—	—	—	—	(38)	32	(6)	
Gains/(losses) included in investment income								
Realized	1,798	814	1	1,999	(122)	98	4,588	
Unrealized	2,673	(1,019)	(149)	1,073	17	45	2,640	
<b>Balance, end of year</b>	<b>\$ 34,864</b>	<b>\$ 14,390</b>	<b>\$ 6,553</b>	<b>\$ 45,305</b>	<b>\$ 97</b>	<b>\$ (1,830)</b>	<b>\$ 99,379</b>	

								2016
(Canadian \$ millions)	Equity	Fixed Income	Inflation sensitive	Real Assets	Investment-Related Receivables <sup>4</sup>	Investment-Related Liabilities <sup>4</sup>	Total	
Balance, beginning of year	\$ 30,596	\$ 16,031	\$ 6,252	\$ 41,209	\$ 197	\$ (2,095)	\$ 92,190	
Purchases	7,294	5,228	289	7,714	941	768	22,234	
Sales	(9,188)	(6,937)	(375)	(4,008)	(937)	(780)	(22,225)	
Transfers in <sup>3</sup>	—	206	—	—	12	(77)	141	
Transfers out <sup>3</sup>	—	—	—	—	(24)	131	107	
Gains/(losses) included in investment income								
Realized	2,231	1,118	71	507	49	32	4,008	
Unrealized	(1,572)	(1,408)	36	(239)	(1)	14	(3,170)	
<b>Balance, end of year</b>	<b>\$ 29,361</b>	<b>\$ 14,238</b>	<b>\$ 6,273</b>	<b>\$ 45,183</b>	<b>\$ 237</b>	<b>\$ (2,007)</b>	<b>\$ 93,285</b>	

<sup>3</sup> Transfers in and transfers out of Level 3 are due to the change in the availability of observable inputs used for fair value measurement of investment assets or related liabilities. Similarly, the transfers between Level 2 and Level 1 in 2017 of \$nil million (2016 - \$330 million) are due to the change in the applicability of non-observable inputs. See note 1c Fair Value Hierarchy.

<sup>4</sup> The purchases and sales balances associated with investment related receivables and liabilities have been reclassified to more appropriately reflect the nature of the underlying transactions. The restatement has no impact on the balance of Level 3 investment related receivables or liabilities as at December 31 2016.

### (c) Derivative contracts

Derivative contracts are financial contracts, the value of which is derived from the value of underlying assets, commodities, indices, interest rates or currency rates. Derivative contracts are transacted either in the over-the-counter (OTC) market or on regulated exchanges.

Notional amounts of derivative contracts represent the contractual amount to which a rate or price is applied for computing the cash to be paid or received. Notional amounts are the basis upon which the returns from, and the fair value of, the contracts are determined. They do not necessarily indicate the amounts of future cash flow involved or the current fair value of the derivative contracts and, therefore, do not indicate the Plan's exposure to credit or market risks. The derivative contracts become favourable (assets) or unfavourable (liabilities) as a result of fluctuations in either market rates or prices relative to their terms. The aggregate notional amounts and fair values of derivative contracts can fluctuate significantly.

Derivative contracts, transacted either in the OTC market or on regulated exchanges, include:

## Swaps

Swaps are OTC contracts in which two counterparties exchange a series of cash flows based on agreed upon rates to a notional amount. The various swap agreements that the Plan enters into are as follows:

Equity and commodity swaps are contracts in which one counterparty agrees to either pay or receive from the other cash flows based on changes in the value of either an equity or commodity index, a basket of stocks or commodities, or a single stock or commodity.

Interest rate swaps are agreements where two counterparties exchange a series of payments based on different interest rates applied to a notional amount. Certain interest rate swaps traded with U.S. counterparties in the OTC market are centrally cleared at regulated clearing houses.

Currency swaps involve the exchange of fixed payments in one currency for the receipt of fixed payments in another currency.

## Forwards and futures

Futures are standardized contracts traded on regulated future exchanges, whereas forward contracts are negotiated agreements that are transacted between counterparties in the OTC market. Examples of futures and forwards are described below:

Equity and commodity futures are contractual obligations to either buy or sell at a fixed value (the contracted price) of an equity or commodity index, a basket of stocks, a single stock or commodities at a predetermined future date.

Interest rate futures are contractual obligations to either buy or sell an interest rate sensitive financial instrument on a predetermined future date at a specified price.

Currency forwards and futures are contractual obligations to exchange one currency for another at a specified price or settlement at a predetermined future date.

## Options

Options may be either acquired in standardized amounts on regulated exchanges or customized and acquired in the OTC market. They are contractual agreements under which the seller (writer) grants the purchaser the right, but not the obligation, either to buy (call option) or sell (put option), a security, exchange rate, interest rate, or other financial instrument or commodity at a predetermined price, at or by a specified future date. The seller (writer) of an option can also settle the contract by paying the cash settlement value of the purchaser's right. The seller (writer) receives a premium from the purchaser for this right. The various option agreements that the Plan enters into include equity and commodity options, interest rate options, and foreign currency options.

## Credit derivatives

Credit derivatives are OTC contracts that transfer credit risk related to an underlying financial instrument (referenced asset) from one counterparty to another. Examples of credit derivatives include credit default swaps, total return swaps, and loan participations.

Credit default swaps provide protection against the decline in value of the referenced asset as a result of specified events such as payment default or insolvency. These swaps are similar in structure to an option whereby the purchaser pays a premium to the seller of the credit default swap in return for payment related to the deterioration in the value of the referenced asset. The referenced asset for credit default swaps is a debt instrument. Certain credit default swaps traded with U.S. counterparties in the OTC market are centrally cleared at regulated clearing houses.

Total return swaps are contracts in which one counterparty agrees to pay or receive from the other cash flows based on changes in the value of the referenced asset.

## Other derivative products

The Plan also transacts in other derivative products including statistic swaps and dividend swaps in the OTC market. An investor may trade the statistic swaps with the objective of adding value or hedging for risks associated with the magnitude of movement, i.e., volatility, variance, correlation, covariance of some underlying products, such as exchange rates, or stock indexes. Dividend swaps are OTC contracts where an investor agrees to match all dividends paid out by an underlying stock or index over a specified time period. In return, the dividend payer receives a fixed amount at expiry called the dividend swap rate.

The following schedule summarizes the notional amounts and fair value of the Plan's derivative contracts held as at December 31:

(Canadian \$ millions)	2017		2016	
	Notional	Fair Value	Notional	Fair Value
<b>Equity and commodity derivatives</b>				
Swaps	\$ 39,107	\$ 189	\$ 21,454	\$ 402
Futures	15,160	206	5,572	14
Options: Listed				
– purchased	968	10	350	21
– written	542	(16)	669	(28)
OTC				
– purchased	14,733	144	14,114	730
– written	3,708	(161)	3,125	(195)
	<b>74,218</b>	<b>372</b>	<b>45,284</b>	<b>944</b>
<b>Interest rate derivatives</b>				
Swaps	143,020	70	90,105	29
Futures	477,070	84	103,444	(10)
Options: Listed				
– purchased	48,610	19	11,318	5
– written	11,965	(12)	10,673	(6)
OTC				
– purchased	41,907	21	30,398	115
– written	33,870	(34)	42,699	(110)
	<b>756,442</b>	<b>148</b>	<b>288,637</b>	<b>23</b>
<b>Currency derivatives</b>				
Swaps	20,601	(3)	11,215	(70)
Forwards <sup>5</sup>	77,208	(227)	70,956	(119)
Options: OTC				
– purchased	9,404	52	8,299	121
– written	7,187	(52)	7,839	(111)
	<b>114,400</b>	<b>(230)</b>	<b>98,309</b>	<b>(179)</b>
<b>Credit derivatives</b>				
Credit default swaps				
– purchased	16,276	(380)	16,099	(286)
– written	17,308	249	19,793	140
	<b>33,584</b>	<b>(131)</b>	<b>35,892</b>	<b>(146)</b>
<b>Other derivatives</b>				
Statistic swaps	5,584	14	5,061	(19)
Dividend swaps	600	(23)	254	(21)
	<b>6,184</b>	<b>(9)</b>	<b>5,315</b>	<b>(40)</b>
	<b>984,828</b>	<b>150</b>	<b>473,437</b>	<b>602</b>
Net cash collateral (received)/paid under derivative contracts	–	(222)	–	27
<b>Notional and net fair value of derivative contracts</b>	<b>\$ 984,828</b>	<b>\$ (72)</b>	<b>\$ 473,437</b>	<b>\$ 629</b>

<sup>5</sup> Excludes currency forwards related to Real Estate assets as disclosed in note 5.

The net fair value of derivative contracts as at December 31 in the previous table is represented by:

(Canadian \$ millions)	2017	2016
Derivative-related receivables	\$ 2,851	\$ 2,678
Cash collateral paid under derivative contracts	21	31
Derivative-related liabilities	(2,701)	(2,076)
Cash collateral received under derivative contracts	(243)	(4)
	<b>\$ (72)</b>	<b>\$ 629</b>

#### (d) Investment asset mix

Direct investments, derivative contracts, and investment-related receivables and liabilities are classified by asset mix category based on the intent of the investment strategies of the underlying portfolios of the Plan. The Plan's net investments are summarized in Canadian dollars below as at December 31:

	2017		2016	
	Effective Net Investments at Fair Value (\$ millions)	Asset Mix %	Effective Net Investments at Fair Value (\$ millions)	Asset Mix %
<b>Equity<sup>6</sup></b>				
Publicly traded	\$ 35,132	19%	\$ 38,973	22%
Non-publicly traded	31,936	17	26,981	16
	<b>67,068</b>	<b>36</b>	65,954	38
<b>Fixed income</b>				
Bonds	41,413	22	43,529	25
Real-rate products	19,959	11	31,725	19
	<b>61,372</b>	<b>33</b>	75,254	44
<b>Inflation sensitive<sup>7</sup></b>				
Commodities	11,083	6	4,184	3
Natural resources	6,553	3	6,273	3
Inflation hedge	8,918	5	—	—
	<b>26,554</b>	<b>14</b>	10,457	6
<b>Real assets</b>				
Real estate	25,512	14	26,470	16
Infrastructure	18,735	10	17,826	10
Real-rate products	1,451	1	—	—
	<b>45,698</b>	<b>25</b>	44,296	26
<b>Credit<sup>8</sup></b>	<b>13,575</b>	<b>7</b>	—	—
<b>Absolute return strategies</b>	<b>10,730</b>	<b>6</b>	13,278	8
<b>Overlay<sup>9</sup></b>	<b>(270)</b>	—	9	—
<b>Money market<sup>9</sup></b>	<b>(39,375)</b>	<b>(21)</b>	(37,166)	(22)
<b>Net investments</b>	<b>\$ 185,352</b>	<b>100%</b>	\$ 172,082	100%

<sup>6</sup> The Equity asset class is comprised of Publicly traded and Non-publicly traded equities. December 31, 2016 comparative figures have been reclassified to reflect these categories.

<sup>7</sup> Beginning January 1, 2017, Natural resources and other securities that provide exposure to inflation form the Inflation sensitive asset class.

<sup>8</sup> Beginning January 1, 2017, corporate and emerging market debt moved into the new Credit asset class.

<sup>9</sup> Overlay includes strategies to overweight or underweight certain foreign currency positions. Beginning January 1, 2017, certain index positions formerly presented in the Overlay asset class have moved to Money market. December 31, 2016 comparative figures have been reclassified to reflect the changes.

## (e) Risk management

### Objectives

The Plan's primary long-term risk is that the Plan's assets will fall short of its liabilities (i.e., benefits owed to members). Therefore, the objective of investment risk management is to achieve a diversifying of risks and returns in a fashion that minimizes the likelihood of an overall reduction in total fund value and maximizes the opportunity for gains over the entire portfolio. This is achieved through asset diversification so that the market and credit exposure to any single issuer and to any single component of the capital markets is reduced to an acceptable level.

The Plan also manages its liquidity risk so that there is sufficient liquidity to enable the Plan to meet all of its future obligations as they become payable, which includes meeting short-term mark-to-market payments resulting from the Plan's derivative exposure and to give the Plan the ability to adjust the asset mix in response to the changes in market conditions.

### Policies

To apply risk management to investments in a consistent manner, the Plan has a number of policies, for example:

- **Statement of Investment Policies and Procedures** – The statement addresses the manner in which the fund shall be invested. The statement is subject to the Board's review at least annually. The long-term rate of return goal is set at the actuarial assumed discount rate contained in the funding valuation using the going-concern basis. The Plan's investments are selected and held in accordance with the criteria and limitations set forth in the statement and in accordance with all relevant legislation. The statement effective for the year ended December 31, 2017 was last amended November 17, 2016 and includes the following asset allocation ranges:

Exposure	Minimum	Maximum
Equities	32%	42%
Fixed income	20%	45%
Inflation sensitive	8%	18%
Real assets	21%	31%
Credit	2%	12%
Absolute return strategies	1%	11%
Money market <sup>10</sup>	(59)%	0%

<sup>10</sup> The money market asset class provides funding for investments in other asset classes.

- **Board Investment Policy** – This policy applies to the total-fund and aggregate asset classes. The policy addresses the risks that are relevant and material at the total-fund level. The policy sets ranges for allocations to the asset classes and foreign currency. Management determines exposure within these approved ranges. The policy also specifies the risk budget allocation and lists investment constraints such as maximum exposures permitted for a single issuer, liquidity requirements, and currency management. The Board approves this policy and reviews it regularly.
- **Investment Division Policy** – This policy addresses the manner in which the Investment Division is organized for the purpose of undertaking the investment and risk management of the fund and for day-to-day operations management. This policy specifies the oversight role of the CEO, CIO and senior management committees within the Investment Division.
- **Portfolio policies for each investment department** – These policies are developed to apply to the individual portfolios within each asset class managed by the Investment Division. Portfolio policies include the departments' investment strategies, operating procedures, trading limits and approval requirements, risk factors and a description of how the risks will be managed and reporting requirements for each portfolio manager, particularly relating to reporting deviations from the approved portfolio policy. All portfolio policies are reviewed annually and approved by the CIO and the senior managing director responsible for the department.
- **Trade Authorization and Execution Operation Policy** – This policy provides guidance on trading with authorized counterparties.
- **Investment Division Counterparty Credit Policy** – This policy applies to investments with credit risk exposure that arises from entering into certain counterparty agreements. The policy provides constraints on counterparty credit exposure and procedures for obtaining authorization to trade with a new counterparty.
- **Pre-Investment Approval Policy** – This policy formalizes the procedures to ensure the data needed for trade capture, pricing, risk management, and accounting is accurate, complete, and can be entered into the Plan's systems of record on a timely basis prior to commencement of trading.

## Processes

The Plan uses risk budgeting to allocate risk across the investment asset classes. The risk budget is presented to the Board annually for review and approval. Each investment department is responsible for managing the investment risks associated with the investments they manage within the risk budget allocated to them. Each department is subject to compliance with the Statement of Investment Policies and Procedures, the Board Investment Policy (which includes the risk budget allocated to them), Investment Division Policy, Trade Authorization and Execution Operation Policy, Pre-Investment Approval Policy and the applicable portfolio policies. In addition, the Capital Markets department is responsible for maintaining the liquidity positions in accordance with the Plan's policies on liquidity and for compliance with the Investment Division Counterparty Credit Policy. The Finance Division independently measures the investment risk exposure and the liquidity position of the Plan and provides the information to the Investment Division and the Investment Committee of the Board.

Each investment department has an investment committee, or an equivalent, which meets regularly to assess the investment risks associated with the portfolios it manages and determines action plans, if required. Individual managers in each investment department receive limited authority to invest from the Board by sub-delegation from senior management. Trading limits and approval requirements are set out in the portfolio policies for the department, the Investment Division Policy and the Board Investment Policy. For investments not traded on exchanges, such as alternative investments and private equity investments, the investment departments conduct due diligence before acquisition and use it as a tool to monitor the investments after acquisition. The objective is to obtain as much transparency as possible for the departments to assess the risk exposure arising from these private and alternative investments.

The senior representatives from each investment department are members of one or both of the Investment Committee - Total Fund (IC - TF) and Investment Committee - Global Privates & Illiquids (IC - GPI). The IC-TF is responsible for considerations around the overall investment program with a focus on managing investment risks at a total-fund level. This committee brings together the experience, investment and operational business judgment required for assessing and managing market, credit and liquidity risks on a regular basis. It monitors the currency positions, interest rate risk and liquidity risk at the total-fund level. Chaired by the Chief Investment Officer, the IC-GPI is responsible for the oversight of private market or illiquid transactions and the overall private portfolio composition. The Chief Risk & Strategy Officer is a member of both Committees. The Chief Legal & Corporate Affairs Officer or a delegate attends the IC-GPI meetings in an advisory capacity. The committees meet at least every other week.

The CEO chairs the Enterprise Risk Management Committee, the CEO-Led Risk Committee and the CEO-Led Risk Committee (Member Services). The Enterprise Risk Management Committee oversees the enterprise risk management program of the Plan and includes senior representatives from all divisions. The Enterprise Risk Management Committee meets regularly and reports to the Board semi-annually and more frequently as necessary. The CEO-Led Risk Committee oversees the alignment of the investment program with the risk appetite and mission, vision and values of the Plan including policies, committee mandates, significant operational risks and external developments that could have a material impact on the investment program. This committee includes senior representatives from Investments, Strategy & Risk, Finance, Enterprise Operations and the General Counsel's Office and meets quarterly and more frequently as necessary. The CEO-Led Risk Committee (Member Services) oversees the alignment of the Member Services division with the Board's Enterprise Risk Appetite Statement and Ontario Teachers' mission, vision and values. This Committee includes senior members from Strategy and Risk, Member Services and Legal and Compliance.

### (f) Credit risk

The Plan is exposed to the risk that a counterparty defaults or becomes insolvent. Credit risk is the risk of loss associated with a counterparty's inability to fulfill its payment obligations. Credit risk may arise directly from an obligor, an issuer of securities, or indirectly from a guarantor of a credit obligation.

#### Credit risk management

The Plan actively manages its credit exposures. When over exposures are detected – either in individual exposures or in groups of exposures – the Plan takes action to mitigate the risks. Such actions may include reducing the exposures and using credit derivatives.

Except for debt issued or guaranteed without significant conditions by the Government of Canada, by the government of a province or territory of Canada (with an investment grade credit rating), or by the Government of the United States of America, the Plan's total investment in securities of a single issuer across all asset classes shall not exceed 3% of the market value of the total fund without the approval of the Board. Debt exposure to a single issuer or with a single guarantor shall not exceed 2% of the market value of the Plan without approval of the Board. Further, not more than 10% of the market value of the Plan may be made up of non-investment grade or unrated investments.

The Plan enters into agreements with counterparties to limit its exposure to credit losses. An International Swaps and Derivatives Association (ISDA) Master Agreement is executed with most OTC derivative counterparties, which allows both parties to settle obligations on a net basis when termination or other predetermined events occur. The Plan also negotiates collateral agreements known as credit support annexes (CSAs) with key counterparties to further mitigate counterparty credit risk. A CSA gives the Plan the power to realize collateral posted by counterparties in the event of a default by such counterparties.

Since collateral is an important mitigant of counterparty credit risk, the Plan routinely obtains collateral from its counterparties, not only under OTC derivative contracts but also under reverse repurchase agreements. Note 2i provides further details on collateral pledged and received.

The Plan has a credit risk assessment process to approve prospective new counterparties and to monitor authorized counterparties for derivative contracts, repurchase and reverse repurchase agreements, securities borrowing agreements, prime broker relationships and futures and options clearing. The Plan deals primarily with counterparties that have an investment grade credit rating. Policies are in place to limit the maximum exposures to any individual counterparty for derivative contracts or repurchase and reverse repurchase agreements, prime broker relationships and futures and options clearing.

### Maximum exposure to credit risk before collateral held

The Plan assumes credit risk exposure through debt investments and amounts receivable from the Province of Ontario and brokers. The maximum exposure to credit risk related to these financial instruments is their fair value as presented in the consolidated statements of financial position and note 2a. The Plan is also exposed to credit risk of counterparties to its OTC derivative transactions. Counterparty credit risk exposure for OTC derivatives is measured as the net positive fair value of the contractual obligations with the counterparties.

To monitor credit risk, the Plan produces, on a quarterly basis, a concentration report by credit rating of all credit sensitive financial securities.

Counterparties are assigned a credit rating as determined by the Plan's internal credit risk management function. Counterparty credit ratings are also compared to their external ratings as provided by recognized credit rating agencies on a daily basis.

The credit risk exposure of debt investments and OTC derivatives, by credit rating category, without taking account of any collateral held or other credit enhancements as at December 31 is as follows:

	2017				
Credit rating (Canadian \$ millions)	Bonds and Short-term investments	Real-rate products	Securities purchased under agreements to resell	Loans and Private debt	OTC Derivatives
AAA/R-1 (high)	\$ 39,290	\$ 31,068	\$ —	\$ —	\$ —
AA/R-1 (mid)	2,360	75	2,331	—	39
A/R-1 (low)	12,687	2,983	15,876	—	633
BBB/R-2	5,630	—	352	—	—
Below BBB/R-2	2,573	—	—	—	—
Unrated <sup>11</sup>	2,460	79	6,074	12,356	—
	<b>\$ 65,000</b>	<b>\$ 34,205</b>	<b>\$ 24,633</b>	<b>\$ 12,356</b>	<b>\$ 672</b>

Credit rating (Canadian \$ millions)	Bonds and Short-term investments	Real-rate products	Securities purchased under agreements to resell	Loans and Private debt	OTC Derivatives
AAA/R-1 (high)	\$ 41,168	\$ 32,697	\$ —	\$ —	\$ —
AA/R-1 (mid)	2,502	—	5,990	—	83
A/R-1 (low)	9,376	3,482	21,006	—	891
BBB/R-2	5,259	—	—	—	—
Below BBB/R-2	2,123	—	—	—	—
Unrated <sup>11</sup>	1,448	213	914	12,243	—
	\$ 61,876	\$ 36,392	\$ 27,910	\$ 12,243	\$ 974

<sup>11</sup> Unrated comprises securities that are either privately held, managed externally, or not rated by the rating agencies.

The Plan is also exposed to credit risk through off-balance sheet arrangements. For off-balance sheet guarantees, the maximum exposure to credit risk is the maximum amount that the Plan would have to pay if the guarantees were to be called upon. For loan commitments, the maximum exposure is the committed amount under the agreements. For credit derivatives, the maximum exposure is the notional amount of written credit derivatives as presented in note 2c.

As at December 31 (Canadian \$ millions)	2017	2016
Guarantees	\$ 359	\$ 314
Loan commitments	63	133
Notional amount of written credit derivatives	17,308	19,793
<b>Total off balance sheet credit risk exposure</b>	<b>\$ 17,730</b>	<b>\$ 20,240</b>

While the Plan's maximum exposure to credit risk is the carrying value of the assets, or, in the case of off-balance sheet items, the amount guaranteed or committed, in most cases the likely exposure is far less due to collateral, credit enhancements (e.g., guarantees in favour of the Plan) and other actions taken to mitigate the Plan's exposure, as described previously.

### Credit risk concentrations

As at December 31, 2017, the Plan has a significant concentration of credit risk with the Government of Canada, the Province of Ontario and the U.S Treasury. This concentration relates primarily to holding Government of Canada issued securities of \$45.4 billion (2016 – \$51.0 billion), U.S. Treasury issued securities of \$13.0 billion (2016 – \$0.2 billion), Province of Ontario bonds of \$6.7 billion (2016 – \$5.0 billion), receivable from the Province of Ontario (see note 3) of \$3.3 billion (2016 – \$3.3 billion) and future provincial funding requirements of the Plan.

### (g) Market risk

Market risk is the risk of loss that results from fluctuations in various market factors such as equity and commodity prices, interest and foreign exchange rates, and credit spreads. The Plan is exposed to market risk through its investing activities. The level of market risk to which the Plan is exposed varies depending on considerations such as market conditions, expectations of future price movements, the occurrence of certain catastrophic events (e.g., hurricanes and earthquakes) affecting the prices of insurance linked securities, expectations of future yield movements and the composition of the asset mix.

### Market risk management

The Plan manages market risk primarily through diversifying the investments across industry sectors, investment strategies and on a global basis. A variety of derivative contracts are also utilized to manage the Plan's market risk exposures.

### Market and credit risk measurement

The Plan uses a statistical Value-at-Risk (VaR)-type approach, the expected tail loss (ETL) methodology, to measure investment risk comprising of market and credit risk over a one-year horizon at a 99% confidence level. The ETL methodology captures more of the effect of extreme loss events than VaR for the same confidence level as it is the average of all the losses in the tail.

Total Asset Risk is prepared using the ETL methodology which captures the investment risk exposure by asset class and reflects the risk of potential losses in net assets due to both market and credit risk factors. Statistically, the Plan would expect to see losses approximate to the risk exposure on the report only 1% of the time over a one year period, subject to certain assumptions and limitations discussed below.

The ETL methodology is a statistical approach that accounts for market volatility and credit risk as well as risk diversification achieved by investing in various products and markets. Risks are measured consistently across all markets and products and can be aggregated to arrive at a single risk number. The one-year 99% ETL number used by the Plan is generated using a historical simulation and bootstrap sampling approach that reflects the expected annual return on the portfolio in the worst 1% of the cases. When sufficient historical data is not available, proxies and statistical methods are used to complete the data series.

There are limitations to the ETL methodology in use. For example, historical data may not provide the best estimate of future changes. It may fail to capture the correlation in asset returns in extreme adverse market movements which have not occurred in the historical window. However, the sampling approach and long historical window mitigate this limitation to some extent by enabling the generation of a set of scenarios that include extreme adverse events. Another limitation is that the Plan computes the risk relative to asset positions at the close of the business day. Positions may change substantially during the course of a trading day. These limitations and the nature of the ETL measure mean that the Plan's losses may exceed the risk exposure amounts indicated in any risk reports.

The Plan continuously monitors and enhances the risk calculation methodology, striving for better estimation of risk exposure. A number of initiatives were completed in the past year that significantly improved the accuracy of calculated risk measures. Existing risk methodologies were modified to incorporate more accurate risk models and more reliable risk data.

The table below shows Total Asset Risk ETL of the Plan.

(Canadian \$ billions) <sup>12</sup>	2017	2016
<b>Equity<sup>13</sup></b>		
Publicly traded	\$ 11.0	\$ 12.0
Non-publicly traded	14.0	12.5
<b>Fixed income</b>		
Bonds	7.0	4.5
Real-rate products	4.5	6.5
<b>Inflation sensitive<sup>14</sup></b>		
Commodities	3.5	2.0
Natural resources	1.5	1.5
Inflation hedge	3.0	—
<b>Real assets</b>		
Real estate	4.5	4.0
Infrastructure	3.5	3.0
Real-rate products	0.5	—
<b>Credit<sup>15</sup></b>	2.0	—
<b>Absolute return strategies<sup>16</sup></b>	3.0	2.5
<b>Overlay<sup>16</sup></b>	3.5	1.5
<b>Money market<sup>16</sup></b>	10.5	6.5
<b>Total Asset Risk ETL Exposure<sup>17</sup></b>	<b>\$ 42.0</b>	<b>\$ 37.5</b>

<sup>12</sup> Rounded to the nearest \$0.5 billion.

<sup>13</sup> The Equity asset class is comprised of Publicly traded and Non-publicly traded equities. December 31, 2016 comparative figures have been reclassified to reflect these categories.

<sup>14</sup> Beginning January 1, 2017, Natural resources and other securities that provide exposure to inflation form the Inflation sensitive asset class.

<sup>15</sup> Beginning January 1, 2017, corporate and emerging market debt moved into the new Credit asset class.

<sup>16</sup> Overlay includes strategies to overweight or underweight certain foreign currency positions. Beginning January 1, 2017, certain index positions formerly presented in the Overlay asset class have moved to Money market and certain foreign currency positions formerly presented in the Absolute return strategies asset class have moved to Overlay. December 31, 2016 comparative figures have been reclassified to reflect the changes.

<sup>17</sup> Total Asset Risk ETL Exposure does not equal the sum of ETL exposure for each asset class because diversification reduces total risk exposure.

## Interest rate risk

Interest rate risk refers to the effect on the market value of the Plan's assets and liabilities due to fluctuations in interest rates. The value of the Plan's assets is affected by short-term changes in nominal and real interest rates. Pension liabilities are exposed to fluctuations in long-term interest rates as well as expectations for salary escalation.

The Plan measures interest rate risk of relevant asset classes in its asset mix (note 2d). The Plan measures the sensitivity to changes in nominal interest rates of bonds and derivative contracts included in its Fixed Income and Credit asset classes - a 1% increase in nominal interest rates would result in a decline in the value of these investments of \$6.5 billion (2016 – \$3.4 billion). Similarly, the Plan measures the sensitivity to changes in real interest rates of real-rate products and derivative contracts included in its Fixed Income and Real Assets asset classes - a 1% increase in real interest rates would result in a decline in the value of these investments of \$3.1 billion (2016 – \$5.1 billion).

The Plan also measures the sensitivity of nominal and real-rate securities and derivative contracts that are included in the Inflation hedge category of the Plan's Inflation sensitive asset class to changes in market-implied inflation. A 1% increase in the market-implied rate of inflation would result in an increase in the value of these investments of \$1.6 billion.

As at December 31, 2017, holding the inflation and salary escalation assumptions constant, a 1% decrease in the assumed long-term real rates of return would result in an increase in the pension liabilities of approximately 22% or \$45.3 billion (2016 – 22% or \$40.8 billion).

## Foreign currency risk

Foreign currency exposure arises from the Plan's holdings of foreign currency-denominated investments and related derivative contracts.

As at December 31, the Plan had foreign currency exposure, measured in Canadian dollars, from investments, net receivable from brokers, and investment related cash as follows:

(Canadian \$ millions)	2017	2016
Currency	Net Exposure	Net Exposure
United States Dollar	\$ 39,660	\$ 49,553
Chilean Peso	3,455	3,108
Euro	3,230	7,774
Brazilian Real	3,010	2,673
British Pound Sterling	2,857	4,505
Danish Krone	1,977	1,175
Japanese Yen	1,945	3,275
Chinese Renminbi	(1,827)	1,307
Australian Dollar	1,419	1,944
Mexican Peso	1,357	838
Other	10,419	7,955
	<b>\$ 67,502</b>	<b>\$ 84,107</b>

As at December 31, with all other variables and underlying values held constant, a 5% increase/decrease in the value of the Canadian dollar against major foreign currencies would result in an approximate decrease/increase in the value of net investments as follows:

(Canadian \$ millions)	2017	2016
Currency	Change in Net Investment Value	Change in Net Investment Value
United States Dollar	\$ 1,983	\$ 2,478
Chilean Peso	173	155
Euro	161	389
Brazilian Real	151	134
Other	907	1,050
	<b>\$ 3,375</b>	<b>\$ 4,206</b>

#### (h) Liquidity risk

Liquidity risk refers to the risk that the Plan does not have sufficient cash to meet its current payment liabilities and acquire investments in a timely and cost-effective manner. Liquidity risk is inherent in the Plan's operations and can be impacted by a range of situation specific and market-wide events including, but not limited to, credit events and significant movements in the market.

#### Liquidity risk management

The liquidity position of the Plan is analyzed daily to ensure the Plan maintains at least 2.0% of its assets in unencumbered Canadian treasury bills. The Plan also manages its liquidity by holding additional unencumbered Government of Canada securities (bonds, treasury bills and real-rate bonds) and U.S. Government securities that are available for repurchase agreements so that the Plan is able to withstand the liquidity effects of a market stress event and pay its contractual cash flows and projected cash requirements over a one-year horizon with a 99% probability. The Plan's liquidity position is periodically tested by simulations of major events such as significant movements in the market.

#### Liquid assets

The Plan maintains a portfolio of highly marketable assets including Canadian and U.S. government bonds that can be sold or funded on a secured basis as protection against any unforeseen interruption to cash flow. The fair value of the Canadian and U.S. government bonds is \$58,435 million as at December 31, 2017 (2016 – \$51,208 million). The Plan also has publicly traded equities of \$23,852 million net of short positions (2016 – \$27,551 million) which are listed on major recognized stock exchanges. These securities are readily realizable and convertible to cash.

#### Contractual maturity

The Plan's liabilities include accrued pension benefits, investment-related liabilities, due to brokers, accounts payable and accrued liabilities. Due to brokers, accounts payable and accrued liabilities are all due within one year. As the Plan may settle securities sold but not yet purchased, cash collateral received under credit support annexes and derivatives at fair value before contractual maturity, they are considered to mature within one year.

The Plan's investment-related liabilities by maturity as at December 31 are as follows:

(Canadian \$ millions)	2017			
	Within One Year	One to Five Years	Over Five Years	Total
Securities sold under agreements to repurchase	\$ (31,829)	\$ (7,013)	\$ —	\$ (38,842)
Securities sold but not yet purchased				
Equities	(2,230)	—	—	(2,230)
Fixed income	(11,177)	—	—	(11,177)
Real estate	(1,384)	(2,102)	(946)	(4,432)
Commercial Paper	(8,938)	—	—	(8,938)
Term debt	—	(2,167)	—	(2,167)
Cash collateral received under credit support annexes	(419)	—	—	(419)
Derivative-related, net	(3,566)	—	—	(3,566)
	<b>\$ (59,543)</b>	<b>\$ (11,282)</b>	<b>\$ (946)</b>	<b>\$ (71,771)</b>

(Canadian \$ millions)	2016			
	Within One Year	One to Five Years	Over Five Years	Total
Securities sold under agreements to repurchase	\$ (39,736)	\$ (7,686)	\$ —	\$ (47,422)
Securities sold but not yet purchased				
Equities	(1,947)	—	—	(1,947)
Fixed Income	(19,108)	—	—	(19,108)
Real estate	(920)	(1,929)	(347)	(3,196)
Commercial Paper	(9,120)	—	—	(9,120)
Term debt	—	—	—	—
Cash collateral received under credit support annexes	(163)	—	—	(163)
Derivative-related, net	(2,678)	—	—	(2,678)
	<b>\$ (73,672)</b>	<b>\$ (9,615)</b>	<b>\$ (347)</b>	<b>\$ (83,634)</b>

### (i) Collateral pledged and received

The Plan pledges and receives cash and security collateral in the ordinary course of managing net investments. Security collateral consists primarily of Canadian and U.S. government securities. Generally, additional collateral is provided if the value of the securities falls below a predetermined level. The securities transferred are recognized as assets when the Plan retains substantially all risks and rewards, including credit risk, settlement risk and market risk. The Plan is not allowed to either pledge the same securities with other financial institutions or to sell them to another entity unless the Plan substitutes such securities with other eligible securities. The Plan holds the collateral received as long as the Plan is not a defaulting party or an affected party in connection with a specified condition listed on the contractual agreements and there is no early termination of the contractual agreement. The Plan is permitted to either sell or repledge the collateral in the absence of default by the owner of the collateral. The fair value of collateral sold or repledged as at December 31, 2017 is \$nil (2016 - \$20 million).

The Plan engages in securities borrowing transactions and pledges associated collateral. The Plan does not recognize any securities borrowed as its investment assets because the risks and rewards of the borrowed securities remain with the lenders.

The fair value of collateral pledged and received, as well as the securities purchased under agreements to resell and sold under agreements to repurchase and securities borrowed as at December 31 are as follows:

(Canadian \$ millions)	2017	2016
<b>Securities purchased under agreements to resell and sold under agreements to repurchase</b>		
Securities purchased under agreements to resell	\$ 24,633	\$ 27,910
Collateral held	24,815	27,749
Securities sold under agreements to repurchase	38,842	47,422
Collateral pledged	39,080	47,438
<b>Securities borrowing</b>		
Securities borrowed	3,827	4,979
Collateral pledged <sup>18</sup>	4,242	5,382
<b>Derivative-related</b>		
Collateral received <sup>19</sup>	737	1,003
Collateral pledged <sup>20</sup>	1,949	1,175

<sup>18</sup> Includes cash collateral of \$2,239 (2016 - \$1,967)

<sup>19</sup> Includes cash collateral of \$419 (2016 - \$163)

<sup>20</sup> Includes cash collateral of \$59 (2016 - \$121)

#### (j) Offsetting financial assets and financial liabilities

The Plan enters into agreements with counterparties such as ISDA Master Agreements and Global Master Repurchase Agreements (GMRA's) in order to mitigate its exposure to credit losses (see note 2f). These agreements provide rights to allow the parties to settle obligations on a net basis when certain predetermined events occur. As these rights of offset are conditional, the related amounts are not netted in the Consolidated Statements of Financial Position.

The impact of these arrangements as at December 31 is presented in the following table:

(Canadian \$ millions)	2017			
	Gross amount presented in note 2a	Amounts subject to netting agreements	Securities and cash collateral <sup>21</sup>	Net Exposure
<b>Financial assets</b>				
Securities purchased under agreements to resell	\$ 24,633	\$ (23,288)	\$ (1,345)	\$ —
Derivative-related receivables	3,494	(1,879)	(580)	1,035
	\$ 28,127	\$ (25,167)	\$ (1,925)	\$ 1,035
<b>Financial liabilities</b>				
Securities sold under agreements to repurchase	\$ (38,842)	\$ 23,288	\$ 15,533	\$ (21)
Derivative-related liabilities	(3,566)	1,879	1,631	(56)
	\$ (42,408)	\$ 25,167	\$ 17,164	\$ (77)

(Canadian \$ millions)	2016			
	Gross amount presented in note 2a	Amounts subject to netting agreements	Securities and cash collateral <sup>21</sup>	Net Exposure
<b>Financial assets</b>				
Securities purchased under agreements to resell	\$ 27,910	\$ (18,753)	\$ (9,154)	\$ 3
Derivative-related receivables	3,307	(1,699)	(927)	681
	<b>\$ 31,217</b>	<b>\$ (20,452)</b>	<b>\$ (10,081)</b>	<b>\$ 684</b>
<b>Financial liabilities</b>				
Securities sold under agreements to repurchase	\$ (47,422)	\$ 18,753	\$ 28,666	\$ (3)
Derivative-related liabilities	(2,678)	1,699	967	(12)
	<b>\$ (50,100)</b>	<b>\$ 20,452</b>	<b>\$ 29,633</b>	<b>\$ (15)</b>

<sup>21</sup> Securities and cash collateral exclude over-collateralization and collateral in transit. See note 2i for the total amount of collateral.

### **NOTE 3. RECEIVABLE FROM THE PROVINCE OF ONTARIO**

The receivable from the Province consists of required matching contributions and interest thereon.

As at December 31 (Canadian \$ millions)	2017	2016
Contributions receivable	\$ 3,269	\$ 3,224
Accrued interest receivable	45	49
	<b>\$ 3,314</b>	<b>\$ 3,273</b>

The receivable as at December 31, 2017, from the Province of Ontario consists of \$1,660 million, which was received in January 2018, and an estimated \$1,654 million to be received with interest in January 2019. The receivable as at December 31, 2016, from the Province consisted of \$1,635 million, which was received in January 2017, and an initial estimate of \$1,638 million to be received in January 2018. The difference between the initial estimates and the actual amount received was due to interest.

## NOTE 4. ACCRUED PENSION BENEFITS

### (a) Actuarial assumptions

The actuarial assumptions used in determining the value of accrued pension benefits of \$204,322 million (2016 – \$189,397 million) reflect management’s best estimate of future economic events and involve both economic and non-economic assumptions. The non-economic assumptions include considerations such as mortality as well as withdrawal and retirement rates. The primary economic assumptions include the discount rate, the salary escalation rate and the inflation rate. The discount rate is based on market rates, as at the valuation date, of bonds issued by the Province of Ontario, which have characteristics similar to the Plan’s liabilities. The discount rate was determined by applying a weighted average discount rate that reflects the estimated timing and amount of benefit payments. The inflation rate is the geometric difference between the yield on Government of Canada long-term nominal bonds and Government of Canada real-return bonds. The salary escalation rate incorporates the inflation rate assumption and long-term expectation of growth in real wages.

A summary of the primary economic assumptions is as follows:

As at December 31	2017	2016
Discount rate	2.95%	3.25%
Salary escalation rate	2.70%	2.80%
Inflation rate	1.70%	1.80%
Real rate <sup>1</sup>	1.25%	1.40%

<sup>1</sup> Real rates shown as the geometric difference between the discount rate and the inflation rate.

The primary economic assumptions were changed as a result of changes in capital markets during 2017 and the new salary agreements reached in 2017 noted below. These changes in economic assumptions resulted in a net increase in the value of accrued pension benefits of \$6,508 million (2016 – \$9,281 million increase).

The primary economic assumptions incorporated the two-year salary contracts as announced by the Ministry of Education on April 12, 2017, for school years beginning September 1, 2017 and September 1, 2018.

There were no material changes adopted in 2017 to the non-economic assumptions, however, there were refinements to the ratio of credited service to qualifying service assumed for future pension accruals as well as the retirement assumptions. Both of these changes were as a result of a study performed focused on the longer period of time required for members to reach full-time employment. There was a small refinement in 2016 to the assumed retirement age for inactive members. The change in non-economic assumptions increased the accrued pension benefits by \$145 million (2016 - \$113 million increase). The changes in economic and non-economic assumptions resulted in a net increase in the value of accrued pension benefits of \$6,653 million (2016 - \$9,394 million increase).

### (b) Indexation levels

Credited service earned after December 31, 2009 is subject to conditional inflation protection as described in paragraph (f) of the Description of Plan note. Indexation levels vary between 50% and 100% of the change in the Consumer Price Index (CPI) for credited service earned between January 1, 2010, and December 31, 2013, and vary between 0% and 100% of the change in the CPI for credited service earned after 2013. Conditional inflation protection can only be invoked and changes to indexation levels can only be made when a funding valuation is filed. The Ontario government and designated employers participating in the Plan will make extra contributions to the Plan to match the inflation protection benefits members forego up to a maximum foregone inflation of 50% of CPI.

For the financial statement valuation, future pension payments are indexed at the levels stated in the most recent funding valuation filing. As a result, the December 31, 2017 accrued pension benefits reflect the indexation levels as stated in the January 1, 2017 funding valuation report; and the December 31, 2016 accrued pension benefits reflect the indexation levels as stated in the January 1, 2016 funding valuation report.

As noted in the filed January 1, 2017 funding valuation, indexation levels will be increased to 100% of CPI for all periods of credited service effective January 1, 2018. Also, effective January 1, 2018, pensioners who retired after 2009 will receive a one-time increase to their pensions to prospectively restore benefits to the level they would have been had 100% inflation protection been provided on January 1, 2017. This level will remain in effect until the next actuarial valuation is filed with the regulatory authorities at which time the level may be reduced depending on the funded status of the Plan. The change in the indexation level resulted in an increase in accrued pension benefits of \$1,207 million in 2017.

The filed January 1, 2016 funding valuation increased indexation levels from 70% to 90% of CPI for all periods of credited service effective January 1, 2017. Also, effective January 1, 2017, pensioners who retired after 2009 received a one-time increase to their pensions to prospectively restore benefits to the level they would have been had 100% inflation protection been provided on January 1, 2016. This level remained in effect until the January 1, 2017 funding valuation was filed with the regulatory authorities. The change in the indexation level resulted in an increase in accrued pension benefits of \$1,674 million in 2016.

The indexation levels reflected in accrued pension benefits as at December 31 are as follows:

	2017	2016
Credited service	Inflation protection level	Inflation protection level
Earned before 2010	<b>100% of CPI</b>	100% of CPI
Earned during 2010 – 2013	<b>100% of CPI</b>	90% of CPI
Earned after 2013	<b>100% of CPI</b>	90% of CPI

### (c) Experience gains and losses

Experience losses on the accrued pension benefits of \$568 million (2016 – gains \$194 million) arose from differences between the actuarial assumptions and actual results.

## NOTE 5. INVESTMENT IN REAL ESTATE

The Plan's real estate portfolio is comprised of real estate-related investments that are either owned or managed on behalf of the Plan by The Cadillac Fairview Corporation Limited (CFCL), a wholly owned subsidiary. The Plan consolidates the fair value of the assets and liabilities of CFCL and the investment holding companies managed by CFCL. Investment holding companies and investment entities, including the joint ventures, managed by external parties, are recognized as the Plan's investments measured at fair value and presented on a non-consolidated basis.

The tables below provide information on the real estate portfolio. Intercompany transactions and balances are eliminated upon consolidation. The first table presents major components of the net investment in real estate. The second table presents major components of net real-estate income:

As at December 31	2017		2016	
(Canadian \$ millions)	Fair Value	Cost	Fair Value	Cost
<b>Assets<sup>1,2</sup></b>				
Real estate properties	\$ 25,410	\$ 15,017	\$ 26,506	\$ 15,695
Investments	4,284	3,315	4,159	3,113
Other assets	288	281	258	256
<b>Total assets</b>	<b>29,982</b>	<b>18,613</b>	<b>30,923</b>	<b>19,064</b>
<b>Liabilities<sup>1,2</sup></b>				
Long-term debt	3,551	3,548	2,324	2,196
Other liabilities	881	623	872	680
<b>Total liabilities</b>	<b>4,432</b>	<b>4,171</b>	<b>3,196</b>	<b>2,876</b>
<b>Net investment in real estate</b>	<b>\$ 25,550</b>	<b>\$ 14,442</b>	<b>\$ 27,727</b>	<b>\$ 16,188</b>

<sup>1</sup> U.S. Dollar, Mexican Pesos and Colombian Pesos net assets have been hedged by way of foreign currency forward contracts for a notional amount of \$1,463 million (2016 – \$1,423 million) with a combined fair value of \$3 million (2016 – (\$8) million).

<sup>2</sup> Joint ventures managed by external parties hold real estate properties and have liabilities. The net asset value of these joint ventures is included in investments, representing assets of \$1,097 million (2016 – \$708 million) and liabilities of \$383 million (2016 - \$305 million).

(Canadian \$ millions)	2017	2016
<b>Revenue</b>		
Rental	\$ 1,925	\$ 1,949
Investment and other	112	92
	<b>2,037</b>	<b>2,041</b>
<b>Expenses</b>		
Property operating	800	850
General and administrative	58	36
Other	23	15
	<b>881</b>	<b>901</b>
Operating income	<b>1,156</b>	<b>1,140</b>
Interest expense	<b>(121)</b>	<b>(90)</b>
Income (note 6)	<b>1,035</b>	<b>1,050</b>
Net investment gain	<b>661</b>	<b>906</b>
<b>Net real estate income</b>	<b>\$ 1,696</b>	<b>\$ 1,956</b>

## NOTE 6. NET INVESTMENT INCOME

Net investment income/(loss) after allocating net realized and unrealized gains on investments, management fees and transaction costs to asset classes

Net investment income is reported net of management fees, transaction costs, and is grouped by asset class. Net investment income, after giving effect to derivative contracts, for the year ended December 31, is as follows:

Net Investment Income							2017
(Canadian \$ millions)	Income <sup>1</sup>	Realized <sup>2</sup>	Unrealized <sup>2,3</sup>	Investment Income	Management Fees	Transaction Costs	Net Investment Income
<b>Equity</b>							
Publicly traded							
Canadian	\$ 20	\$ (5)	\$ 47	\$ 62	\$ —	\$ (3)	\$ 59
Non-Canadian	451	5,017	(180)	5,288	(61)	(49)	5,178
Non-publicly traded							
Canadian	134	(31)	841	944	(7)	(18)	919
Non-Canadian	947	1,611	1,794	4,352	(239)	(89)	4,024
	1,552	6,592	2,502	10,646	(307)	(159)	10,180
<b>Fixed income</b>							
Bonds	1,214	(971)	499	742	(6)	(21)	715
Short-term investments	(15)	198	248	431	—	—	431
Alternative investments <sup>4</sup>	87	853	(616)	324	(20)	(1)	303
Canadian real-rate products	455	356	(622)	189	—	(14)	175
Non-Canadian real-rate products	189	499	(855)	(167)	—	—	(167)
	1,930	935	(1,346)	1,519	(26)	(36)	1,457
<b>Inflation sensitive</b>							
Commodities	(86)	204	399	517	—	(5)	512
Timberland	73	—	(137)	(64)	—	—	(64)
Natural resources	191	1	(12)	180	(1)	(20)	159
	178	205	250	633	(1)	(25)	607
<b>Real assets</b>							
Real estate (note 5)	1,057	1,092	(431)	1,718	—	(22)	1,696
Infrastructure	814	948	1,357	3,119	(22)	(57)	3,040
	1,871	2,040	926	4,837	(22)	(79)	4,736
	\$ 5,531	\$ 9,772	\$ 2,332	\$ 17,635	\$ (356)	\$ (299)	\$ 16,980

<sup>1</sup> Income includes interest, dividends, real estate operating income (net of interest expense), and other investment-related income and expenses.

<sup>2</sup> Includes net foreign currency losses of \$454 million (both realized and unrealized).

<sup>3</sup> Net of certain management and performance fees.

<sup>4</sup> Comprised primarily of hedge funds and managed futures accounts.

## Net Investment Income

2016

(Canadian \$ millions)	Income <sup>5</sup>	Realized <sup>6</sup>	Unrealized <sup>6,7</sup>	Investment Income	Management Fees	Transaction Costs	Net Investment Income
<b>Equity</b>							
Publicly traded							
Canadian	\$ 34	\$ (137)	\$ 545	\$ 442	\$ (1)	\$ (10)	\$ 431
Non-Canadian	534	3,197	(2,355)	1,376	(44)	(43)	1,289
Non-publicly traded							
Canadian	50	(84)	278	244	(10)	(33)	201
Non-Canadian	746	2,084	(1,903)	927	(242)	(117)	568
	1,364	5,060	(3,435)	2,989	(297)	(203)	2,489
<b>Fixed income</b>							
Bonds	800	(540)	(1,040)	(780)	(3)	(16)	(799)
Short-term investments	(7)	502	(154)	341	—	—	341
Alternative investments <sup>8</sup>	173	1,077	(769)	481	(25)	(2)	454
Canadian real-rate products	482	177	40	699	(2)	(5)	692
Non-Canadian real-rate products	208	137	48	393	—	—	393
	1,656	1,353	(1,875)	1,134	(30)	(23)	1,081
<b>Inflation sensitive</b>							
Commodities	(24)	(110)	791	657	—	(3)	654
Timberland	153	70	(182)	41	—	—	41
Natural resources	186	1	227	414	(20)	(3)	391
	315	(39)	836	1,112	(20)	(6)	1,086
<b>Real assets</b>							
Real estate (note 5)	1,065	371	535	1,971	(1)	(14)	1,956
Infrastructure	896	58	(505)	449	(10)	(53)	386
	1,961	429	30	2,420	(11)	(67)	2,342
	\$ 5,296	\$ 6,803	\$ (4,444)	\$ 7,655	\$ (358)	\$ (299)	\$ 6,998

<sup>5</sup> Income includes interest, dividends, real estate operating income (net of interest expense), and other investment-related income and expenses.

<sup>6</sup> Includes net foreign currency losses of \$209 million (both realized and unrealized).

<sup>7</sup> Net of certain management and performance fees.

<sup>8</sup> Comprised primarily of hedge funds and managed futures accounts.

## NOTE 7. INVESTMENT RETURNS AND RELATED BENCHMARK RETURNS

Investment returns and related benchmark returns by investment asset class for the year ended December 31 are as follows:

(percent)	2017		2016	
	Investment Returns	Investment Benchmark Returns	Investment Returns	Investment Benchmark Returns
Equity <sup>1,4</sup>	17.6%	15.4%	4.8%	4.9%
Fixed income <sup>4</sup>	2.6	2.6	0.8	1.0
Inflation sensitive <sup>2,4</sup>	(3.2)	(4.0)	8.3	6.7
Real assets <sup>4</sup>	10.9	7.1	5.3	3.4
Credit <sup>3,4</sup>	1.7	1.1	—	—
Total fund net return <sup>5,6</sup>	9.7%	8.2%	4.0%	3.5%

<sup>1</sup> The Equity asset class is comprised of Publicly traded and Non-publicly traded equities. December 31, 2016 comparative figures have been reclassified to reflect these categories.

<sup>2</sup> Beginning January 1, 2017, Natural resources and other securities that provide exposure to inflation form the Inflation sensitive asset class.

<sup>3</sup> Beginning January 1, 2017, corporate and emerging market debt moved into the new Credit asset class.

<sup>4</sup> Net of transaction costs and management fees but before Ontario Teachers' investment administration expenses.

<sup>5</sup> Absolute return strategies, Overlay and Money market are included in the total fund net return and not shown separately.

<sup>6</sup> The total fund net return includes Ontario Teachers' investment administrative expenses. December 31, 2016 comparative figure has been changed to reflect the presentation of total-fund return on a net basis.

Investment returns have been calculated using a time-weighted rate of return methodology.

The Plan identifies benchmarks to evaluate the investment management performance. The performance of each asset class is measured against benchmarks that simulate the results based on the asset class.

The total fund net return is measured against a Canadian dollar-denominated composite benchmark produced by aggregating returns from each of the policy asset-class benchmarks.

## NOTE 8. FUNDING VALUATIONS

Funding valuations are prepared annually and must be filed at least once every three years with the regulatory authorities. These valuations are used to determine the funding requirements of the Plan. When filing the January 1, 2017 funding valuation, the co-sponsors eliminated the special contributions of 1.1% of pay effective January 1, 2018. For 2017, active members were required to contribute 11.50% of the portion of their salaries covered by the CPP and 13.10% of salaries above this level. Effective January 1, 2018, the required contribution will be reduced to 10.40% of the portion of salaries covered by the CPP and 12.0% of salaries above this level. Member contributions are matched by the Province and designated employers. The Funding Management Policy established by the co-sponsors provides guidance for the co-sponsors in determining contribution and benefit levels.

Under an agreement between the co-sponsors, contribution rates are as follows:

(percent)	Contribution Rate	
	Covered by CPP	Not covered by CPP
2011	10.40%	12.00%
2012	10.80%	12.40%
2013	11.15%	12.75%
2014 to 2017	11.50%	13.10%
2018 onwards	10.40%	12.00%

The actuarial methods used to prepare funding valuations are different than those used to prepare a financial statement valuation and the amounts included in these consolidated financial statements. The funding valuations use an actuarial valuation method which takes into account future benefits to be earned and future contributions to be made by members of the Plan as at the valuation date.

The most recent funding valuation that has been filed with regulatory authorities was prepared as at January 1, 2017, by Mercer (Canada) Limited and disclosed a funding surplus of \$5,430 million, after increasing indexation levels to 100% for credited service earned after 2009, as well as eliminating the special contributions of 1.1% of salary - both measures being effective January 1, 2018.

The sponsors have decided to file the January 1, 2018 valuation with the regulatory authorities and have chosen to allocate the surplus to a contingency reserve.

## NOTE 9. CONTRIBUTIONS

(Canadian \$ millions)	2017	2016
<b>Members</b>		
Current service <sup>1</sup>	\$ 1,625	\$ 1,619
Optional credit	37	34
	<b>1,662</b>	1,653
<b>Province of Ontario</b>		
Current service	1,610	1,596
Interest	32	36
Optional credit	34	31
	<b>1,676</b>	1,663
Designated employers	36	34
Transfers from other pension plans	11	13
	<b>47</b>	47
	<b>\$ 3,385</b>	\$ 3,363

<sup>1</sup> Contributions past due are less than \$1 million in 2017 and 2016.

## NOTE 10. BENEFITS

(Canadian \$ millions)	2017	2016
Retirement pensions	\$ 5,407	\$ 5,227
Death benefits	380	376
Disability pensions	26	26
Commuted value transfers	74	64
Family law transfers	32	24
Transfers to other plans	8	8
Benefits paid	<b>\$ 5,927</b>	\$ 5,725
Other payments <sup>1</sup>	5	—
	<b>\$ 5,932</b>	\$ 5,725

<sup>1</sup> Settlement or other claim-related payments to certain current and former beneficiaries determined on a case-by-case basis. Such payments do not reduce the accrued pension benefits.

## NOTE 11. ADMINISTRATIVE EXPENSES

### (a) Investment expenses

(Canadian \$ millions)	2017	2016
Salaries, incentives and benefits	\$ 296.7	\$ 290.1
Premises and equipment	52.0	49.4
Professional and consulting services	53.0	50.1
Information services	27.2	28.7
Communication and travel	18.6	16.4
Custodial fees	8.7	7.3
Statutory audit fees	2.7	2.3
Board and committee remuneration	1.1	0.9
Other	7.1	6.0
	<b>\$ 467.1</b>	<b>\$ 451.2</b>

### (b) Member services expenses

(Canadian \$ millions)	2017	2016
Salaries, incentives and benefits	\$ 38.1	\$ 37.4
Premises and equipment	13.5	10.6
Professional and consulting services	4.0	4.8
Communication and travel	1.2	1.2
Statutory audit fees	0.1	0.1
Board and committee remuneration	0.2	0.1
Other	1.0	0.8
	<b>\$ 58.1</b>	<b>\$ 55.0</b>

### (c) Compensation of key management personnel

Key management personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of the Plan, being the Board members, the executive team and the senior managing directors of the Investment Division.

The compensation of the key management personnel is included in the administrative expenses of the Plan. There are no other related party transactions between the key management personnel and the Plan.

The compensation of the key management personnel<sup>1</sup> as at December 31 is summarized below:

(Canadian \$ millions)	2017	2016
Short-term employee benefits	\$ 16.8	\$ 14.6
Post-employment benefits	(0.6)	2.4
Termination benefits	—	3.5
Other long-term benefits	14.8	12.6
	<b>\$ 31.0</b>	<b>\$ 33.1</b>

<sup>1</sup>The table does not include compensation of either officers or directors of The Cadillac Fairview Corporation Limited.

### (d) Employees' post-employment benefits

The employees of the Plan are members of the defined benefit plans, of either the Ontario Public Service Employees Union (OPSEU) Pension Plan or Public Service Pension Plan (PSPP). The expected contributions from the Plan in 2018 are approximately \$11.9 million. Some employees are also members of the Public Service Supplementary Plan (PSSP). These three

pension plans are sponsored by the Province of Ontario and information is available on [www.optrust.com](http://www.optrust.com) and [www.opb.ca](http://www.opb.ca). As the employer, the Plan matches the employees' contributions to these pension plans. Some senior management employees also participate in a non-registered, unfunded Supplemental Employee Retirement Plan (SERP) managed by the Plan to provide the employees non-indexed retirement benefits equal to 2% of the employee's pensionable earnings times the number of years of service, less the initial annual pension to which the employee is entitled under the PSPP and PSSP, combined. The contributions expensed by the Plan during the year were \$7.9 million (2016 – \$12.5 million). Contributions are included in the salaries, incentives and benefits expenses.

## **NOTE 12. CAPITAL**

Funding valuation surpluses or deficits as determined by an independent actuary are considered the Plan's capital for the purposes of the consolidated financial statements. See note 8 for an explanation of the difference between the funding valuation and the financial statement valuation.

The funding valuation is used to measure the long-term health of the Plan assessing the Plan's ability to meet its obligations to all current members and their survivors. The objective of managing the Plan's capital is to ensure the Plan is sufficiently funded to pay benefits over the long term.

One of the most important assumptions in the funding valuation is the discount rate (set by the Board) which is used to calculate the present value of future pension benefits the Plan expects to pay to members as well as contributions it anticipates receiving. The discount rate is derived from the expected rate of return on investments and takes into consideration the cost of running the Plan and provisions for plan maturity as well as major adverse events, such as the 2008 financial crisis.

Preliminary funding valuation surpluses or deficits are determined annually. At least once every three years, a formal funding valuation report is required to be filed with the regulatory authorities. As stated in the Partners' Agreement<sup>1</sup>, the Plan cannot be in a deficit position when such reports are filed<sup>2</sup>. As a result, the formal report must include adjustments to benefit and / or contribution levels as necessary to eliminate any preliminary valuation deficit. Any required adjustments are determined by the co-sponsors with guidance from the Funding Management Policy (Appendix A to the Partners' Agreement).

<sup>1</sup> The Partners' Agreement is the document which establishes the partnership between the co-sponsors and outlines the roles of the board and co-sponsors.

<sup>2</sup> The formal funding valuation report must be actuarially balanced such that the sum of the funding liabilities (present value of future pension benefits), the present value of the reduction in cost due to providing indexation levels below 100% and any contingency reserve is equal to the sum of the Plan's market value of assets, asset smoothing adjustment (if applicable), present value of future contributions and present value of future matching of foregone inflation adjustments.

## **NOTE 13. RETIREMENT COMPENSATION ARRANGEMENT (RCA)**

Restrictions in the ITA on the payment of certain benefits from a registered plan for periods of service after 1991 may impact some Plan members. To address affected members, the RCA was established by agreement between the co-sponsors as a supplementary plan to provide these benefits.

The RCA is administered under a trust separate from the assets of the Plan. The Board has been appointed by the co-sponsors to act as the trustee of the RCA.

Because the RCA is a separate trust and the Plan does not control the RCA, the net assets available for benefits and the value of accrued benefits and deficit, referred to below, have not been included in the consolidated financial statements of the Plan.

The RCA is funded on a pay-as-you-go basis from a portion of the contributions made to the Plan by members, the Province and designated employers. The portion is based on a limit on contributions to the Plan with contributions above the limit being remitted to the RCA. The limit is determined annually by the Plan's independent actuary and historically was determined such that the RCA contributions were expected to be sufficient to pay the benefits over the next 12 months.

In 2017, the RCA was amended by the co-sponsors to empower the Board to determine the amount of contributions allocated to the RCA fund. The amendment requires that the Board seeks the advice of the Plan actuary in making this determination. In addition, the amendment limits the funding to amounts sufficient to pay for benefits for a period of no more than 10 years following each valuation date.

At the beginning of 2018, the actuary determined that the limit should remain at \$14,500. Due to the funding policy adopted by the co-sponsors, the net assets available for benefits will continue to be substantially less than the accrued benefits.

The RCA financial statements are in compliance with Section 4600 and IFRS. A summary of the financial statements for the RCA, is as follows:

As at December 31 (Canadian \$ thousands)	<b>2017</b>	2016
<b>Statements of financial position</b>		
<b>NET ASSETS AVAILABLE FOR BENEFITS</b>		
Assets	\$ 48,928	\$ 41,619
Liabilities	(3,787)	(5,382)
	<b>\$ 45,141</b>	<b>\$ 36,237</b>
<b>ACCRUED PENSION BENEFITS AND DEFICIT</b>		
Accrued pension benefits	\$ 382,176	\$ 335,040
Deficit	(337,035)	(298,803)
	<b>\$ 45,141</b>	<b>\$ 36,237</b>
<b>Statements of changes in net assets available for benefits</b>		
Contributions	\$ 17,887	\$ 20,662
Investment income	107	138
	<b>17,994</b>	<b>20,800</b>
Benefits paid	8,957	9,524
Expenses	133	165
	<b>9,090</b>	<b>9,689</b>
Increase in net assets available for benefits	<b>\$ 8,904</b>	<b>\$ 11,111</b>

The actuarial assumptions used in determining the value of accrued benefits are consistent with the Plan except that the assumed discount rate has been adjusted to reflect the effect of the 50% refundable tax under the RCA.

The estimate of the value of accrued benefits is highly sensitive to salary increases, both actual and assumed. Any changes to the salary assumptions will have a significant effect on the liabilities for future benefits. In addition, significant uncertainty exists in projecting the liabilities of the RCA due to changes in the number of future participants as well as changes to the income tax regulations relating to pensions.

## **NOTE 14. COMMITMENTS**

The Plan has committed to enter into investment and other transactions, which may be funded over the next several years in accordance with the terms and conditions agreed to. As at December 31, 2017, these commitments totalled \$11,909 million (2016 – \$10,597 million).

## **NOTE 15.**

### **GUARANTEES AND INDEMNIFICATIONS**

#### Guarantees

The Plan provides guarantees to third parties related to certain companies the Plan invests in and will be called upon to satisfy the guarantees if the companies fail to meet their obligations. The Plan expects most guarantees to expire unused. No payments have been made by the Plan in either 2017 or 2016 under these guarantees.

The Plan guarantees loan and credit agreements which will expire by 2020. The Plan's maximum exposure is \$52 million as at December 31, 2017 (2016 – \$nil million). The companies have drawn \$11 million under the agreements (2016 – \$nil million).

The Plan guarantees lease agreements for a subsidiary with expiry dates ranging from 2029 to 2059. The Plan's maximum exposure is \$85 million as at December 31, 2017 (2016 – \$96 million). There were no default lease payments in either 2017 or 2016.

The Plan also guarantees the ability of certain investee companies to settle certain financial obligations. The Plan's maximum exposure is \$91 million as at December 31, 2017 (2016 - \$67 million).

The Cadillac Fairview Corporation Limited manages the real estate investments and has provided guarantees relating to the completion of the construction of certain residential developments. The term of these guarantees spans the lives of the development projects, which range from one to five years. The maximum exposure cannot be determined because the projects are not yet complete. These guarantees amounted to \$131 million as at December 31, 2017 (2016 – \$151 million) and have not been recognized in the real estate liabilities.

The Plan guarantees the debentures issued by a real estate trust it consolidates. No payments have been made by the Plan into the real estate trust or related to the debentures. The debentures are comprised of \$0.75 billion 4.31% Series B Debentures maturing on January 25, 2021 and \$0.6 billion 3.64% Series C Debentures maturing on May 9, 2018. The debentures, included in the Plan's real estate investment-related liabilities, may be redeemed by the issuer at any time prior to maturity.

The Plan also guarantees commercial paper and term debt consisting of US\$1.75 billion 2.125% senior notes issued by Ontario Teachers' Finance Trust which the Plan consolidates. The senior notes, maturing in September 2022, are not redeemable prior to maturity at the option of the trust or the Plan except as described in the Offering Memorandum dated September 12, 2017. The trust and its affiliates may at any time and from time to time purchase the senior notes in the open market or otherwise. The commercial paper is not redeemable prior to maturity or subject to voluntary prepayment, except as described in the U.S. Commercial Paper Private Placement Memorandum dated June 2017. The maturity terms for the commercial paper outstanding as at December 31, 2017 are up to 270 days from the date of issue in the U.S. and up to 364 days in Canada. The maximum aggregate principal amounts of the commercial paper outstanding at any one time do not exceed \$10 billion. As at December 31, 2017, commercial paper issued amounted to \$8,968 million (2016 - \$9,127 million). The fair values of these guarantees are included in the Plan's investment-related liabilities.

#### Indemnifications

The Plan provides that Board members, employees and certain others are to be indemnified in relation to certain proceedings that may be commenced against them. In addition, in the normal course of operations, the Plan may, in certain circumstances, agree to indemnify a counterparty. Under these agreements, the Plan, its subsidiaries and joint ventures may be required to compensate counterparties for costs incurred as a result of various contingencies such as legal claims or changes in laws and regulations. The number of such agreements, the variety of indemnifications and their contingent character prevents the Plan from making a reasonable estimate of the maximum amount that would be required to pay all such counterparties.

# MAJOR INVESTMENTS

As at December 31, 2017

## FIXED INCOME AND SHORT-TERM INVESTMENTS OVER \$150 MILLION

Type (Canadian \$ millions)	Maturity	Coupon (%)	Fair Value	Cost
Government of Canada bonds	2018–2064	0.50–9.00	\$24,682	\$23,687
Securities purchased under agreements to resell	2018–2019	-1.00–1.94	24,633	24,792
Provincial bonds	2018–2049	0.00–8.50	10,164	9,662
International corporate bonds	2018–2053	0.00–13.00	6,142	6,300
International sovereign debt	2018–2068	0.00–23.38	5,908	6,106
Canada treasury bills	2018–2018	0.00–0.00	4,265	4,261
Bank notes	2018–2059	0.00–1.30	2,236	2,238
Commercial paper	2018–2018	0.00–1.67	1,312	1,310
Canadian corporate bonds	2018–2040	0.00–14.00	533	516
U.S. treasury bonds	2019–2047	1.25–6.25	(1,158)	(318)
Term debt issued	2022–2022	2.13–2.13	(2,167)	(2,134)
Commercial paper issued	2018–2018	0.00–1.70	(8,938)	(9,014)
Securities sold under agreements to repurchase	2018–2020	-0.92–2.25	(38,842)	(39,164)

## REAL-RETURN INVESTMENTS OVER \$150 MILLION

Type (Canadian \$ millions)	Maturity	Coupon (%)	Fair Value	Cost
Real-return Canada bonds	2021–2050	0.50–4.25	\$16,508	\$13,031
U.S. treasury inflation protection	2018–2047	0.13–3.88	14,138	11,817
Real-return provincial bonds	2021–2036	2.00–4.50	1,920	1,243
Real-return Canada corporate bonds	2021–2039	0.00–5.33	1,062	458

## CORPORATE SHARES/UNITS OVER \$150 MILLION

As at December 31, 2017 (millions)

Security Name	Shares	Fair Value	Security Name	Shares	Fair Value
The Macerich Company	23.3	\$1,916.3	TMX Group Limited	2.8	\$200.3
Multiplan Empreendimentos Imobiliarios S.A.	54.8	1,431.4	Lloyds Banking Group plc	163.3	188.4
Alphabet Inc.	0.3	421.1	SiteOne Landscape Supply, Inc.	1.9	179.6
Samsung Electronics Co., Ltd.	0.1	388.1	EXOR N.V.	2.3	176.2
Sprint Corporation	46.1	340.1	Intact Financial Corporation	1.6	170.1
XPO Logistics, Inc.	2.6	294.0	Visa Inc.	1.2	165.3
Hudson's Bay Company	23.0	260.0	Daimler AG	1.5	164.2
Aircastle Limited	7.9	231.1	Citigroup Inc.	1.8	163.6
Tencent Holdings Limited	3.3	216.0	SoftBank Group Corp.	1.6	156.9
CenturyLink, Inc.	10.1	211.5	BlackBerry Limited	10.8	151.0
Facebook, Inc.	0.9	204.9	LafargeHolcim Ltd.	2.1	150.8

## REAL ESTATE PROPERTIES OVER \$150 MILLION

As at December 31, 2017

Property	Total Square Footage (in thousands)	Effective % Ownership	Property	Total Square Footage (in thousands)	Effective % Ownership
<b>Canadian Regional Shopping Centres</b>			<b>Canadian Office Properties</b>		
Champlain Place, Dieppe	847	100%	City Centre Office, Calgary	850	100%
Chinook Centre, Calgary	1,412	100%	Deloitte Tower, Montreal	515	100%
Fairview Mall, Toronto	875	50%	Granville Square, Vancouver	402	50%
Fairview Park Mall, Kitchener	838	100%	Pacific Centre Office Complex, Vancouver	1,819	50%
Fairview Pointe Claire, Montreal	1,172	50%	RBC Centre, Toronto	1,223	50%
Le Carrefour Laval, Montreal	1,426	100%	Shell Centre, Calgary	693	100%
Les Galeries D'Anjou, Montreal	1,305	50%	Toronto-Dominion Centre Office Complex, Toronto	4,412	70%
Les Promenades St. Bruno, Montreal	1,142	100%	Toronto Eaton Centre Office Complex, Toronto	1,845	100%
Lime Ridge Mall, Hamilton	807	100%	Waterfront Centre, Vancouver	401	50%
Market Mall, Calgary	926	50%	Yonge Corporate Centre, Toronto	668	100%
Markville Shopping Centre, Markham	1,016	100%			
Masonville Place, London	651	100%			
Pacific Centre, Vancouver	1,070	50%			
Polo Park Mall, Winnipeg	1,417	100%			
Richmond Centre, Richmond	797	50%			
Rideau Centre, Ottawa	1,413	100%			
Sherway Gardens, Toronto	1,269	100%			
Shops at Don Mills, Toronto	466	100%			
Toronto-Dominion Centre, Toronto	158	70%			
Toronto Eaton Centre, Toronto	2,924	100%			

## PRIVATE COMPANIES AND PARTNERSHIPS OVER \$150 MILLION

As at December 31, 2017

24 Hour Fitness Worldwide Inc.	Exal International Limited	Outdoor Holdings, LLC
Actera Partners II L.P.	FAPS Holdings, Inc.	PAG Asia I LP
AEA Investors Fund V LP	Fifth Cinven Fund (No.6) Limited Partnership	PAG Asia II LP
Aethon Energy Management LLC	Flexera Holdings, L.P.	Pershing Square VI International, L.P.
Apollo Overseas Partners (Delaware 892) VIII, L.P.	Flynn Restaurant Group LLC	PetVet Care Centers, Inc.
Apollo Special Situations Fund, L.P.	FMAP CIM Limited	Phynet Dermatology LLC
AQR Offshore Multi-Strategy Fund VII Ltd.	FMAP PCM Limited	Polar Multi-Strategy Fund (Legacy)
Ares Corporate Opportunities Fund III, L.P.	FMAP WMC Limited	Providence Equity Partners VI L.P.
Ares Corporate Opportunities Fund IV, L.P.	Fondo de Capital Privado Terranum	Providence Equity Partners VII-A L.P.
Aroona Farms SA Pty Ltd.	FountainVest China Growth Fund II, L.P.	Pure International Holdings (BVI) Limited
Arterra Wines Canada, Inc.	FountainVest China Growth Fund, L.P.	Quinte Limited
Asia Opportunity Fund III, L.P.	GCT Global Container Terminals Inc.	RedBird Capital Partners Platform L.P.
Automobile Protection Corporation	Hancock Timber Resource Group	Resource Management Service Inc.
Autopista Arco Norte, S.A. de CV	Hawkwood Energy, LLC	Riverbed Technology, Inc.
Baldr Fund Inc.	Heartland Dental Care, Inc.	SCI PH Inc.
BaseCore Metals LP	Helly Hansen Group AS	Scotia Gas Networks plc
Baybridge Seniors Housing Inc.	Heritage Royalty Limited Partnership	SeaCube Container Leasing Ltd.
BDCM Offshore Opportunity Fund II, Ltd.	Hudson Catastrophe Fund, Ltd.	Serta Simmons Holdings, LLC
Birmingham International Airport	Imperial Parking Corporation	Shearer's Foods, Inc.
BluEarth Renewables Inc.	Infiltrator Systems, Inc.	Silver Lake Partners IV, L.P.
Bristol Airport Limited	Intercos S.p.A.	Skyway Concession Company LLC
BroadStreet Capital Partners, Inc.	InterGen N.V.	Sociedad Austral de Electricidad S.A.
Busy Bees Benefits Holdings Limited	Irish National Lottery	Solus Offshore Opportunities Fund 5 L.P.
Camelot Group plc	Kedaara Capital I Limited	Storapod Holding Company, Inc.
Canada Guaranty Mortgage Insurance Company	Koole Tankstorage Zaandam B.V.	Sydney Desalination Plant Pty Limited
Canbriam Energy, Inc.	Kyobo Life Insurance Co., Ltd.	Synlab Limited
Catalina Holdings (Bermuda) Ltd.	LMAP 903 Limited	TDR Capital II 'B' L.P.
Catterton Partners VII, L.P.	LMAP 904 Limited	The Brussels Airport Company
CIBanco, S.A. CIB/477	LMAP 909	Thoma Bravo Fund XI-A, L.P.
Copenhagen Airport A/S	LMAP 910	Thoma Bravo Fund XII-A, L.P.
Coway Holdings, Inc.	LMAP Chi Limited	TierPoint, LLC
CPG International Inc.	London City Airport	TP Partners Fund, L.P.
CSC ServiceWorks Holdings, Inc.	Lowell Group Limited	TPG Asia VI, L.P.
Cubico Sustainable Investments Limited	MBK Partners III, L.P.	Traeger Pellet Grills Holdings LLC
DaVinciRe Holdings Ltd.	Mémora Servicios Funerarios, S.L.U.	Triam Partners Co-Investment Opportunities Fund, L.P.
DTZ Jersey Holdings Ltd.	Metronode Group Pty Ltd	Triam Partners, Ltd.
EdgeMarc Energy Holdings, LLC	MR Argent Offshore Fund AB L.P.	Univision Communications Inc.
Empresa de Servicios Sanitarios del Bio-Bio S.A.	MSB Capital Limited	ValueAct Capital International Fund A, L.P.
Esva S.A.	Munchkin, Inc.	ValueAct Capital International III, L.P.
Euclid Fund	Nuevosur, S.A.	Westerleigh Group Holdings Limited
EWP PA Fund, Ltd.	NXT Capital Holdings, L.P.	
	OGF SA	
	OLE Media Management L.P.	
	Orbis Institutional Global Equity L.P.	

# ELEVEN-YEAR FINANCIAL REVIEW

(Canadian \$ billions)	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>CHANGE IN NET ASSETS</b>											
<b>Income</b>											
Investment income	\$16.98	\$7.00	\$19.67	\$16.26	\$13.72	\$14.75	\$11.74	\$13.27	\$10.89	\$(19.03)	\$4.68
Contributions											
Members/transfers	1.71	1.70	1.67	1.63	1.55	1.48	1.41	1.35	1.29	1.13	1.06
Province of Ontario	1.68	1.66	1.64	1.59	1.53	1.46	1.41	1.35	1.43	1.18	1.08
<b>Total income</b>	<b>20.37</b>	<b>10.36</b>	<b>22.98</b>	<b>19.48</b>	<b>16.80</b>	<b>17.69</b>	<b>14.56</b>	<b>15.97</b>	<b>13.61</b>	<b>(16.72)</b>	<b>6.82</b>
<b>Expenditures</b>											
Benefits paid	5.93	5.72	5.54	5.31	5.15	4.92	4.66	4.50	4.39	4.20	4.02
Investment expenses	0.47	0.45	0.43	0.41	0.36	0.30	0.29	0.29	0.21	0.15	0.23
Member Services expenses	0.06	0.06	0.05	0.05	0.05	0.04	0.05	0.05	0.04	0.04	0.04
<b>Total expenditures</b>	<b>6.46</b>	<b>6.23</b>	<b>6.02</b>	<b>5.77</b>	<b>5.56</b>	<b>5.26</b>	<b>5.00</b>	<b>4.84</b>	<b>4.64</b>	<b>4.39</b>	<b>4.29</b>
<b>Increase/(decrease) in net assets</b>	<b>\$13.91</b>	<b>\$4.13</b>	<b>\$16.96</b>	<b>\$13.71</b>	<b>\$11.24</b>	<b>\$12.43</b>	<b>\$9.56</b>	<b>\$11.13</b>	<b>\$8.97</b>	<b>\$(21.11)</b>	<b>\$2.53</b>
<b>NET ASSETS</b>											
<b>Investments</b>											
Equity											
Publicly traded	\$35.13	\$38.97	\$49.85	\$48.27	\$47.62	\$48.43	\$40.35	\$36.74	\$32.86	\$26.74	\$42.38
Non-publicly traded	31.94	26.98	27.69	20.58	14.27	11.08	11.32	10.75	8.32	8.19	7.66
Fixed income											
Bonds	41.41	43.53	37.98	35.19	30.53	28.87	26.50	22.73	15.46	14.22	22.91
Real-rate products	19.96	31.72	31.13	30.36	26.37	31.14	29.29	23.24	19.88	17.41	11.06
Inflation sensitive											
Commodities	11.08	4.18	4.00	9.03	8.21	6.97	5.64	5.22	1.94	1.25	3.02
Natural resources	6.55	6.28	6.25	2.87	2.62	2.17	2.17	2.22	2.34	2.80	2.12
Inflation hedge	8.92	–	–	–	–	–	–	–	–	–	–
Real assets											
Real estate	25.51	26.47	24.86	22.09	19.24	16.86	14.96	16.86	14.21	13.48	13.41
Infrastructure	18.74	17.83	15.66	12.66	11.68	9.65	8.71	7.07	5.57	7.23	6.72
Real-rate products	1.45	–	–	–	–	–	–	–	–	–	–
Credit	13.58	–	–	–	–	–	–	–	–	–	–
Absolute return strategies	10.73	13.28	17.76	15.84	12.20	12.27	12.33	11.38	11.67	14.75	12.30
Overlay	(0.27)	0.51	–	–	–	–	–	–	–	–	–
Money market	(39.38)	(37.67)	(46.93)	(44.50)	(33.84)	(40.18)	(35.01)	(31.49)	(18.74)	(20.97)	(13.58)
<b>Net investments</b>	<b>185.35</b>	<b>172.08</b>	<b>168.25</b>	<b>152.39</b>	<b>138.90</b>	<b>127.26</b>	<b>116.26</b>	<b>104.72</b>	<b>93.51</b>	<b>85.10</b>	<b>108.00</b>
Receivable from Province of Ontario	3.31	3.27	3.21	3.10	2.97	2.83	2.72	2.63	2.52	2.19	1.84
Other assets	1.59	1.21	0.44	0.22	0.14	0.50	0.51	0.57	0.63	0.40	0.36
Other liabilities	(0.77)	(0.99)	(0.46)	(1.23)	(1.25)	(1.07)	(2.39)	(0.39)	(0.26)	(0.25)	(1.65)
<b>Net assets</b>	<b>189.48</b>	<b>175.57</b>	<b>171.44</b>	<b>154.48</b>	<b>140.76</b>	<b>129.52</b>	<b>117.10</b>	<b>107.53</b>	<b>96.40</b>	<b>87.44</b>	<b>108.55</b>
Accrued pension benefits	204.32	189.40	173.27	172.73	148.57	166.01	162.59	146.89	131.86	118.14	115.46
<b>Deficit</b>	<b>\$(14.84)</b>	<b>\$(13.83)</b>	<b>\$(1.83)</b>	<b>\$(18.25)</b>	<b>\$(7.81)</b>	<b>\$(36.49)</b>	<b>\$(45.49)</b>	<b>\$(39.36)</b>	<b>\$(35.46)</b>	<b>\$(30.70)</b>	<b>\$(6.91)</b>
<b>PERFORMANCE (percent)</b>											
Total-fund net return	9.7	4.0	12.7	11.5	10.6	12.7	10.9	14.0	12.7	(18.1)	4.3
Benchmark	8.2	3.5	10.1	10.1	9.3	11.0	9.8	9.8	8.8	(9.6)	2.3
<b>ASSUMPTIONS USED FOR FINANCIAL STATEMENT VALUATION</b>											
As at December 31 (percent)											
Discount rate	2.95	3.25	3.25	3.35	4.20	3.40	3.40	4.05	4.60	4.00	4.65
Salary escalation rate	2.70	2.80	2.50	2.70	3.00	3.00	3.05	3.40	3.55	2.35	3.20
Inflation rate	1.70	1.80	1.50	1.70	2.00	2.00	2.05	2.40	2.55	1.35	2.20
Real rate <sup>1</sup>	1.25	1.40	1.70	1.65	2.20	1.40	1.35	1.65	2.05	2.65	2.45

<sup>1</sup> Effective December 31, 2015, real rate shown as the geometric difference between the discount rate and the inflation rate. Previously, the real rate shown was based on the arithmetic difference between the discount rate and the inflation rate.

# FUNDING VALUATION HISTORY

Funding valuations must be filed with pension regulatory authorities at least every three years. Valuation dates and voluntary filings are determined by OTF and the Ontario government. Filings must show the plan has sufficient assets to pay all future benefits to current plan members. The 10 most recent filed funding valuations and the assumptions used for each are summarized in the table below. Details on plan changes from funding decisions are available in the Plan Funding section at [otpp.com](http://otpp.com).

The sponsors used a portion of the \$11.5 billion surplus (as of January 1, 2017) to increase inflation protection levels to 100% of the Consumer Price Index (CPI) for pension credit earned after 2009. Pensioners who retired after 2009 also received a one-time increase to their pensions to restore benefits to the level they would have been had 100% inflation protection been provided on January 1, 2017. In addition, the contribution rate for the plan's active members was reduced by 1.1%, effective January 1, 2018. This marked an early end to the 1.1% "special contributions" that had been scheduled to finish in 2026.

## FILED FUNDING VALUATIONS<sup>1</sup>

As at January 1 (Canadian \$ billions)	2017	2016	2015	2014	2012	2011	2009	2008	2005	2003
Net assets available for benefits	\$175.6	\$171.4	\$154.5	\$140.8	\$117.1	\$107.5	\$87.4	\$108.5	\$84.3	\$66.2
Smoothing adjustment	(2.9)	(10.8)	(8.2)	(7.2)	(3.0)	3.3	19.5	(3.6)	(1.5)	9.7
Value of assets	172.7	160.6	146.3	133.6	114.1	110.8	106.9	104.9	82.8	75.9
Future basic contributions	41.1	41.5	38.8	37.5	35.4	33.8	25.9	23.6	16.7	14.7
Future special contributions	0.3	3.1	3.5	3.5	3.3	3.8	5.5	5.6	6.2	–
Future matching of CIP benefit reduction	–	2.3	5.9	7.4	7.3	5.1	–	–	–	–
Total assets	214.1	207.5	194.5	182.0	160.1	153.5	138.3	134.1	105.7	90.6
Cost of future pensions <sup>2</sup>	(208.7)	(205.3)	(197.3)	(188.2)	(167.6)	(158.4)	(137.5)	(134.1)	(105.6)	(89.1)
Reduction in cost due to less than 100% indexing	–	2.3	5.9	7.4	7.7	5.1	–	–	–	–
Surplus	\$5.4	\$4.5	\$3.1	\$1.2	\$0.2	\$0.2	\$0.8	\$0.0	\$0.1	\$1.5

## ASSUMPTIONS USED FOR FILED VALUATIONS

As at January 1 (percent)	2017	2016	2015	2014	2012	2011	2009	2008	2005	2003
Inflation rate	2.00	2.00	2.00	2.10	2.20	2.15	1.35	2.20	2.750	2.05
Real discount rate <sup>3</sup>	2.75	2.75	2.85	2.85	3.10	3.25	3.65	3.45	3.725	4.35
Discount rate	4.80	4.80	4.85	4.95	5.30	5.40	5.00	5.65	6.475	6.40

<sup>1</sup> Valuation filing dates determined by the plan sponsors.

<sup>2</sup> Includes value of 100% inflation protection.

<sup>3</sup> Effective January 1, 2016, real rate shown as the geometric difference between the discount rate and the inflation rate. Previously, the real rate shown was based on the arithmetic difference between the discount rate and the inflation rate.

## CONTRIBUTION<sup>1</sup> AND INDEXATION LEVELS<sup>2</sup>

Conditional Inflation Protection (CIP) Level	2017 <sup>3</sup>	2016	2015	2014	2012	2011	2009	2008	2005	2003
Indexation level (Post-2009–Pre-2014 benefits)	100.0	90.0	70.0	60.0	50.0	60.0	100.0	n/a	n/a	n/a
Indexation level (Post-2013 benefits)	100.0	90.0	70.0	60.0	45.0	60.0	100.0	n/a	n/a	n/a
Contribution level above the YMPE	13.1	13.1	13.1	13.1	12.4	12.0	12.0	11.2	8.9	8.9
Contribution level below the YMPE	11.5	11.5	11.5	11.5	10.8	10.4	10.4	9.6	7.3	7.3

<sup>1</sup> Contribution levels are those that were in effect in the calendar year of the valuation.

<sup>2</sup> Indexation levels are effective the January 1 following the valuation date.

<sup>3</sup> With the decision to file the January 1, 2017, valuation, the sponsors eliminated the 1.1% special contributions effective January 1, 2018. Therefore, contribution rates for 2018 are 10.4% of earnings below the YMPE plus 12% of earnings above the YMPE.