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
February 28, 2019

David McGraw
Chief Financial Officer

INDEPENDENT AUDITOR'S REPORT

To the Administrator of

Ontario Teachers' Pension Plan Board:

OPINION

We have audited the consolidated financial statements of Ontario Teachers' Pension Plan Board (the "Plan"), which comprise the consolidated statement of financial position as at December 31, 2018, and the consolidated statements of changes in net assets available for benefits, changes in accrued pension benefits, and changes in deficit for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Plan as at December 31, 2018, and the changes in its net assets available for benefits and changes in its accrued pension benefits for the year then ended in accordance with Canadian accounting standards for pension plans.

BASIS FOR OPINION

We conducted our audit in accordance with Canadian generally accepted auditing standards ("Canadian GAAS"). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Plan in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

RESPONSIBILITIES OF MANAGEMENT AND THOSE CHARGED WITH GOVERNANCE FOR THE FINANCIAL STATEMENTS

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

In preparing the financial statements, management is responsible for assessing the Plan's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Plan or to cease operations, or has no realistic alternative but to do so.

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

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian GAAS will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian GAAS, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Plan's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Plan to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Plan to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Deloitte LLP.

Chartered Professional Accountants
Licensed Public Accountants
Toronto, Ontario
February 28, 2019

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, 2018, 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, 2018;
- 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 2018;
- 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, 2018, as a going concern. This is different from the funding 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 2018, 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.   Lise Houle, F.C.I.A., F.S.A.
February 28, 2019

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

As at December 31 (Canadian $ millions)		**2018**		2017
Net assets available for benefits				
ASSETS				
Cash	**$**	**534**	$	515
Receivable from the Province of Ontario (note 3)		**3,224**		3,314
Receivable from brokers		**189**		1,001
Investments (note 2)		**256,891**		257,123
Premises and equipment		**63**		65
		260,901		262,018
LIABILITIES				
Accounts payable and accrued liabilities		**458**		420
Due to brokers		**22**		349
Investment-related liabilities (note 2)		**69,309**		71,771
		69,789		72,540
Net assets available for benefits	**$**	**191,112**	$	189,478
Accrued pension benefits and deficit				
Accrued pension benefits (note 4)	**$**	**192,281**	$	204,322
Deficit		**(1,169)**		(14,844)
Accrued pension benefits and deficit	**$**	**191,112**	$	189,478

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)	2018	2017
Net assets available for benefits, beginning of year	**$ 189,478**	$ 175,570
Investment operations		
Net investment income (note 6)	**5,233**	16,980
Administrative expenses (note 11a)	**(555)**	(467)
Net investment operations	**4,678**	16,513
Member service operations		
Contributions (note 9)	**3,166**	3,385
Benefits (note 10)	**(6,141)**	(5,932)
Administrative expenses (note 11b)	**(69)**	(58)
Net member service operations	**(3,044)**	(2,605)
Increase in net assets available for benefits	**1,634**	13,908
Net assets available for benefits, end of year	**$ 191,112**	$ 189,478

CONSOLIDATED STATEMENTS OF CHANGES IN ACCRUED PENSION BENEFITS

For the year ended December 31 (Canadian $ millions)		2018		2017
Accrued pension benefits, beginning of year	**$**	**204,322**	$	189,397
Increase in accrued pension benefits				
Interest on accrued pension benefits		**6,043**		6,156
Benefits accrued		**7,157**		6,268
Changes in actuarial assumptions and methods (note 4a)		**—**		6,653
Changes in level of conditional indexing (note 4b)		**—**		1,207
Experience losses (note 4c)		**709**		568
		13,909		20,852
Decrease in accrued pension benefits				
Benefits paid (note 10)		**6,138**		5,927
Changes in actuarial assumptions and methods (note 4a)		**19,812**		—
		25,950		5,927
Net (decrease)/increase in accrued pension benefits		**(12,041)**		14,925
Accrued pension benefits, end of year	**$**	**192,281**	$	204,322

CONSOLIDATED STATEMENTS OF CHANGES IN DEFICIT

For the year ended December 31 (Canadian $ millions)		2018		2017
Deficit, beginning of year	**$**	**(14,844)**	$	(13,827)
Increase in net assets available for benefits		**1,634**		13,908
Net decrease/(increase) in accrued pension benefits		**12,041**		(14,925)
Deficit, end of year	**$**	**(1,169)**	$	(14,844)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2018

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 a contributory defined benefit pension plan co-sponsored by the Province of Ontario (the Province) and Ontario Teachers' Federation (OTF) (the co-sponsors). The principal 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 (RPP) which is exempt from income taxes in Canada. The Plan may be liable for taxes on income earned in other jurisdictions.

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 pension credit earned up to December 31, 2009, inflation protection is 100% of the change in the Consumer Price Index. Pension credit earned after December 31, 2009, is subject to conditional inflation protection (CIP). For pension credit 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 pension credit 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 pension credit 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 RPP 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 $159,471 (CPP-exempt members $147,222) in 2018 and $157,755 (CPP-exempt members $145,722) in 2017; 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 entities that support the Plan's investing and funding strategies, 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, 2018 were authorized for issue through a resolution of the Board on February 28, 2019.

(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 16 Leases. The new standard will replace IAS 17, Leases for reporting periods beginning on or after January 1, 2019. IFRS 16 introduces a new single lessee accounting model for all leases by eliminating the distinction between operating and financing leases and requires lessees to recognize right-of-use assets and lease liabilities on the balance sheet. Depreciation expense on the right-of-use asset and interest expense on the lease liability will replace the operating lease expense.

Management has determined that there will not be a 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. Real estate 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. Management fees include incremental costs incurred with external parties that are directly attributable to existing investments and are not related to acquisition or disposal.

(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 pension credit earned after December 31, 2009 is conditional, depending on the Plan's funded status. For 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[1] 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 $714 million (2017 – $626 million), before allocating the effect of derivative contracts:

As at December 31		2018		2017
(Canadian $ millions)	**Fair Value**	**Cost**	Fair Value	Cost
Equity				
Publicly traded				
Canadian	**$ 1,545**	**$ 1,904**	$ 2,233	$ 2,134
Non-Canadian	**21,228**	**19,459**	23,849	17,809
Non-publicly traded				
Canadian	**4,881**	**3,482**	3,676	2,527
Non-Canadian	**32,149**	**23,444**	29,800	22,605
	59,803	**48,289**	59,558	45,075
Fixed income				
Bonds	**54,561**	**53,328**	57,187	56,273
Short-term investments	**9,111**	**9,094**	7,813	7,809
Alternative investments	**15,375**	**12,644**	12,665	10,648
Canadian real-rate products	**19,904**	**15,608**	19,570	14,804
Non-Canadian real-rate products	**14,514**	**12,834**	14,635	12,310
	113,465	**103,508**	111,870	101,844
Inflation sensitive				
Commodities	**875**	**853**	—	—
Timberland	**2,496**	**1,301**	2,250	1,301
Natural resources	**5,621**	**5,706**	4,303	4,286
	8,992	**7,860**	6,553	5,587
Real assets				
Real estate (note 5)	**31,301**	**19,319**	29,982	18,613
Infrastructure	**17,842**	**11,549**	18,735	13,384
	49,143	**30,868**	48,717	31,997
	231,403	**190,525**	226,698	184,503
Investment-related receivables				
Securities purchased under agreements to resell	**15,826**	**15,577**	24,633	24,792
Cash collateral deposited under securities borrowing arrangements	**2,549**	**2,549**	2,239	2,239
Cash collateral paid under credit support annexes	**57**	**57**	59	59
Derivative-related, net	**7,056**	**2,684**	3,494	1,662
	25,488	**20,867**	30,425	28,752
Investments	**$ 256,891**	**$ 211,392**	$ 257,123	$ 213,255

[1] For additional details, refer to the Major Investments on page 100.

As at December 31		2018		2017
(Canadian $ millions)	**Fair Value**	**Cost**	Fair Value	Cost
Investment-related liabilities				
Securities sold under agreements to repurchase	**$ (28,280)**	**$ (27,869)**	$ (38,842)	$ (39,164)
Securities sold but not yet purchased				
Equities	**(2,617)**	**(2,587)**	(2,230)	(2,128)
Fixed income	**(12,493)**	**(11,573)**	(11,177)	(10,569)
Real estate (note 5)[2]	**(3,894)**	**(3,471)**	(4,432)	(4,171)
Commercial paper	**(8,676)**	**(8,323)**	(8,938)	(9,014)
Term debt	**(5,091)**	**(4,669)**	(2,167)	(2,134)
Cash collateral received under credit support annexes	**(937)**	**(937)**	(419)	(419)
Derivative-related, net	**(7,321)**	**(1,797)**	(3,566)	(959)
	(69,309)	**(61,226)**	(71,771)	(68,558)
Net investments (note 2d)	**$ 187,582**	**$ 150,166**	$ 185,352	$ 144,697

[2] Real estate liabilities include the liabilities of real estate subsidiaries and trusts. These include $795 million fair value and $764 million cost (December 31, 2017 $1,419 million fair value and $1,367 million cost) which are guaranteed by the Plan as described in note 15. The remaining liabilities held in real estate entities are not guaranteed by the Plan.

(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, 2018
(Canadian $ millions)	**Level 1**	**Level 2**	**Level 3**	**Total**
Equity	**$ 21,757**	**$ 162**	**$ 37,884**	**$ 59,803**
Fixed income	**85,455**	**12,084**	**15,926**	**113,465**
Inflation sensitive	**875**	**—**	**8,117**	**8,992**
Real assets	**2,485**	**309**	**46,349**	**49,143**
Investment-related receivables	**2,830**	**22,469**	**189**	**25,488**
Investment-related liabilities	**(16,095)**	**(51,138)**	**(2,076)**	**(69,309)**
Net investments	**$ 97,307**	**$ (16,114)**	**$ 106,389**	**$ 187,582**

				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

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.

							2018
(Canadian $ millions)	**Equity**	**Fixed Income**	**Inflation Sensitive**	**Real Assets**	**Investment-Related Receivables**	**Investment-Related Liabilities**	**Total**
Balance, beginning of year	**$ 34,864**	**$ 14,390**	**$ 6,553**	**$ 45,305**	**$ 97**	**$ (1,830)**	**$ 99,379**
Purchases	**7,123**	**5,299**	**1,427**	**2,681**	**128**	**195**	**16,853**
Sales	**(8,997)**	**(3,884)**	**(15)**	**(3,789)**	**(60)**	**(276)**	**(17,021)**
Transfers in[3]	**—**	**—**	**—**	**—**	**(4)**	**—**	**(4)**
Transfers out[3]	**—**	**(1,062)**	**—**	**—**	**—**	**4**	**(1,058)**
Gains/(losses) included in investment income							
Realized	**3,545**	**463**	**—**	**(47)**	**(30)**	**62**	**3,993**
Unrealized	**1,349**	**720**	**152**	**2,199**	**58**	**(231)**	**4,247**
Balance, end of year	**$ 37,884**	**$ 15,926**	**$ 8,117**	**$ 46,349**	**$ 189**	**$ (2,076)**	**$ 106,389**

							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[3]	—	—	—	—	(5)	3	(2)
Transfers out[3]	—	—	—	—	(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
Balance, end of year	$ 34,864	$ 14,390	$ 6,553	$ 45,305	$ 97	$ (1,830)	$ 99,379

[3] 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. There were no transfers between Level 2 and Level 1 in 2018 and 2017. See note 1c Fair Value Hierarchy.

(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:

				2018			2017
(Canadian $ millions)		**Notional**	**Fair Value**[5]		Notional	Fair Value[5]	
			Assets	**Liabilities**		Assets	Liabilities
Equity and commodity derivatives[4]							
Swaps		**$ 57,105**	**$ 1,215**	**$ (2,370)**	$ 44,928	$ 1,019	$ (837)
Futures		**11,288**	**15**	**(49)**	15,160	233	(27)
Options: Listed	– purchased	**139**	**2**	**—**	968	10	—
	– written	**404**	**—**	**(32)**	542	—	(16)
OTC	– purchased	**33,201**	**2,265**	**—**	14,733	144	—
	– written	**24,999**	**28**	**(781)**	3,708	128	(290)
		127,136	**3,525**	**(3,232)**	80,039	1,534	(1,170)
Interest rate derivatives							
Swaps		**185,629**	**976**	**(865)**	143,020	650	(580)
Futures		**126,127**	**317**	**—**	477,070	84	—
Options: Listed	– purchased	**399,686**	**21**	**—**	48,610	14	—
	– written	**15,890**	**—**	**(20)**	11,965	—	(7)
OTC	– purchased	**79,879**	**189**	**(78)**	41,907	117	(96)
	– written	**94,110**	**81**	**(148)**	33,870	59	(93)
		901,321	**1,584**	**(1,111)**	756,442	924	(776)
Currency derivatives[4]							
Swaps		**13,367**	**25**	**(53)**	20,964	28	(32)
Forwards[6]		**89,968**	**1,391**	**(2,149)**	77,208	845	(1,072)
Options: OTC	– purchased	**19,225**	**256**	**(12)**	9,404	52	—
	– written	**17,603**	**12**	**(224)**	7,187	—	(52)
		140,163	**1,684**	**(2,438)**	114,763	925	(1,156)
Credit derivatives							
Credit default swaps	– purchased	**41,934**	**147**	**(356)**	16,276	25	(405)
	– written	**38,108**	**308**	**(231)**	17,308	329	(80)
		80,042	**455**	**(587)**	33,584	354	(485)
		1,248,662	**7,248**	**(7,368)**	984,828	3,737	(3,587)
Net cash collateral (received)/paid under derivative contracts			**(192)**	**47**		(243)	21
Notional and fair value of derivative contracts		**$ 1,248,662**	**$ 7,056**	**$ (7,321)**	$ 984,828	$ 3,494	$ (3,566)

4 "Other derivatives" previously reported separately have been reclassified to their underlying product.

5 Fair values previously reported on a net basis are now presented with the fair value of assets and liabilities as separate amounts.

6 Excludes currency forwards related to Real Estate assets as disclosed in note 5.

(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 effective net investments reflecting these classifications are summarized in Canadian dollars below as at December 31:

	2018		2017	
	Effective Net Investments at Fair Value ($ millions)	**Asset Mix %**	Effective Net Investments at Fair Value ($ millions)	Asset Mix %
Equity				
Publicly traded	**$ 31,602**	**17%**	$ 35,132	19%
Non-publicly traded	**33,354**	**18**	31,936	17
	64,956	**35**	67,068	36
Fixed income				
Bonds	**58,243**	**31**	41,413	22
Real-rate products	**19,473**	**10**	19,959	11
	77,716	**41**	61,372	33
Inflation sensitive				
Commodities	**10,612**	**6**	11,083	6
Natural resources	**8,117**	**4**	6,553	3
Inflation hedge	**8,709**	**5**	8,918	5
	27,438	**15**	26,554	14
Real assets				
Real estate	**27,444**	**15**	25,512	14
Infrastructure	**17,801**	**9**	18,735	10
Real-rate products	**4,332**	**2**	1,451	1
	49,577	**26**	45,698	25
Credit	**15,232**	**8**	13,575	7
Absolute return strategies	**12,547**	**7**	10,730	6
Overlay	**(375)**	**—**	(270)	—
Money market	**(59,509)**	**(32)**	(39,375)	(21)
Net investments	**$ 187,582**	**100%**	$ 185,352	100%

(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 pension payments, 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 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, 2018 was last amended May 1, 2018 and includes the following asset allocation ranges:

	Asset Mix % Minimum	Asset Mix % Maximum
Equities	30%	40%
Fixed income	20%	60%
Inflation sensitive	10%	20%
Real assets	21%	31%
Credit	3%	13%
Absolute return strategies	4%	14%
Money market[7]	(78)%	0%

[7] 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 different types of investments and liquidity requirements. 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, investment constraints, key risks and a description of how the risks will be managed and reporting requirements for each investment department.
- Trade Authorization and Execution Operation Policy – This policy specifies operational requirements to be followed within the Investment Division to trade on regulated exchanges and in OTC markets.
- 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 active risk across the investment asset classes. The active 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 active 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 active 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 Total Fund Management department is responsible for maintaining the liquidity positions in accordance with the Plan's policies on liquidity, and the Total Fund Management and Capital Markets departments are responsible 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/or 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.

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 (Investments) 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.

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, options, and fixed income 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:

					2018
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)	**$ 37,520**	**$ 31,377**	**$ —**	**$ —**	**$ —**
AA/R-1 (mid)	**2,267**	**77**	**5,277**	**—**	**82**
A/R-1 (low)	**12,575**	**2,901**	**7,945**	**—**	**1,124**
BBB/R-2	**5,742**	**—**	**248**	**—**	**66**
Below BBB/R-2	**3,016**	**—**	**—**	**—**	**—**
Unrated[8]	**2,552**	**63**	**2,356**	**12,958**	**—**
	$ 63,672	**$ 34,418**	**$ 15,826**	**$ 12,958**	**$ 1,272**

Credit rating (Canadian $ millions)	Bonds and Short-term investments	Real-rate products	Securities purchased under agreements to resell	Loans and Private debt	OTC Derivatives
					2017
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[8]	2,460	79	6,074	12,356	—
	$ 65,000	$ 34,205	$ 24,633	$ 12,356	$ 672

[8] 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)	**2018**	2017
Guarantees	**$ 280**	$ 359
Loan commitments	**18**	63
Notional amount of written credit derivatives	**38,108**	17,308
Total off balance sheet credit risk exposure	**$ 38,406**	$ 17,730

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, 2018, 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 $42.5 billion (2017 – $45.4 billion), U.S. Treasury issued securities of $10.8 billion (2017 – $13.0 billion), Province of Ontario bonds of $6.5 billion (2017 – $6.7 billion), receivable from the Province of Ontario (see note 3) of $3.2 billion (2017 – $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.

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

(Canadian $ billions)[9]	**2018**	2017
Equity		
Publicly traded	**$ 8.5**	$ 11.0
Non-publicly traded	**14.0**	14.0
Fixed income		
Bonds	**9.5**	7.0
Real-rate products	**4.0**	4.5
Inflation sensitive		
Commodities	**3.0**	3.5
Natural resources	**2.0**	1.5
Inflation hedge	**3.5**	3.0
Real assets		
Real estate	**4.5**	4.5
Infrastructure	**3.0**	3.5
Real-rate products	**1.0**	0.5
Credit	**2.0**	2.0
Absolute return strategies	**1.5**	3.0
Overlay	**5.5**	3.5
Money market	**14.5**	10.5
Total Asset Risk ETL Exposure[10]	**$ 38.0**	$ 42.0

9 Rounded to the nearest $0.5 billion.

10 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 $7.6 billion (2017 – $6.5 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 (2017 – $3.1 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 $2.0 billion (2017 - $1.6 billion).

As at December 31, 2018, 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 21% or $40.1 billion (2017 – 22% or $45.3 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 has investments exposed to foreign currency. In Canadian dollars this exposure is as follows:

(Canadian $ millions)	**2018**	2017
Currency	**Net Exposure**	Net Exposure
United States Dollar	**$ 35,150**	$ 39,660
Chilean Peso	**3,425**	3,455
Euro	**2,976**	3,230
Brazilian Real	**2,747**	3,010
British Pound Sterling	**2,730**	2,857
Japanese Yen	**2,331**	1,945
Chinese Renminbi	**(2,272)**	(1,827)
Danish Krone	**2,049**	1,977
Australian Dollar	**1,418**	1,419
Mexican Peso	**1,394**	1,357
Other	**9,851**	10,419
	$ 61,799	$ 67,502

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)	**2018**	2017
Currency	**Change in Net Investment Value**	Change in Net Investment Value
United States Dollar	**$ 1,758**	$ 1,983
Chilean Peso	**171**	173
Euro	**149**	161
Brazilian Real	**137**	151
Other	**875**	907
	$ 3,090	$ 3,375

(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 Plan monitors its liquidity position on a daily basis to ensure sufficient liquid assets are available to meet potential collateral requirements, contractual cash flows and other projected cash requirements (such as pension payments) over a one-year horizon. In determining the available liquid assets, factors such as fair value, collateral pledged and received, repurchase agreements and securities lending and borrowing arrangements are considered. Potential collateral requirements under stress are determined by a historical simulation of market movements and their impact on the Plan's repurchase agreements, derivatives contracts, and securities lending and borrowing agreements over a one-year horizon.

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 $53,216 million as at December 31, 2018 (2017 – $58,435 million). The Plan also has publicly traded equities of $20,156 million net of short positions (2017 – $23,852 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)				**2018**
	Within One Year	**One to Five Years**	**Over Five Years**	**Total**
Securities sold under agreements to repurchase	**$ (21,040)**	**$ (7,240)**	**$ —**	**$ (28,280)**
Securities sold but not yet purchased				
Equities	**(2,617)**	**—**	**—**	**(2,617)**
Fixed income	**(12,493)**	**—**	**—**	**(12,493)**
Real estate	**(587)**	**(2,257)**	**(1,050)**	**(3,894)**
Commercial Paper	**(8,676)**	**—**	**—**	**(8,676)**
Term debt	**—**	**(5,091)**	**—**	**(5,091)**
Cash collateral received under credit support annexes	**(937)**	**—**	**—**	**(937)**
Derivative-related, net	**(7,321)**	**—**	**—**	**(7,321)**
	$ (53,671)	**$ (14,588)**	**$ (1,050)**	**$ (69,309)**

(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)
	$ (59,543)	$ (11,282)	$ (946)	$ (71,771)

(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, 2018 is $nil (2017 - $nil).

The Plan engages in securities borrowing and lending transactions and pledges and receives associated collateral. The Plan does not recognize any securities borrowed as its investment assets or derecognize securities lent 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 and lent as at December 31 are as follows:

(Canadian $ millions)	**2018**	2017
Securities purchased under agreements to resell and sold under agreements to repurchase		
Gross amounts of securities purchased under agreements to resell[11]	**$ 16,216**	$ 24,633
Collateral held	**16,498**	24,815
Gross amounts of securities sold under agreements to repurchase[11]	**28,670**	38,842
Collateral pledged	**29,016**	39,080
Securities borrowing and lending		
Securities borrowed	**5,442**	3,827
Securities lent	**288**	—
Collateral pledged[12]	**5,535**	4,242
Derivative-related		
Collateral received[13]	**1,505**	737
Collateral pledged[14]	**2,600**	1,949

[11] See note 2j for reconciliation of total gross amount to net amounts presented in note 2a.

[12] Includes cash collateral of $2,549 (2017 - $2,239)

[13] Includes cash collateral of $937 (2017 - $419)

[14] Includes cash collateral of $57 (2017 - $59)

(j) Offsetting financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is reported in the Consolidated Statements of Financial Position when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis, or realize the asset and settle the liability simultaneously. Certain repurchase agreement transactions settled through a central clearing counterparty satisfy the offsetting criteria. 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. When 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)							**2018**
	Gross amounts	**Less: Amounts offset**	**Net amount presented in note 2a**	**Amounts subject to netting agreements**	**Securities and cash collateral[15]**	**Net Exposure**
Financial assets						
Securities purchased under agreements to resell	**$ 16,216**	**$ (390)**	**$ 15,826**	**$ (13,476)**	**$ (2,314)**	**$ 36**
Derivative-related receivables	**7,056**	**—**	**7,056**	**(4,489)**	**(1,284)**	**1,283**
	$ 23,272	**$ (390)**	**$ 22,882**	**$ (17,965)**	**$ (3,598)**	**$ 1,319**
Financial liabilities						
Securities sold under agreements to repurchase	**$ (28,670)**	**$ 390**	**$ (28,280)**	**$ 13,476**	**$ 14,785**	**$ (19)**
Derivative-related liabilities	**(7,321)**	**—**	**(7,321)**	**4,489**	**2,461**	**(371)**
	$ (35,991)	**$ 390**	**$ (35,601)**	**$ 17,965**	**$ 17,246**	**$ (390)**

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

15 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)	**2018**	2017
Contributions receivable	**$ 3,184**	$ 3,269
Accrued interest receivable	**40**	45
	$ 3,224	$ 3,314

The receivable as at December 31, 2018, from the Province of Ontario consists of $1,675 million, which was received in January 2019, and an estimated $1,549 million to be received with interest in January 2020. The receivable as at December 31, 2017, from the Province consisted of $1,660 million, which was received in January 2018, and an initial estimate of $1,654 million to be received in January 2019. 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 $192,281 million (2017 – $204,322 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	**2018**	2017
Discount rate	**3.20%**	2.95%
Salary escalation rate	**2.40%**	2.70%
Inflation rate	**1.40%**	1.70%
Real rate[1]	**1.80%**	1.25%

[1] 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 2018. These changes in economic assumptions resulted in a net decrease in the value of accrued pension benefits of $19,812 million (2017 – $6,508 million increase, inclusive of the impact of the two-year salary contracts as announced by the Ministry of Education for school years beginning September 1, 2017 and September 1, 2018).

There were no changes to the non-economic assumptions as at December 31, 2018. There were refinements in 2017 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. The change in non-economic assumptions in 2017 increased the accrued pension benefits by $145 million. The changes in economic and non-economic assumptions resulted in a net decrease in the value of accrued pension benefits of $19,812 million (2017 - $6,653 million increase).

(b) Indexation levels

Pension credit 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 pension credit earned between January 1, 2010, and December 31, 2013, and vary between 0% and 100% of the change in the CPI for pension credit 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 financial statement valuations, future pension payments are indexed at the levels stated in the most recent funding valuation filing. As a result, the December 31, 2018 accrued pension benefits reflect the indexation levels as stated in the January 1, 2018 funding valuation report.

As noted in the filed January 1, 2018 funding valuation, indexation levels will remain at 100% of CPI for pension credit earned after 2009. 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 filed January 1, 2017 funding valuation increased indexation levels to 100% of CPI for pension credit earned after 2009 effective January 1, 2018. Also, effective January 1, 2018, pensioners with post-2009 pension credit 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, 2017. The change in the indexation level resulted in an increase in accrued pension benefits of $1,207 million in 2017.

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

	2018[2]	2017[3]
Pension credit	**Inflation protection level**	Inflation protection level
Earned before 2010	**100% of CPI**	100% of CPI
Earned during 2010 – 2013	**100% of CPI**	100% of CPI
Earned after 2013	**100% of CPI**	100% of CPI

[2] Inflation protection level per the January 1, 2018 funding valuation.

[3] Inflation protection level per the January 1, 2017 funding valuation.

(c) Experience gains and losses

Experience losses on the accrued pension benefits of $709 million (2017 – $568 million losses) 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		**2018**		2017
(Canadian $ millions)	**Fair Value**	**Cost**	Fair Value	Cost
Assets[1, 2]				
Real estate properties	**$ 27,276**	**$ 15,652**	$ 25,410	$ 15,017
Investments	**3,742**	**3,386**	4,284	3,315
Other assets	**283**	**281**	288	281
Total assets	**31,301**	**19,319**	29,982	18,613
Liabilities[1, 2]				
Long-term debt	**2,907**	**2,853**	3,551	3,548
Other liabilities	**987**	**618**	881	623
Total liabilities	**3,894**	**3,471**	4,432	4,171
Net investment in real estate	**$ 27,407**	**$ 15,848**	$ 25,550	$ 14,442

[1] 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 $1,120 million (2017 – $1,463 million) with a combined fair value of $(37) million (2017 – $3 million).

[2] 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 $1,215 million (2017 – $1,097 million) and liabilities of $548 million (2017 – $383 million).

(Canadian $ millions)	**2018**	2017
Revenue		
Rental	**$ 1,999**	$ 1,925
Investment and other	**105**	112
	2,104	2,037
Expenses		
Property operating	**818**	800
General and administrative	**60**	58
Other	**24**	23
	902	881
Operating income	**1,202**	1,156
Interest expense	**(106)**	(121)
Income (note 6)	**1,096**	1,035
Net investment gain	**335**	661
Net real estate income	**$ 1,431**	$ 1,696

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							2018
(Canadian $ millions)	Income [1]	Realized [2]	Unrealized [2]	Investment Income [3]	Management Fees	Transaction Costs	Net Investment Income
Equity							
Publicly traded							
Canadian	$ 35	$ 114	$ (403)	$ (254)	$ —	$ (4)	$ (258)
Non-Canadian	592	859	(2,803)	(1,352)	(60)	(68)	(1,480)
Non-publicly traded							
Canadian	152	16	250	418	(19)	(64)	335
Non-Canadian	868	3,323	1,516	5,707	(272)	(50)	5,385
	1,647	4,312	(1,440)	4,519	(351)	(186)	3,982
Fixed income							
Bonds	1,264	(2,063)	(538)	(1,337)	(1)	(39)	(1,377)
Short-term investments	(9)	(204)	(416)	(629)	(3)	(1)	(633)
Alternative investments	119	91	299	509	(21)	(2)	486
Canadian real-rate products	470	(26)	(470)	(26)	—	—	(26)
Non-Canadian real-rate products	167	1,275	(656)	786	—	—	786
	2,011	(927)	(1,781)	(697)	(25)	(42)	(764)
Inflation sensitive							
Commodities	(165)	322	(1,555)	(1,398)	—	(6)	(1,404)
Timberland	93	—	246	339	—	—	339
Natural resources	234	—	(102)	132	(3)	(2)	127
	162	322	(1,411)	(927)	(3)	(8)	(938)
Real assets							
Real estate (note 5)	1,120	(116)	451	1,455	(2)	(22)	1,431
Infrastructure	711	(64)	942	1,589	(24)	(43)	1,522
	1,831	(180)	1,393	3,044	(26)	(65)	2,953
	$ 5,651	$ 3,527	$ (3,239)	$ 5,939	$ (405)	$ (301)	$ 5,233

[1] Income includes interest, dividends, real estate operating income (net of interest expense), and other investment-related income and expenses.

[2] Includes net foreign currency losses of $2,172 million (both realized and unrealized).

[3] Net of certain management and performance fees.

Net Investment Income							2017
(Canadian $ millions)	Income [4]	Realized [5]	Unrealized [5]	Investment Income [6]	Management Fees	Transaction Costs	Net Investment Income
Equity							
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
Fixed income							
Bonds	1,214	(971)	499	742	(6)	(21)	715
Short-term investments	(15)	198	248	431	—	—	431
Alternative investments	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
Inflation sensitive							
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
Real assets							
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

[4] Income includes interest, dividends, real estate operating income (net of interest expense), and other investment-related income and expenses.

[5] Includes net foreign currency losses of $454 million (both realized and unrealized).

[6] Net of certain management and performance fees.

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:

	2018		2017	
(percent)	**Investment Returns**	**Investment Benchmark Returns**	Investment Returns	Investment Benchmark Returns
Equity[1]	**7.2%**	**(0.4)%**	17.6%	15.4%
Fixed Income[1]	**2.8**	**2.8**	2.6	2.6
Inflation sensitive[1]	**2.6**	**1.0**	(3.2)	(4.0)
Real assets[1]	**7.0**	**8.1**	10.9	7.1
Credit[1]	**6.3**	**4.7**	1.7	1.1
Total fund net return[2 3]	**2.5%**	**0.7 %**	9.7%	8.2%

1 Net of transaction costs and management fees but before Ontario Teachers' investment administration expenses.

2 Absolute return strategies, Overlay and Money market are included in the total fund net return and not shown separately.

3 The total fund net return includes Ontario Teachers' investment administrative expenses.

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. As a result, contribution rates reduced to 10.40% of earnings below the CPP limit plus 12.00% of earnings above the CPP limit. In 2017, active members were required to contribute 11.50% of earnings below the CPP limit plus 13.10% of earnings above the CPP limit. 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 contributions and benefit levels.

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

	Contribution Rate	
(percent)	Earnings below the CPP limit	Earnings above the CPP limit
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 actuarial 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, whereas the accrued pension benefits recognized in the financial statements represent the actuarial present value of pension obligations in respect of service accrued to date for all active and inactive members.

The most recent funding valuation that has been filed with regulatory authorities was prepared as at January 1, 2018, by Mercer (Canada) Limited and disclosed a funding surplus of $10.3 billion. The co-sponsors allocated the surplus to a contingency reserve.

NOTE 9. CONTRIBUTIONS

(Canadian $ millions)	2018	2017
Members		
Current service[1]	**$ 1,518**	$ 1,625
Optional credit	**36**	37
	1,554	1,662
Province of Ontario		
Current service	**1,507**	1,610
Interest	**29**	32
Optional credit	**34**	34
	1,570	1,676
Designated employers	**33**	36
Transfers from other pension plans	**9**	11
	42	47
	$ 3,166	$ 3,385

1 Contributions past due are less than $1 million in 2018 and 2017.

NOTE 10. BENEFITS

(Canadian $ millions)	2018	2017
Retirement pensions	**$ 5,606**	$ 5,407
Death benefits	**405**	380
Disability pensions	**25**	26
Commuted value transfers	**65**	74
Family law transfers	**28**	32
Transfers to other plans	**9**	8
Benefits paid	**$ 6,138**	$ 5,927
Other payments[1]	**3**	5
	$ 6,141	$ 5,932

1 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)	2018	2017
Salaries, incentives and benefits	**$ 343.9**	$ 296.7
Premises and equipment	**60.0**	52.0
Professional and consulting services	**79.9**	53.0
Information services	**29.0**	27.2
Communication and travel	**19.9**	18.6
Custodial fees	**10.5**	8.7
Statutory audit fees	**2.9**	2.7
Board and committee remuneration	**1.1**	1.1
Other	**7.9**	7.1
	$ 555.1	$ 467.1

(b) Member services expenses

(Canadian $ millions)	2018	2017
Salaries, incentives and benefits	**$ 42.2**	$ 38.1
Premises and equipment	**17.5**	13.5
Professional and consulting services	**7.0**	4.0
Communication and travel	**1.1**	1.2
Statutory audit fees	**0.1**	0.1
Board and committee remuneration	**0.2**	0.2
Other	**1.0**	1.0
	$ 69.1	$ 58.1

(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[1] as at December 31 is summarized below:

(Canadian $ millions)	2018	2017
Short-term employee benefits	**$ 19.0**	$ 16.8
Post-employment benefits	**2.5**	(0.6)
Termination benefits	**4.8**	—
Other long-term benefits	**15.8**	14.8
	$ 42.1	$ 31.0

[1] 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 2019 are approximately $13.4 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 and 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 $12.5 million (2017 – $7.9 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[1], the Plan cannot be in a deficit position when such reports are filed[2]. 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).

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

2 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 an RPP 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.

Under the terms of the RCA, its net assets available for benefits and the value of accrued benefits and deficit (referred to below) must constitute a distinct fund held separate from the RPP, and not included in the consolidated financial statements of the Plan.

The RCA is funded primarily 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 Board, after consulting the Plan's independent actuary. The Board's objective is to ensure sufficient funds exist within the RCA to pay for several years (but not more than 10 years) of projected benefits following each valuation date. At the beginning of 2018, the limit was set to 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)		2018		2017
Statements of financial position				
NET ASSETS AVAILABLE FOR BENEFITS				
Assets	**$**	**48,766**	$	48,928
Liabilities		**(2,143)**		(3,787)
	$	**46,623**	$	45,141
ACCRUED PENSION BENEFITS AND DEFICIT				
Accrued pension benefits	**$**	**420,807**	$	382,176
Deficit		**(374,184)**		(337,035)
	$	**46,623**	$	45,141
Statements of changes in net assets available for benefits				
Contributions	**$**	**10,756**	$	17,887
Investment income		**346**		107
		11,102		17,994
Benefits paid		**9,476**		8,957
Expenses		**144**		133
		9,620		9,090
Increase in net assets available for benefits	**$**	**1,482**	$	8,904

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 impact 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, 2018, these commitments totalled $15,360 million (2017 – $11,909 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 2018 or 2017 under these guarantees.

The Plan guarantees loan and credit agreements which will expire by 2020. The Plan's maximum exposure is $99 million as at December 31, 2018 (2017 – $52 million). The companies have drawn $11 million under the agreements (2017 – $11 million).

The Plan guarantees a lease agreement for an investment company which will expire by 2059. The Plan's maximum exposure is $74 million as at December 31, 2018 (2017 – $85 million). There were no default lease payments in either 2018 or 2017.

The Plan also guarantees the ability of certain investee companies to settle certain financial obligations. The Plan's maximum exposure is $96 million as at December 31, 2018 (2017 - $91 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 will expire by 2021. The maximum exposure cannot be determined because the projects are not yet complete. These guarantees amounted to $11 million as at December 31, 2018 (2017 – $1 million) and have not been recognized in the real estate liabilities.

The Plan guarantees the $0.75 billion 4.31% Series B Debenture 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 debenture. The debenture, maturing on January 25, 2021 and 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 and US$2 billion 2.75% senior notes issued by Ontario Teachers' Finance Trust which the Plan consolidates. The US$1.75 billion 2.125% and US$2 billion 2.75% senior notes, maturing in September 2022 and April 2021 respectively, are not redeemable prior to maturity at the option of the trust or the Plan except as described in their respective Offering Memoranda dated September 12, 2017 and April 10, 2018. 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, 2018 are up to 397 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, 2018, commercial paper issued amounted to $8,726 million (December 31, 2017 - $8,968 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.