# CONDENSED INTERIM CONSOLIDATED STATEMENTS OF FINANCIAL POSITION (unaudited)

| (Canadian $ millions) | | As at June 30, 2019 | | As at December 31, 2018 |
|---|---|---|---|---|
| **Net assets available for benefits** | | | | |
| **ASSETS** | | | | |
| Cash | **$** | **708** | $ | 534 |
| Receivable from the Province of Ontario | | **2,358** | | 3,224 |
| Receivable from brokers | | **578** | | 189 |
| Investments (note 2) | | **255,906** | | 256,891 |
| Premises and equipment | | **122** | | 63 |
| | | **259,672** | | 260,901 |
| **LIABILITIES** | | | | |
| Accounts payable and accrued liabilities | | **426** | | 458 |
| Due to brokers | | **445** | | 22 |
| Investment-related liabilities (note 2) | | **57,439** | | 69,309 |
| | | **58,310** | | 69,789 |
| **Net assets available for benefits** | **$** | **201,362** | $ | 191,112 |
| **Accrued pension benefits and deficit** | | | | |
| Accrued pension benefits (note 3) | **$** | **220,620** | $ | 192,281 |
| Deficit | | **(19,258)** | | (1,169) |
| **Accrued pension benefits and deficit** | **$** | **201,362** | $ | 191,112 |



ONTARIO TEACHERS' PENSION PLAN

# CONDENSED INTERIM CONSOLIDATED STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS (unaudited)

| For the six-month period ended June 30 (Canadian $ millions) | **2019** | 2018 |
|---|---|---|
| **Net assets available for benefits, as at January 1** | **$ 191,112** | **$ 189,478** |
| **Investment operations** | | |
| Net investment income (note 4) | **12,075** | 6,159 |
| Administrative expenses | **(278)** | (247) |
| Net investment operations | **11,797** | 5,912 |
| **Member service operations** | | |
| Contributions (note 6) | **1,646** | 1,592 |
| Benefits (note 7) | **(3,157)** | (3,031) |
| Administrative expenses | **(36)** | (31) |
| Net member service operations | **(1,547)** | (1,470) |
| **Increase in net assets available for benefits** | **10,250** | 4,442 |
| **Net assets available for benefits, as at June 30** | **$ 201,362** | $ 193,920 |

# CONDENSED INTERIM CONSOLIDATED STATEMENTS OF CHANGES IN ACCRUED PENSION BENEFITS (unaudited)

| For the six-month period ended June 30 (Canadian $ millions) | 2019 | 2018 |
|---|---|---|
| **Accrued pension benefits, as at January 1** | **$ 192,281** | $ 204,322 |
| **Increase in accrued pension benefits** | | |
| Interest on accrued pension benefits | **3,076** | 3,018 |
| Benefits accrued | **3,099** | 3,563 |
| Changes in actuarial assumptions and methods (note 3a) | **25,320** | — |
| | **31,495** | 6,581 |
| **Decrease in accrued pension benefits** | | |
| Benefits paid (note 7) | **3,156** | 3,029 |
| Changes in actuarial assumptions and methods (note 3a) | **—** | 2,091 |
| | **3,156** | 5,120 |
| **Net increase in accrued pension benefits** | **28,339** | 1,461 |
| **Accrued pension benefits, as at June 30** | **$ 220,620** | $ 205,783 |

# CONDENSED INTERIM CONSOLIDATED STATEMENTS OF CHANGES IN DEFICIT (unaudited)

| For the six-month period ended June 30 (Canadian $ millions) | 2019 | 2018 |
|---|---|---|
| **Deficit, as at January 1** | **$ (1,169)** | $ (14,844) |
| Increase in net assets available for benefits | **10,250** | 4,442 |
| Net increase in accrued pension benefits | **(28,339)** | (1,461) |
| **Deficit, as at June 30** | **$ (19,258)** | $ (11,863) |

# NOTES TO CONDENSED INTERIM CONSOLIDATED FINANCIAL STATEMENTS (unaudited)

For the six-month period ended June 30, 2019

## 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 Regulatory Authority of Ontario (FSRA) (formerly, with the Financial Services Commission of Ontario), 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 member with a minimum of 10 years of qualifying service, who becomes disabled while employed in education and who ceases to be employed in education as a result of the disability. 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.

# NOTE 1.
# SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

## (a) Basis of presentation

These condensed interim consolidated financial statements (Interim Financial Statements) are prepared in Canadian dollars, the Plan's functional currency, in accordance with Part IV of the Chartered Professional Accountants (CPA) Canada Handbook (Section 4600) and International Accounting Standard (IAS) 34, Interim Financial Reporting. They do not include all the information and disclosure required in the annual consolidated financial statements. The Interim Financial Statements should be read in conjunction with the annual consolidated financial statements and the accompanying notes included in the Plan’s 2018 Annual Report. The Interim Financial Statements follow the same accounting policies and methods used in preparation of the audited 2018 annual consolidated financial statements.

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 Interim Financial Statements were authorized for issue through a resolution of the Board on August 19, 2019.

## (b) Changes in accounting policies

The impact of IFRS 16 Leases has been incorporated effective January 1, 2019 and is not material to the overall financial statements. The asset value of capitalized leases for office premises, previously treated as operating leases is included in Premises and equipment and the related liabilities is included in Accounts payable and accrued liabilities. Investment assets and Investment-related liabilities include the impact of capitalized leases related to the real estate portfolio. Prior periods have not been re-stated.

## (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.

Details of the valuation methodologies are disclosed in the most recent audited annual consolidated financial statements. There have been no changes to the valuation methodologies since December 31, 2018. A valuation update of the rental property portfolio as at June 30, 2019 was conducted and reflected in these interim financial statements.

### 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 period 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 and to June 30 of the following year. 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 Interim 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 3 explains how estimates and assumptions are used in determining accrued pension benefits.

## (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 Interim 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 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 $910 million (December 31, 2018 - $714 million), before allocating the effect of derivative contracts:

| | | **As at June 30, 2019** | | As at December 31, 2018 |
|---|---|---|---|---|
| (Canadian $ millions) | **Fair Value** | **Cost** | Fair Value | Cost |
| **Equity** | | | | |
| Publicly traded | | | | |
| Canadian | **$ 1,554** | **$ 1,476** | $ 1,545 | $ 1,904 |
| Non-Canadian | **24,348** | **21,256** | 21,228 | 19,459 |
| Non-publicly traded | | | | |
| Canadian | **5,129** | **3,749** | 4,881 | 3,482 |
| Non-Canadian | **30,426** | **23,835** | 32,149 | 23,444 |
| | **61,457** | **50,316** | 59,803 | 48,289 |
| **Fixed income** | | | | |
| Bonds | **57,483** | **53,656** | 54,561 | 53,328 |
| Short-term investments | **8,729** | **8,723** | 9,111 | 9,094 |
| Alternative investments | **16,077** | **13,619** | 15,375 | 12,644 |
| Canadian real-rate products | **21,066** | **15,323** | 19,904 | 15,608 |
| Non-Canadian real-rate products | **11,887** | **9,935** | 14,514 | 12,834 |
| | **115,242** | **101,256** | 113,465 | 103,508 |
| **Inflation sensitive** | | | | |
| Commodities | **923** | **853** | 875 | 853 |
| Timberland | **2,383** | **1,300** | 2,496 | 1,301 |
| Natural resources | **5,755** | **5,795** | 5,621 | 5,706 |
| | **9,061** | **7,948** | 8,992 | 7,860 |
| **Real assets** | | | | |
| Real estate | **32,257** | **20,216** | 31,301 | 19,319 |
| Infrastructure | **17,773** | **11,399** | 17,842 | 11,549 |
| | **50,030** | **31,615** | 49,143 | 30,868 |
| | **235,790** | **191,135** | 231,403 | 190,525 |
| **Investment-related receivables** | | | | |
| Securities purchased under agreements to resell | **13,679** | **13,851** | 15,826 | 15,577 |
| Cash collateral deposited under securities borrowing arrangements | **2,539** | **2,539** | 2,549 | 2,549 |
| Cash collateral paid under credit support annexes | **—** | **—** | 57 | 57 |
| Derivative-related, net | **3,898** | **2,100** | 7,056 | 2,684 |
| | **20,116** | **18,490** | 25,488 | 20,867 |
| **Investments** | **$ 255,906** | **$ 209,625** | $ 256,891 | $ 211,392 |

| (Canadian $ millions) | As at June 30, 2019 Fair Value | Cost | As at December 31, 2018 Fair Value | Cost |
|---|---|---|---|---|
| **Investment-related liabilities** | | | | |
| Securities sold under agreements to repurchase | **$ (22,634)** | **$ (22,855)** | $ (28,280) | $ (27,869) |
| Securities sold but not yet purchased | | | | |
| Equities | **(2,587)** | **(2,366)** | (2,617) | (2,587) |
| Fixed income | **(9,943)** | **(8,934)** | (12,493) | (11,573) |
| Real estate[1] | **(5,138)** | **(4,651)** | (3,894) | (3,471) |
| Commercial paper | **(8,694)** | **(8,752)** | (8,676) | (8,323) |
| Term debt | **(4,978)** | **(4,668)** | (5,091) | (4,669) |
| Cash collateral received under credit support annexes | **(719)** | **(719)** | (937) | (937) |
| Derivative-related, net | **(2,746)** | **(1,534)** | (7,321) | (1,797) |
| | **(57,439)** | **(54,479)** | (69,309) | (61,226) |
| **Net investments** | **$ 198,467** | **$ 155,146** | $ 187,582 | $ 150,166 |

[1] Real estate liabilities include the liabilities of real estate subsidiaries and trusts. These include $792 million fair value and $764 million cost (December 31, 2018 - $795 million fair value and $764 million cost) which are guaranteed by the Plan as described in note 10. 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:

| | | | | **As at June 30, 2019** |
|---|---|---|---|---|
| (Canadian $ millions) | **Level 1** | **Level 2** | **Level 3** | **Total** |
| Equity | **$ 24,695** | **$ 324** | **$ 36,438** | **$ 61,457** |
| Fixed income | **86,377** | **12,208** | **16,657** | **115,242** |
| Inflation sensitive | **923** | **—** | **8,138** | **9,061** |
| Real assets | **2,245** | **352** | **47,433** | **50,030** |
| Investment-related receivables | **2,670** | **17,302** | **144** | **20,116** |
| Investment-related liabilities | **(13,317)** | **(41,843)** | **(2,279)** | **(57,439)** |
| **Net investments** | **$ 103,593** | **$ (11,657)** | **$ 106,531** | **$ 198,467** |

| | | | | As at 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 |

There were no transfers between Level 2 and Level 1 during the six month period ended June 30, 2019 (2018 - $155 million).

The schedule below presents a reconciliation of investments and net investment-related receivables/(liabilities) measured at fair value using significant unobservable inputs (Level 3) for the six-month period ended June 30. Realized and unrealized gains/(losses) are included in investment income.

**For the six-month period ended June 30, 2019**

| (Canadian $ millions) | Equity | Fixed Income | Inflation Sensitive | Real Assets | Investment-Related Receivables | Investment-Related Liabilities | Total |
|---|---|---|---|---|---|---|---|
| Balance as at January 1 | **$ 37,884** | **$ 15,926** | **$ 8,117** | **$ 46,349** | **$ 189** | **$ (2,076)** | **$ 106,389** |
| Purchases | **3,384** | **4,027** | **62** | **2,120** | **26** | **31** | **9,650** |
| Sales | **(4,094)** | **(3,337)** | **—** | **(1,318)** | **(32)** | **(297)** | **(9,078)** |
| Transfers in[2] | **—** | **—** | **—** | **—** | **4** | **15** | **19** |
| Transfers out[2] | **—** | **—** | **—** | **—** | **(19)** | **5** | **(14)** |
| Gains/(losses) included in investment income | | | | | | | |
| Realized | **1,251** | **320** | **—** | **(77)** | **(19)** | **71** | **1,546** |
| Unrealized | **(1,987)** | **(279)** | **(41)** | **359** | **(5)** | **(28)** | **(1,981)** |
| **Balance as at June 30** | **$ 36,438** | **$ 16,657** | **$ 8,138** | **$ 47,433** | **$ 144** | **$ (2,279)** | **$ 106,531** |

For the six-month period ended June 30, 2018

| (Canadian $ millions) | Equity | Fixed Income | Inflation Sensitive | Real Assets | Investment-Related Receivables | Investment-Related Liabilities | Total |
|---|---|---|---|---|---|---|---|
| Balance as at January 1 | $ 34,864 | $ 14,390 | $ 6,553 | $ 45,305 | $ 97 | $ (1,830) | $ 99,379 |
| Purchases | 3,095 | 2,331 | 185 | 1,119 | 103 | 147 | 6,980 |
| Sales | (4,926) | (1,729) | (9) | (1,149) | (25) | (88) | (7,926) |
| Transfers in[2] | — | — | — | — | (2) | 1 | (1) |
| Transfers out[2] | — | — | — | — | (1) | 2 | 1 |
| Gains/(losses) included in investment income | | | | | | | |
| Realized | 2,440 | 310 | — | 288 | (5) | 30 | 3,063 |
| Unrealized | (204) | 639 | 551 | 958 | 59 | (152) | 1,851 |
| Balance as at June 30 | $ 35,269 | $ 15,941 | $ 7,280 | $ 46,521 | $ 226 | $ (1,890) | $ 103,347 |

[2] 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. 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.

Description of the derivative contracts, transacted either in the OTC market or on regulated exchanges, is disclosed in the most recent audited annual consolidated financial statements.

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

| | | **As at June 30, 2019** | | | As at December 31, 2018 | | |
|---|---|---|---|---|---|---|---|
| | | **Notional** | **Fair Value** | | Notional | Fair Value | |
| (Canadian $ millions) | | | **Assets** | **Liabilities** | | Assets | Liabilities |
| **Equity and commodity derivatives** | | | | | | | |
| Swaps | | **$ 51,287** | **$ 725** | **$ (596)** | $ 57,105 | 1,215 | $ (2,370) |
| Futures | | **15,862** | **87** | **—** | 11,288 | 15 | (49) |
| Options: Listed | – purchased | **3,332** | **45** | **—** | 139 | 2 | — |
| | – written | **2,125** | **—** | **(39)** | 404 | — | (32) |
| OTC | – purchased | **30,584** | **362** | **—** | 33,201 | 2,265 | — |
| | – written | **24,532** | **19** | **(309)** | 24,999 | 28 | (781) |
| | | **127,722** | **1,238** | **(944)** | 127,136 | 3,525 | (3,232) |
| **Interest rate derivatives** | | | | | | | |
| Swaps | | **126,635** | **882** | **(618)** | 185,629 | 976 | (865) |
| Futures | | **68,837** | **340** | **—** | 126,127 | 317 | — |
| Options: Listed | – purchased | **167,580** | **4** | **—** | 399,686 | 21 | — |
| | – written | **17,429** | **—** | **(4)** | 15,890 | — | (20) |
| OTC | – purchased | **59,607** | **64** | **(18)** | 79,879 | 189 | (78) |
| | – written | **101,761** | **12** | **(61)** | 94,110 | 81 | (148) |
| | | **541,849** | **1,302** | **(701)** | 901,321 | 1,584 | (1,111) |
| **Currency derivatives** | | | | | | | |
| Swaps | | **5,897** | **15** | **(20)** | 13,367 | 25 | (53) |
| Forwards[3] | | **80,590** | **922** | **(281)** | 89,968 | 1,391 | (2,149) |
| Options: OTC | – purchased | **9,565** | **51** | **—** | 19,225 | 256 | (12) |
| | – written | **9,191** | **—** | **(44)** | 17,603 | 12 | (224) |
| | | **105,243** | **988** | **(345)** | 140,163 | 1,684 | (2,438) |
| **Credit derivatives** | | | | | | | |
| Credit default swaps | – purchased | **25,744** | **54** | **(630)** | 41,934 | 147 | (356) |
| | – written | **29,508** | **661** | **(126)** | 38,108 | 308 | (231) |
| | | **55,252** | **715** | **(756)** | 80,042 | 455 | (587) |
| | | **830,066** | **4,243** | **(2,746)** | 1,248,662 | 7,248 | (7,368) |
| Net cash collateral (received)/paid under derivative contracts | | | **(345)** | **—** | | (192) | 47 |
| **Notional and net fair value of derivative contracts** | | **$ 830,066** | **$ 3,898** | **$ (2,746)** | $1,248,662 | $ 7,056 | $ (7,321) |

[3] Excludes currency forwards related to Real Estate assets.

### (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 June 30, 2019** | | As at December 31, 2018 | |
|---|---|---|---|---|
| | **Effective Net Investments at Fair Value ($ millions)** | **Asset Mix %** | Effective Net Investments at Fair Value ($ millions) | Asset Mix % |
| **Equity** | | | | |
| Publicly traded | **$ 33,498** | **17%** | $ 31,602 | 17% |
| Non-publicly traded | **34,302** | **17** | 33,354 | 18 |
| | **67,800** | **34** | 64,956 | 35 |
| **Fixed income** | | | | |
| Bonds | **71,936** | **36** | 58,243 | 31 |
| Real-rate products | **20,885** | **11** | 19,473 | 10 |
| | **92,821** | **47** | 77,716 | 41 |
| **Inflation sensitive** | | | | |
| Commodities | **14,303** | **7** | 10,612 | 6 |
| Natural resources | **8,138** | **4** | 8,117 | 4 |
| Inflation hedge | **9,025** | **5** | 8,709 | 5 |
| | **31,466** | **16** | 27,438 | 15 |
| **Real assets** | | | | |
| Real estate | **27,228** | **14** | 27,444 | 15 |
| Infrastructure | **17,141** | **9** | 17,801 | 9 |
| Real-rate products | **—** | **—** | 4,332 | 2 |
| | **44,369** | **23** | 49,577 | 26 |
| **Credit** | **16,242** | **8** | 15,232 | 8 |
| **Absolute return strategies** | **14,623** | **7** | 12,547 | 7 |
| **Overlay** | **569** | **—** | (375) | — |
| **Money Market** | **(69,423)** | **(35)** | (59,509) | (32) |
| **Net investments** | **$ 198,467** | **100%** | $ 187,582 | 100% |

## (e) Risk management

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 diversification 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 the market conditions.

There have been no significant changes to the risk management policies and processes for credit and market risk as presented in the most recent audited annual consolidated financial statements, except the following:

- Statement of Investment Policies and Procedures - The statement, posted on the Plan's website addresses the manner in which the fund shall be invested. The statement is subject to the Board's review at least annually; the last review date was November 15, 2018 with an effective date of January 1, 2019. 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 includes changes to the asset class exposure limits as reflected in the following table:

| | **Asset Mix %<br>Minimum** | **Asset Mix %<br>Maximum** |
|---|---|---|
| Equities | 30% | 40% |
| Fixed income | 23% | 77% |
| Inflation sensitive | 11% | 21% |
| Real assets | 19% | 29% |
| Credit | 3% | 13% |
| Absolute return strategies | 4% | 14% |
| Money Market[4] | (94)% | 0% |

[4] 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.

## (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.

### Maximum exposure to credit risk before collateral held

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 is as follows:

**As at June 30, 2019**

| 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) | **$ 38,526** | **$ 29,779** | **$ —** | **$ —** | **$ —** |
| AA/R-1 (mid) | **2,006** | **45** | **2,520** | **—** | **368** |
| A/R-1 (low) | **13,914** | **3,073** | **7,714** | **—** | **677** |
| BBB/R-2 | **5,910** | **—** | **327** | **—** | **—** |
| Below BBB/R-2 | **2,944** | **—** | **—** | **—** | **—** |
| Unrated[5] | **2,912** | **56** | **3,118** | **13,095** | **—** |
| | **$ 66,212** | **$ 32,953** | **$ 13,679** | **$ 13,095** | **$ 1,045** |

As at December 31, 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[5] | 2,552 | 63 | 2,356 | 12,958 | — |
| | $ 63,672 | $ 34,418 | $ 15,826 | $ 12,958 | $ 1,272 |

[5] 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.

| (Canadian $ millions) | **As at June 30, 2019** | As at December 31, 2018 |
|---|---|---|
| Guarantees | **$ 278** | $ 280 |
| Loan commitments | **16** | 18 |
| Notional amount of written credit derivatives | **29,508** | 38,108 |
| **Total off balance sheet credit risk exposure** | **$ 29,802** | $ 38,406 |

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 June 30, 2019, the Plan has a significant concentration of credit risk with the Government of Canada, the Province of Ontario and the U.S Treasury. This concentration relates primarily to holding Government of Canada issued securities of $45.9 billion (December 31, 2018 – $42.5 billion), U.S. Treasury issued securities of $10.5 billion (December 31, 2018 – $10.8 billion), Province of Ontario bonds of $7.6 billion (December 31, 2018 – $6.5 billion), receivable from the Province of Ontario of $2.4 billion (December 31, 2018 – $3.2 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 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 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. Further details of the ETL methodology are disclosed in the most recent audited annual consolidated financial statements.

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

| (Canadian $ billions)[6] | **As at June 30, 2019** | As at December 31, 2018 |
|---|---|---|
| **Equity** | | |
| Publicly traded | **$ 9.5** | $ 8.5 |
| Non-publicly traded | **14.5** | 14.0 |
| **Fixed income** | | |
| Bonds | **12.0** | 9.5 |
| Real-rate products | **4.5** | 4.0 |
| **Inflation sensitive** | | |
| Commodities | **4.0** | 3.0 |
| Natural resources | **2.0** | 2.0 |
| Inflation hedge | **3.5** | 3.5 |
| **Real assets** | | |
| Real estate | **4.0** | 4.5 |
| Infrastructure | **3.5** | 3.0 |
| Real-rate products | **0.0** | 1.0 |
| **Credit** | **2.5** | 2.0 |
| **Absolute return strategies** | **1.0** | 1.5 |
| **Overlay** | **8.5** | 5.5 |
| **Money Market** | **16.0** | 14.5 |
| **Total Asset Risk ETL Exposure[7]** | **$ 43.5** | $ 38.0 |

[6] Rounded to the nearest $0.5 billion.

[7] 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 $9.3 billion (December 31, 2018 – $7.6 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 $2.9 billion (December 31, 2018 – $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 $2.1 billion (December 31, 2018 – $2.0 billion).

As at June 30, 2019, holding the inflation and salary escalation assumptions constant, a 1% decrease in the assumed long-term real rates of return would result in an increase in the pension liabilities of approximately 22% or $ $49.5 billion (December 31, 2018 – 21% or $40.1 billion).

### Foreign currency risk

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

The Plan has investments exposed to foreign currency. In Canadian dollars this exposure is as follows:

| (Canadian $ millions) | **As at June 30, 2019** | As at December 31, 2018 |
|---|---|---|
| Currency | **Net Exposure** | Net Exposure |
| United States Dollar | **$ 32,870** | $ 35,150 |
| Chilean Peso | **3,630** | 3,425 |
| Japanese Yen | **3,512** | 2,331 |
| Brazilian Real | **3,279** | 2,747 |
| Euro | **3,257** | 2,976 |
| Mexican Peso | **2,108** | 1,394 |
| Danish Krone | **2,081** | 2,049 |
| British Pound Sterling | **1,469** | 2,730 |
| South Korean Won | **1,272** | (229) |
| Indian Rupee | **1,251** | 1,242 |
| Other | **10,715** | 7,984 |
| | **$ 65,444** | $ 61,799 |

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) | **As at June 30, 2019** | As at December 31, 2018 |
|---|---|---|
| Currency | **Change in Net Investment Value** | Change in Net Investment Value |
| United States Dollar | **$ 1,643** | $ 1,758 |
| Chilean Peso | **181** | 171 |
| Japanese Yen | **176** | 117 |
| Brazilian Real | **164** | 137 |
| Other | **1,108** | 907 |
| | **$ 3,272** | $ 3,090 |

### (h) Liquidity risk

Liquidity risk is the risk of not being able to obtain sufficient cash or cash equivalents at a reasonable cost to meet the Plan's financial obligations in a timely manner, or to support new investment opportunities as they appear, under a range of liquidity stress. By maintaining a structurally sound liquidity profile, the Plan seeks to ensure that sufficient liquidity is available to cover potential cash and collateral outflows under stressed conditions without undesired changes to the Plan's asset mix while allowing for opportunistic investments.

#### 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 and other potential contingent 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. A portion of the available liquid assets are earmarked to meet contractual cash flows and other projected cash flows (such as pension payments). Potential collateral requirements under stress are estimated 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 used for funding 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 $56,433 million as at June 30, 2019 (December 31, 2018 – $53,216 million). The Plan also has publicly traded equities of $23,314 million net of short positions (December 31, 2018 – $20,156 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 are as follows:

| (Canadian $ millions) | | | | **As at June 30, 2019** |
|---|---|---|---|---|
| | **Within One Year** | **One to Five Years** | **Over Five Years** | **Total** |
| Securities sold under agreements to repurchase | **$ (15,540)** | **$ (7,094)** | **$ —** | **$ (22,634)** |
| Securities sold but not yet purchased | | | | |
| Equities | **(2,587)** | **—** | **—** | **(2,587)** |
| Fixed income | **(9,943)** | **—** | **—** | **(9,943)** |
| Real estate | **(893)** | **(2,160)** | **(2,085)** | **(5,138)** |
| Commercial paper | **(8,694)** | **—** | **—** | **(8,694)** |
| Term debt | **—** | **(4,978)** | **—** | **(4,978)** |
| Cash collateral received under credit support annexes | **(719)** | **—** | **—** | **(719)** |
| Derivative-related, net | **(2,746)** | **—** | **—** | **(2,746)** |
| | **$ (41,122)** | **$ (14,232)** | **$ (2,085)** | **$ (57,439)** |

| (Canadian $ millions) | | | | As at December 31, 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) |

### (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 June 30, 2019 is $nil (December 31, 2018 - $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 in substance 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 are as follows:

| (Canadian $ millions) | **As at June 30, 2019** | As at December 31, 2018 |
|---|---|---|
| **Securities purchased under agreements to resell and sold under agreements to repurchase** | | |
| Gross amounts of securities purchased under agreements to resell[8] | **$ 18,548** | $ 16,216 |
| Collateral held | **18,914** | 16,498 |
| Gross amounts of securities sold under agreements to repurchase[8] | **(27,503)** | 28,670 |
| Collateral pledged | **(28,000)** | 29,016 |
| | | |
| **Securities borrowing and lending** | | |
| Securities borrowed | **5,302** | 5,442 |
| Securities lent | **—** | 288 |
| Collateral pledged[9] | **5,678** | 5,535 |
| | | |
| **Derivative-related** | | |
| Collateral received[10] | **1,561** | 1,505 |
| Collateral pledged[11] | **1,365** | 2,600 |

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

[9] Includes cash collateral of $2,539 (December 31, 2018 - $2,549).

[10] Includes cash collateral of $719 (December 31, 2018 - $937).

[11] Includes cash collateral of $nil (December 31, 2018 - $57).

## (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 Condensed Interim Consolidated Statements of Financial Position.

The impact of these arrangements is presented in the following table:

| (Canadian $ millions) | | | | | | **As at June 30, 2019** |
|---|---|---|---|---|---|---|
| | **Gross amounts** | **Less: Amounts offset** | **Net amount presented in note 2a** | **Amounts subject to netting agreements** | **Securities and cash collateral[12]** | **Net Exposure** |
| **Financial assets** | | | | | | |
| Securities purchased under agreements to resell | **$ 18,548** | **$ (4,869)** | **$ 13,679** | **$ (9,885)** | **$ (3,689)** | **$ 105** |
| Derivative-related receivables | **3,898** | **—** | **3,898** | **(1,448)** | **(1,275)** | **1,175** |
| | **$ 22,446** | **$ (4,869)** | **$ 17,577** | **$ (11,333)** | **$ (4,964)** | **$ 1,280** |
| **Financial liabilities** | | | | | | |
| Securities sold under agreements to repurchase | **$ (27,503)** | **$ 4,869** | **$ (22,634)** | **$ 9,885** | **$ 12,740** | **$ (9)** |
| Derivative-related liabilities | **(2,746)** | **—** | **(2,746)** | **1,448** | **1,261** | **(37)** |
| | **$ (30,249)** | **$ 4,869** | **$ (25,380)** | **$ 11,333** | **$ 14,001** | **$ (46)** |

| (Canadian $ millions) | | | | | | As at December 31, 2018 |
|---|---|---|---|---|---|---|
| | Gross amounts | Less: Amounts offset | Net amount presented in note 2a | Amounts subject to netting agreements | Securities and cash collateral[12] | 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) |

[12] Securities and cash collateral exclude over-collateralization and collateral in transit. See note 2i for the total amount of collateral.

# NOTE 3.
# ACCRUED PENSION BENEFITS

## (a) Actuarial assumptions

The actuarial assumptions used in determining the value of accrued pension benefits of $220,620 million (December 31, 2018 – $192,281 million, June 30, 2018 - $205,783 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 June 30, 2019** | As at December 31, 2018 | As at June 30, 2018 |
|---|---|---|---|
| Discount rate | **2.50%** | 3.20% | 3.05% |
| Salary escalation rate | **2.35%** | 2.40% | 2.75% |
| Inflation rate | **1.35%** | 1.40% | 1.75% |
| Real rate[1] | **1.15%** | 1.80% | 1.30% |

[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 between December 31, 2018 and June 30, 2019. These changes in economic assumptions resulted in a net increase in the value of accrued pension benefits of $25,320 million for the six months ended June 30, 2019 (June 30, 2018 - $2,091 million decrease).

There were no changes to the non-economic assumptions as at June 30, 2019, December 31, 2018 or as at June 30, 2018.

## (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 June 30, 2019 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 indexation levels reflected in accrued pension benefits are as follows:

| | **Valuation as at June 30, 2019[2]** | Valuation as at June 30, 2018[2] |
|---|---|---|
| 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.

## NOTE 4.
## 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, is as follows:

| Net Investment Income (Canadian $ millions) | Income [1] | Realized [2] | Unrealized [2] | Investment Income [3] | Management Fees | Transaction Costs | Net Investment Income |
|---|---|---|---|---|---|---|---|
| | | | | | For the six-month period ended June 30, 2019 | | |
| **Equity** | | | | | | | |
| Publicly traded | | | | | | | |
| Canadian | $ 18 | $ (266) | $ 411 | $ 163 | $ — | $ (1) | $ 162 |
| Non-Canadian | 331 | 972 | 334 | 1,637 | (37) | (17) | 1,583 |
| Non-publicly traded | | | | | | | |
| Canadian | 86 | 195 | (19) | 262 | (16) | (29) | 217 |
| Non-Canadian | 451 | 1,033 | (2,121) | (637) | (154) | (24) | (815) |
| | 886 | 1,934 | (1,395) | 1,425 | (207) | (71) | 1,147 |
| **Fixed income** | | | | | | | |
| Bonds | 649 | 1,448 | 4,071 | 6,168 | — | (6) | 6,162 |
| Short-term investments | — | (142) | 400 | 258 | (1) | — | 257 |
| Alternative investments | 36 | 60 | 30 | 126 | (23) | — | 103 |
| Canadian real-rate products | 239 | 9 | 1,447 | 1,695 | — | — | 1,695 |
| Non-Canadian real-rate products | 83 | 498 | 282 | 863 | — | — | 863 |
| | 1,007 | 1,873 | 6,230 | 9,110 | (24) | (6) | 9,080 |
| **Inflation sensitive** | | | | | | | |
| Commodities | (135) | 19 | 1,062 | 946 | — | (4) | 942 |
| Timberland | 24 | — | (113) | (89) | — | — | (89) |
| Natural resources | 132 | — | 45 | 177 | (2) | (2) | 173 |
| | 21 | 19 | 994 | 1,034 | (2) | (6) | 1,026 |
| **Real assets** | | | | | | | |
| Real estate | 529 | 193 | (5) | 717 | (1) | (16) | 700 |
| Infrastructure | 337 | (280) | 81 | 138 | (8) | (8) | 122 |
| | 866 | (87) | 76 | 855 | (9) | (24) | 822 |
| | $ 2,780 | $ 3,739 | $ 5,905 | $ 12,424 | $ (242) | $ (107) | $ 12,075 |

[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 gains of $1,717 million (impacting both realized and unrealized).
[3] Net of certain management and performance fees.

| (Canadian $ millions) | Income [4] | Realized [5] | Unrealized [5] | Investment Income[6] | Management Fees | Transaction Costs | Net Investment Income |
|---|---|---|---|---|---|---|---|
| **Equity** | | | | | | | |
| Publicly traded | | | | | | | |
| Canadian | $ 13 | $ 30 | $ (33) | $ 10 | $ (1) | $ (2) | $ 7 |
| Non-Canadian | 360 | 2,225 | (1,804) | 781 | (41) | (41) | 699 |
| Non-publicly traded | | | | | | | |
| Canadian | 75 | 187 | (112) | 150 | (12) | (18) | 120 |
| Non-Canadian | 400 | 2,042 | 116 | 2,558 | (123) | (23) | 2,412 |
| | 848 | 4,484 | (1,833) | 3,499 | (177) | (84) | 3,238 |
| **Fixed income** | | | | | | | |
| Bonds | 695 | (1,240) | (786) | (1,331) | — | (20) | (1,351) |
| Short-term investments | (6) | (34) | (314) | (354) | — | — | (354) |
| Alternative investments | 54 | 207 | 260 | 521 | (12) | (1) | 508 |
| Canadian real-rate products | 229 | — | 432 | 661 | (1) | (7) | 653 |
| Non-Canadian real-rate products | 90 | 620 | 157 | 867 | — | — | 867 |
| | 1,062 | (447) | (251) | 364 | (13) | (28) | 323 |
| **Inflation sensitive** | | | | | | | |
| Commodities | (148) | 1,080 | (401) | 531 | — | (3) | 528 |
| Timberland | 40 | — | 143 | 183 | — | — | 183 |
| Natural resources | 101 | — | 393 | 494 | (2) | 2 | 494 |
| | (7) | 1,080 | 135 | 1,208 | (2) | (1) | 1,205 |
| **Real assets** | | | | | | | |
| Real estate | 529 | (68) | 15 | 476 | — | (14) | 462 |
| Infrastructure | 425 | 281 | 257 | 963 | (7) | (25) | 931 |
| | 954 | 213 | 272 | 1,439 | (7) | (39) | 1,393 |
| | $ 2,857 | $ 5,330 | $ (1,677) | $ 6,510 | $ (199) | $ (152) | $ 6,159 |

[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 $1,378 million (impacting both realized and unrealized).
[6] Net of certain management and performance fees.

## NOTE 5.
## FUNDING VALUATIONS

Funding valuations are prepared annually and must be filed at least once every three years with the regulatory authorities. Once filed, these valuations are used to determine the funding requirements of the Plan. The Funding Management Policy established by the co-sponsors provides guidance for the co-sponsors in determining contributions and benefit levels.

Under the agreement described above between the co-sponsors, contribution rates for 2018 onwards are 10.40% for earnings below the CPP limit plus 12.00% for earnings above the CPP limit.

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 Condensed Interim 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 6.
## CONTRIBUTIONS

| For the six-month period ended June 30 (Canadian $ millions) | **2019** | 2018 |
|---|---|---|
| **Members** | | |
| Current service[1] | **$ 799** | $ 771 |
| Optional credit | **19** | 19 |
| | **818** | 790 |
| **Province of Ontario** | | |
| Current service | **783** | 755 |
| Interest | **9** | 10 |
| Optional credit | **18** | 17 |
| | **810** | 782 |
| Designated employers | **16** | 16 |
| Transfers from other pension plans | **2** | 4 |
| | **18** | 20 |
| | **$ 1,646** | $ 1,592 |

[1] Contributions past due are less than $1 million in the six-month period ended June 30, 2019.

## NOTE 7.
## BENEFITS

| For the six-month period ended June 30 (Canadian $ millions) | | **2019** | | 2018 |
|---|---|---|---|---|
| Retirement pensions | | **2,887** | $ | 2,769 |
| Death benefits | | **210** | | 195 |
| Disability pensions | | **12** | | 13 |
| Commuted value transfers | | **32** | | 36 |
| Family law transfers | | **12** | | 11 |
| Transfers to other plans | | **3** | | 5 |
| Benefits paid | **$** | **3,156** | $ | 3,029 |
| Other payments[1] | | **1** | | 2 |
| | **$** | **3,157** | $ | 3,031 |

[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 8.
## 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 5 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 9.
## 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 June 30, 2019, these commitments totalled $15,833 million (December 31, 2018 – $15,360 million).

## NOTE 10.
## 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 during the six-month period ended June 30, 2019, and the twelve-month period ended December 31, 2018.

The Plan guarantees loan and credit agreements which will expire by 2020. The Plan's maximum exposure is $95 million as at June 30, 2019 (December 31, 2018 – $99 million). The companies have drawn $11 million under the agreements (December 31, 2018 – $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 June 30, 2019 (December 31, 2018 – $74 million). There were no default lease payments in either 2019 or 2018.

The Plan also guarantees the ability of certain investee companies to settle certain financial obligations. The Plan’s maximum exposure is $92 million as at June 30, 2019 (December 31, 2018 – $96 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 2023. The maximum exposure cannot be determined because the projects are not yet complete. These guarantees amounted to $17 million as at June 30, 2019 (December 31, 2018 – $11 million) and have not been recognized in the real estate liabilities.

The Plan guarantees the $750 million 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 June 30, 2019 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 June 30, 2019, commercial paper issued amounted to $8,487 million (December 31, 2018 - $8,726 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.