

**US\$1,750,000,000**  
**Ontario Teachers' Finance Trust**  
**2.125% Senior Notes due 2022**  
**Unconditionally and irrevocably guaranteed by**  
**Ontario Teachers' Pension Plan Board**



Ontario Teachers' Finance Trust (the "Issuer") offered US\$1,750,000,000 aggregate principal amount of 2.125% Senior Notes due 2022 (the "Notes"). The Notes are unconditionally and irrevocably guaranteed by the Ontario Teachers' Pension Plan Board (the "Guarantor"), a corporation without share capital continued under the *Teachers' Pension Act* (Ontario) (the "TPA"). The Notes will mature on September 19, 2022 (the "Maturity Date"), unless previously redeemed. As more fully described herein, if, as a result of certain tax related developments, the Issuer would be required to pay certain additional amounts, the Issuer may at its sole discretion elect to redeem the Notes, in whole but not in part, at 100% of their principal amount together with accrued and unpaid interest, if any (including additional amounts, if any), to, but excluding, the redemption date. See "Description of Notes—Tax Redemption."

The Notes are denominated in U.S. Dollars and bear interest from (and including) September 19, 2017 to (but excluding) the Maturity Date at a fixed rate of 2.125% per annum, payable semi-annually in arrears on March 19 and September 19 of each year, beginning on March 19, 2018.

The Notes are direct, unsecured and unsubordinated obligations of the Issuer and rank equally and ratably in right of payment with all other present and future unsecured and unsubordinated indebtedness of the Issuer. The Guarantor's guarantee of the Notes (the "Guarantee") is a direct, unsecured and unsubordinated obligation of the Guarantor and ranks equally and ratably in right of payment with the Guarantor's other unsecured and unsubordinated indebtedness. Claims under the Guarantee would be entitled to priority of payment ahead of the accrued benefit entitlements of members, former members, retired members and any other persons entitled to a benefit under the Ontario Teachers' Pension Plan (the "Plan") in respect of a member, former member, or retired member before any other distribution is made upon an insolvency or winding-up of the Plan. The Notes are effectively subordinated to any future secured indebtedness of the Issuer and the claims under the Guarantee are effectively subordinated to any future secured indebtedness of the Guarantor, in each case, to the extent of the value of the assets securing such indebtedness. In addition, claims under the Notes will be structurally subordinated to any existing and future indebtedness and other liabilities of the Issuer's subsidiaries and claims under Guarantee will be structurally subordinated to any existing and future indebtedness and other liabilities of the Guarantor's subsidiaries (other than the Issuer).

Currently, there is no public market for the Notes. Application has been made for the Notes to be listed on the Official List of the Irish Stock Exchange (the "ISE"), for the approval of this document as listing particulars and admitted to trading on its Global Exchange Market (the "GEM").

**See "Risk Factors" beginning on page 16 for a description of risks of investing in the Notes.**

Neither the Notes nor the related Guarantee have been or will be registered under the United States Securities Act of 1933, as amended (the "Securities Act"), any U.S. federal or state securities laws or the laws of any other jurisdiction. The Notes and the related Guarantee may not be offered or sold within the United States or to, or for the account and benefit of, any U.S. person unless the offer or sale would qualify for a registration exemption from the Securities Act and applicable U.S. federal and state securities laws. Neither the Issuer nor the Guarantor will be registered as investment companies under the U.S. Investment Company Act of 1940, as amended (the "Investment Company Act"). Accordingly, we are only offering the Notes and the related Guarantee (i) to persons reasonably believed to be qualified institutional buyers (as defined in Rule 144A under the Securities Act ("Rule 144A")) ("QIBs") who are also qualified purchasers (as defined in Section 2(a)(51) under the Investment Company Act) ("QPs") and (ii) outside the United States to non-U.S. persons in compliance with Regulation S under the Securities Act ("Regulation S"). See "Plan of Distribution" and "Transfer Restrictions" for additional information about eligible offerees and transfer restrictions. The Notes have not been and will not be qualified for distribution in Canada by a prospectus and will be subject to resale restrictions in Canada.

None of the U.S. Securities and Exchange Commission ("SEC"), any U.S. state or non-U.S. securities commission or any other regulatory authority has approved or disapproved the offering of the Notes, nor have any of the foregoing authorities passed upon or endorsed the merits of the offering or the accuracy, adequacy or completeness of these listing particulars. Any representation to the contrary is a criminal offense.

Price for the Notes: 99.774% plus accrued interest, if any, from September 19, 2017

The initial purchasers (as defined below) delivered the Notes, in book-entry only form through The Depository Trust Company ("DTC") for the account of its direct and indirect participants, including Euroclear Bank S.A./N.V., as operator of the Euroclear System, and Clearstream Banking, *société anonyme*, on September 19, 2017.

*Joint Book-Running Managers*

**Goldman Sachs International      J.P. Morgan      RBC Capital Markets**  
*Co-Managers*

**Barclays      BMO Capital Markets      CIBC Capital Markets**

The date of these listing particulars is September 29, 2017

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## NOTICE TO INVESTORS

None of the Issuer, the Guarantor or the initial purchasers have authorized anyone to provide information to you other than that contained in these listing particulars, and none of the Issuer, the Guarantor or the initial purchasers take any responsibility for, or can provide any assurance as to the accuracy or completeness of, any other information that others may give you. You should assume that the information contained in these listing particulars is accurate only as of September 12, 2017. The business, financial condition, liquidity, results of operations and prospects of the Guarantor (together with the Issuer and the Guarantor's other subsidiaries unless the context requires otherwise, "Ontario Teachers'," "we", "our" or "us") may have changed since that date. Neither the delivery of these listing particulars nor any sale made under the offering memorandum dated as of September 12, 2017 (the "Offering Memorandum") will under any circumstances imply that the information herein is correct as of any date subsequent to September 12, 2017.

These listing particulars have been prepared by the Issuer and the Guarantor in compliance with the listing and admission to trading rules of the ISE as required for the admission to the Official List of the ISE and to trading on its GEM of the Notes described in these listing particulars. These listing particulars may be used only for the purposes for which they have been published and do not constitute an offer to any other person or the public generally to subscribe for or otherwise acquire the Notes.

These listing particulars are based on information provided by the Issuer and the Guarantor and other sources that the Issuer and the Guarantor believe to be reliable. The Issuer, the Guarantor and the initial purchasers cannot assure you that information obtained from other sources is accurate or complete. These listing particulars summarize certain documents and other information and the Issuer and the Guarantor refer you to those documents and sources of information for a more complete understanding of what is discussed in these listing particulars. See "Available Information."

The initial purchasers make no representation or warranty, express or implied, as to the accuracy or completeness of the information contained in these listing particulars. Nothing contained in these listing particulars is, or shall be relied upon as, a promise or representation by the initial purchasers as to the past or future.

None of the Issuer or the initial purchasers are making an offer to sell the Notes in any jurisdiction except where such an offer or sale is permitted. You must comply with all applicable laws and regulations in force in your jurisdiction and you must obtain any consent, approval or permission required by you for the purchase, offer or sale of the Notes under the laws and regulations in force in the jurisdiction to which you are subject or in which you make such purchase, offer or sale, and none of the Issuer or the initial purchasers will have any responsibility therefor. These listing particulars may only be used where it is legal to sell the Notes.

The Notes and the related Guarantee are subject to restrictions on transferability and resale and may not be transferred or resold in the United States except as permitted under the Securities Act and applicable U.S. federal and state securities laws pursuant to registration thereunder or in transactions exempt from, or not subject to, such registration. The Issuer and the Guarantor are relying upon an exemption from registration under the Securities Act for an offer and sale of securities which do not involve a public offering. The Issuer is also relying on exemptions from the prospectus requirements of applicable securities laws in Canada. The Offering Memorandum has been submitted solely to a limited number of persons reasonably believed to be QIBs who are also QPs and to non-U.S. persons outside the United States in compliance with Regulation S so they can consider a purchase of the Notes.

These listing particulars may be used only for the purposes for which it has been published. By accepting delivery of these listing particulars, you acknowledge that the use of the information in these listing particulars for any purpose other than to consider a purchase of the Notes is strictly prohibited. By accepting delivery of these listing particulars and by purchasing the Notes, you will be deemed to have made certain acknowledgments, representations and agreements as set forth under “Transfer Restrictions” in these listing particulars. As a prospective purchaser of the Notes, you should be aware that you may be required to bear the financial risks of this investment for an indefinite period of time. See “Risk Factors” for a description of risk factors relating to an investment in the Notes.

None of the Issuer, the Guarantor, the initial purchasers or any of their respective representatives are making any representation to any purchaser regarding the legality of an investment in the Notes by such purchaser under any investment or similar laws or regulations. In making an investment decision, prospective investors must rely on their own examination of Ontario Teachers’ business, the Notes, the Guarantee and the terms of the offering, including the merits and risks involved. Prospective investors should not construe anything in these listing particulars as legal, business or tax advice. Each prospective investor should consult its own advisors as needed to make its investment decision and to determine whether it is legally permitted to purchase the Notes under applicable legal, investment or similar laws or regulations.

None of the SEC, any U.S. state or non-U.S. securities commission or any other regulatory authority has approved or disapproved the offering of the Notes, nor have any of the foregoing authorities passed upon or endorsed the merits of the offering or the accuracy, adequacy or completeness of these listing particulars. Any representation to the contrary is a criminal offense.

The Issuer reserves the right to withdraw the offering of Notes at any time, and the Issuer and the initial purchasers reserve the right to reject any commitment to subscribe for the Notes in whole or in part and to allot to any prospective investor less than the full amount of Notes sought by that investor. The initial purchasers and certain related entities may acquire for their own account a portion of the Notes.

Certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the Notes. Such transactions may include purchases of the Notes to stabilize their market price, purchases of the Notes to cover all or some of an over-allotment or a short position in the Notes maintained by the initial purchasers and the imposition of penalty bids. Such activities, if commenced, may be discontinued at any time. However, there is no assurance that such stabilization action will be undertaken. Such stabilizing, if commenced, may be discontinued at any time and, if begun, must be brought to an end after a limited period. Any stabilization action or over-allotment must be conducted by the relevant persons in accordance with all applicable laws and rules. For a description of these activities, see “Plan of Distribution.”



## **ENFORCEMENT OF CIVIL LIABILITIES**

The Issuer is a trust established under the laws of Ontario. The Guarantor is an Ontario corporation without share capital continued under the TPA. The directors and executive officers of the Issuer and the Guarantor reside in Canada. As a result, it may be difficult for investors to effect service of process within the United States or in any other jurisdiction outside Canada upon the Issuer, the Guarantor or such persons or to enforce against them in courts of any jurisdiction outside Canada judgments predicated upon the civil liability provisions of the federal or state securities laws of the United States. The Issuer and the Guarantor have appointed CT Corporation System as an agent to receive service of process with respect to any action brought against them in any federal or state court in the State of New York arising from the offering. In addition, it may be difficult for investors to enforce, in Canadian courts or in original actions or actions for enforcement of judgments obtained in courts of jurisdictions outside of Canada, among other things, civil liabilities predicated upon the federal and state securities laws of the United States.

We have been advised by our Canadian counsel that a judgment of a United States court predicated solely upon civil liability under such laws would probably be enforceable in Canada if the United States court in which the judgment was obtained has a basis for jurisdiction in the matter that was recognized by a Canadian court for such purposes. We have also been advised by such counsel, however, that there is substantial doubt whether an original action could be brought successfully in Canada predicated solely upon such civil liabilities.

## **AVAILABLE INFORMATION**

Neither the Issuer nor the Guarantor is subject to the reporting requirements of the U.S. Securities Exchange Act of 1934, as amended (the “Exchange Act”). During any period in which the Issuer and the Guarantor are neither subject to Section 13 or Section 15(d) of the Exchange Act nor exempt from the registration requirements of Section 12(g) of the Exchange Act pursuant to Rule 12g3-2(b) thereunder and any Notes remain outstanding, the Issuer and the Guarantor will make available, upon request, to any holder or beneficial owner of Notes that are “restricted securities” under the Securities Act or to any prospective purchaser or subscriber of such Notes designated by such holder or beneficial owner, the information referred to in Rule 144A(d)(4) in order to permit resale of the Notes in compliance with Rule 144A.

Any such requests may be made to the Guarantor in writing at its main offices located at 5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada, Attention: Investor Relations, or to the Issuer in writing at its main offices located at 5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada, Attention: Investor Relations.

The information included in (or accessed through) any website included or referred to in these listing particulars is not incorporated by reference in, and shall not be considered part of, these listing particulars. Any website address herein is included as an inactive textual reference only.

## FORWARD-LOOKING STATEMENTS

These listing particulars contain forward-looking statements. Examples of such forward-looking statements include, but are not limited to: (i) statements regarding Ontario Teachers' results of operations and financial condition; (ii) statements of plans, objectives or goals, including those related to Ontario Teachers' operations; and (iii) statements of assumptions underlying such statements. Words such as "aim," "anticipate," "believe," "could," "estimate," "expect," "forecast," "guidance," "intend," "may," "plan," "potential," "predict," "seek," "should," "would," "will" and similar expressions are intended to identify forward-looking statements but are not the exclusive means of identifying such statements.

By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific, and risks exist that the predictions, forecasts, projections and other forward-looking statements will not be achieved. Ontario Teachers' cautions investors that a number of important factors could cause actual results to differ materially from the plans, objectives, expectations, estimates and intentions expressed or implied in such forward-looking statements, including the following factors:

- the condition of global financial markets and macroeconomic conditions generally;
- fluctuations in interest rate levels;
- our derivative transactions;
- funding requirements or benefit payment costs;
- longevity risk of our pension obligations;
- fluctuations in exchange rates;
- increased competition;
- general risks associated with the real estate industry;
- differences in experience compared with our assumptions, as well as updates of the assumptions and quantitative models we use;
- impairment or failure of financial institution counterparties;
- damage to our reputation;
- interruption or other operational failures in telecommunication, information technology ("IT") and other operational systems, or a failure to maintain the security, integrity, confidentiality or privacy of sensitive data in those systems;
- failure to comply with or changes to laws, regulations and rules of Canada and Ontario;
- operational risks;
- our pursuit of strategic transaction opportunities;
- natural disasters and other unpredictable events;
- insurance policies that may be insufficient to protect us against large losses;
- the loss of key personnel, and the failure to attract and retain key personnel with appropriate qualifications and experience;
- changes in credit ratings;
- liability of the Issuer or the Guarantor for Canadian income tax;
- challenge of tax filings by tax authorities; and
- changes in tax laws.

Should one or more of these factors or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described herein as anticipated, believed, estimated, expected, forecast or intended. Prospective investors should read the sections of these listing particulars entitled “Summary,” “Risk Factors,” “2016 Management’s Discussion & Analysis” (contained in Annex B), “2016 Annual Audited Consolidated Financial Statements” (contained in Annex C), “2015 Management’s Discussion & Analysis” (contained in Annex D), “2015 Annual Audited Consolidated Financial Statements” (contained in Annex E) and “Business” for a more complete discussion of the factors that could affect Ontario Teachers’ future performance and the markets in which Ontario Teachers’ operates.

In light of these risks, uncertainties and assumptions, the forward-looking events described in these listing particulars may not occur. These forward-looking statements speak only as at September 12, 2017, and Ontario Teachers’ undertakes no obligation to update or revise any forward-looking statement, whether as a result of new information or future events or developments. Additional factors affecting Ontario Teachers’ business emerge from time to time and it is not possible to predict all of these factors, nor can Ontario Teachers’ assess the impact of all such factors on its business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those expressed or implied in any forward-looking statement. Although Ontario Teachers’ believes the plans, intentions and expectations expressed or implied by such forward-looking statements are reasonable, it cannot assure you that those plans, intentions or expectations will be achieved. In addition, you should not interpret statements regarding past trends or activities as assurances that those trends or activities will continue in the future. All forward-looking statements attributable to Ontario Teachers’ or persons acting on its behalf are expressly qualified in their entirety by this cautionary statement.

## **PRESENTATION OF FINANCIAL AND CERTAIN OTHER INFORMATION**

The information included in these listing particulars is not intended to, and does not, comply with all of the disclosure requirements of the SEC that would apply if the offering were being made pursuant to a registration statement filed with the SEC. Additionally, the financial information included in these listing particulars will not be subject to review by the SEC. Compliance with such requirements could require the modification or exclusion of certain financial measures and/or other information included in these listing particulars and the presentation of certain other information not included in these listing particulars.

There are no registration rights associated with the Notes and the related Guarantee, and we have no intention to offer to exchange the Notes and the related Guarantee for new securities pursuant to a registration statement filed with the SEC. The Fiscal and Paying Agency Agreement is not qualified under, or subject to the provisions of, the Trust Indenture Act of 1939, as amended.

### **Financial Information**

Unless otherwise specified, the financial information included in these listing particulars is based on the audited consolidated financial statements of the Guarantor as of and for the years ended December 31, 2016 and 2015 (the “Audited Consolidated Financial Statements”) and the unaudited consolidated financial statements as of and for the six months ended June 30, 2017 (the “Unaudited Consolidated Financial Statements”), in each case annexed to these listing particulars. The Audited Consolidated Financial Statements and the Unaudited Consolidated Financial Statements of the Guarantor are prepared in Canadian dollars, the Guarantor’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 Guarantor must consistently comply with either International Financial Reporting Standards (“IFRS”) in Part I of the CPA Canada Handbook or accounting for private enterprises in Part II of the CPA Canada Handbook. The Guarantor 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. Section 4600 and IFRS differ in certain respects from accounting principles generally accepted in the United States of America (“U.S. GAAP”). We have not included in these listing particulars a reconciliation of the Audited Consolidated Financial Statements, the Unaudited Consolidated Financial Statements or other financial information to U.S. GAAP.

Neither the Issuer nor the Guarantor is a reporting issuer under applicable Canadian securities legislation and therefore neither is required to file continuous disclosure documents, reports and other information with the securities commission or similar regulatory authority in any province or territory of Canada. Similarly, neither the Issuer nor the Guarantor is required to, and neither undertakes to, file periodic reports or other information with the SEC. The financial information included in these listing particulars is not intended to comply with the financial reporting requirements of the SEC.

All dollar amounts presented in these listing particulars are in Canadian dollars, unless otherwise indicated. References herein to “\$,” “C\$” and “Cdn. dollars” are to Canadian dollars, and references to “US\$” are to U.S. dollars.

### **Currency and Exchange Information**

The Audited Consolidated Financial Statements and the Unaudited Consolidated Financial Statements are prepared in Canadian dollars, and the Guarantor’s fiscal year ends on December 31 of each year. For your convenience, the following table sets forth, for the periods indicated, the period-end, average, high and low WM/Reuters exchange rates expressed as U.S. dollars per C\$1.00. The average rate for a period means the average of all daily 4pm London fix closing rates for each business day during that period. The period-end, high and low rates for a period means the period-end, high and low 4pm London fix closing rates for that period.

We make no representation that the Canadian dollar or U.S. dollar amounts referred to in these listing particulars have been, could have been or could, in the future, be converted into U.S. dollars or Canadian dollars, as the case may be, at any particular rate, if at all.

<u>Fiscal year</u>	<u>Period End</u>	<u>Average Rate</u>	<u>High</u>	<u>Low</u>
2014 .....	US\$0.8634	US\$0.9058	US\$0.9414	US\$0.8577
2015 .....	0.7199	0.7833	0.8634	0.7153
2016 .....	0.7457	0.7552	0.7983	0.6832

<u>Month</u>	<u>Period End</u>	<u>Average Rate</u>	<u>High</u>	<u>Low</u>
January 2017 .....	US\$0.7670	US\$0.7574	US\$0.7670	US\$0.7456
February 2017 .....	0.7550	0.7636	0.7693	0.7550
March 2017 .....	0.7498	0.7466	0.7523	0.7396
April 2017 .....	0.7314	0.7445	0.7539	0.7314
May 2017 .....	0.7404	0.7355	0.7441	0.7283
June 2017 .....	0.7700	0.7512	0.7700	0.7399
July 2017 .....	0.7996	0.7875	0.8049	0.7691
August 2017 .....	0.7976	0.7932	0.8016	0.7839
September 1–7, 2017 .....	0.8231	0.8113	0.8231	0.8054

The 4pm London fix closing rate published by WM/Reuters on September 7, 2017 was US\$0.8231 = C\$1.

## **Rounding**

Certain rounding adjustments have been made in arriving at some of the figures included in these listing particulars. As a result, numerical figures shown as totals in some tables may not be the arithmetic aggregations of the figures that precede them.

## **Industry and Market Data**

Market data and other statistical information used throughout these listing particulars are generally based on independent industry publications, government publications, reports by market research firms or other published independent sources.

Although the Issuer and the Guarantor believe these various sources are reliable, they have not independently investigated or verified the information and cannot guarantee its accuracy or completeness. In addition, these sources may use different definitions of the relevant markets than those the Issuer and the Guarantor present. Some industry and market data contained herein are also based on our estimates, which are derived from our internal analysis, as well as third party sources. Data regarding the Guarantor's industry and market are intended to provide general guidance but are inherently imprecise.

## SUMMARY

*This summary is not complete and does not contain all of the information that you should consider before investing in the Notes. You should read the entire listing particulars carefully, especially the risks discussed under the “Risk Factors” section of these listing particulars, and the Audited Consolidated Financial Statements and the Unaudited Consolidated Financial Statements and the notes to those financial statements included elsewhere in these listing particulars.*

### The Guarantor

Ontario Teachers’ Pension Plan Board (“OTPPB” or the “Guarantor”) is a globally active investor with holdings in more than 50 countries across diversified sectors and asset classes. It administers the assets of the Ontario Teachers’ Pension Plan (the “Plan”), earns money through investing, pays benefits to Plan members and their survivors and reports and advises on the Plan’s funding status and regulatory requirements. OTPPB is an Ontario corporation without share capital continued under the TPA. It is responsible for administering the Plan and managing the assets of the Plan for the benefit of approximately 387,000 active, deferred and retired teachers, as of December 31, 2016, who are providing, or before retirement were providing, elementary and secondary school education in the Canadian Province of Ontario (collectively, the “members”).

The Plan is a Canadian based contributory defined benefit pension plan, established in 1917 and co-sponsored by the Ontario government, through the Minister of Education, and Ontario Teachers’ Federation (“OTF”), on behalf of teachers in the Province of Ontario’s publicly funded schools (the “Sponsors”). Its mission is to provide outstanding service and retirement security for its members—today and tomorrow. The Plan benefits are funded by contributions and investment earnings. Contributions are made by active members of the Plan (predominantly teachers employed in public schools in the Province of Ontario) and are matched by the government of Ontario and designated employers. All teachers in primary and secondary public schools in Ontario are required to participate in the Plan, as well as teachers at designated private schools in Ontario. Contributions are mandatory. Voluntary contributions by members of the Plan are not permitted.

As of December 31, 2016, OTPPB managed investments and provided for the retirement income for approximately 182,000 active and 69,000 deferred elementary and secondary school teachers and paid retirement benefits to approximately 136,000 retired teachers. The Plan is Canada’s largest single profession pension plan with C\$175.6 billion and C\$180.5 billion in net assets in its pension fund (the “Fund”) as of December 31, 2016 and June 30, 2017, respectively. The Plan produced a total-fund gross return in 2016 of 4.2%, net of trading costs, investment management expenses and external management fees but before Ontario Teachers’ internal investment administrative costs, and a total-fund net return of 4.0% after all investment costs. In 2016, its portfolio generated C\$7.0 billion of investment income. For the six months ended June 30, 2017, the Plan produced a total-fund gross return of 3.7%, net of trading costs, investment management expenses and external management fees but before Ontario Teachers’ internal investment administrative costs, and a total-fund net return of 3.6% after all investment costs and its portfolio generated C\$6.4 billion of investment income.

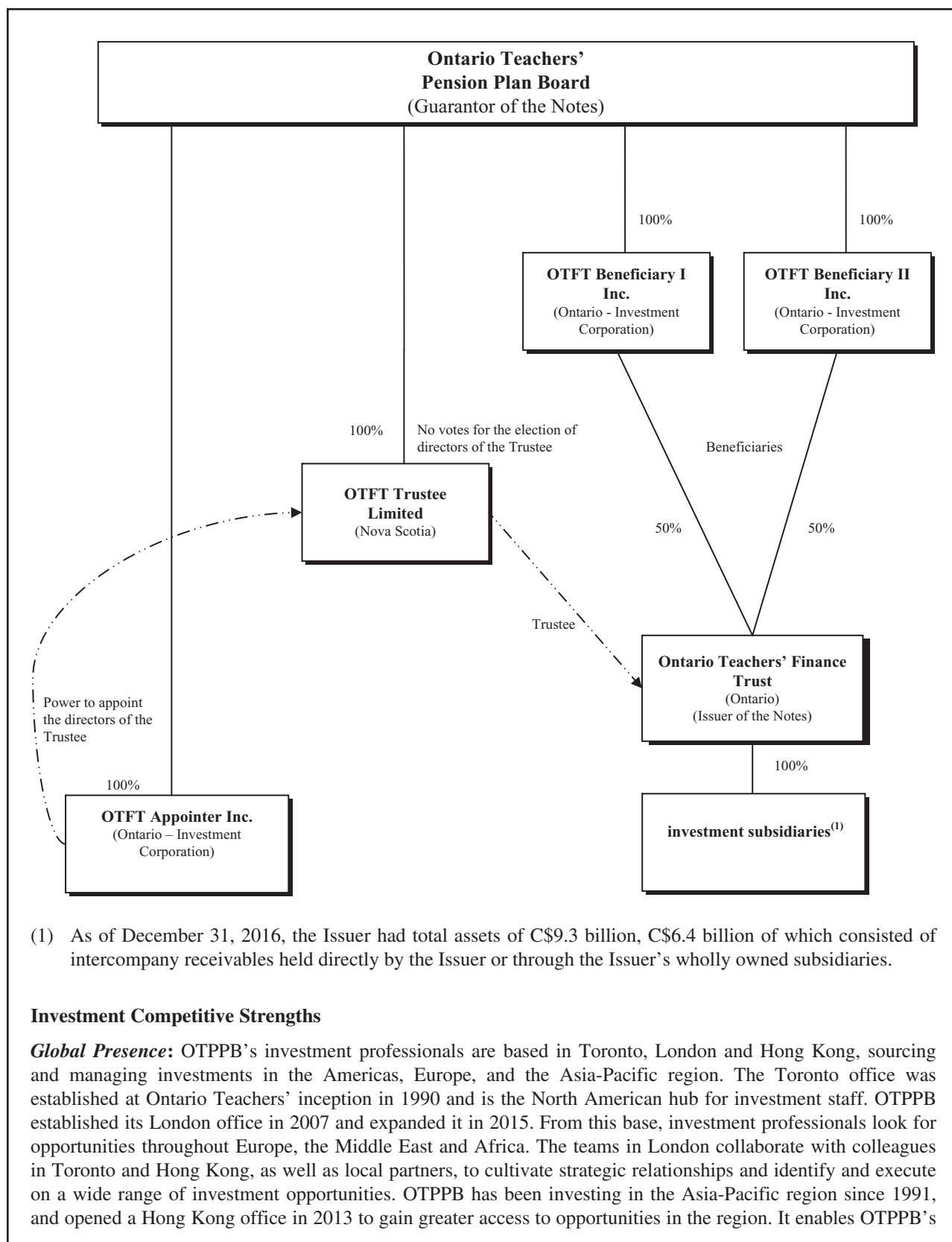
OTPPB’s board has eleven independent board members, five of whom are appointed by the government of Ontario and five of whom are appointed by OTF. The chair is appointed jointly by the government of Ontario and OTF. These board members oversee the management of the Fund and administration of the Plan. The board members are required to act independently of both the Plan Sponsors and management, and to make decisions in the best interests of all beneficiaries of the Plan.

OTPPB’s mandate is to administer the Plan and to manage the Fund in accordance with the TPA, which is OTPPB’s governing legislation, the *Pension Benefits Act* (Ontario) (the “PBA”), which is the legislation governing all Ontario pension plans, and the *Income Tax Act* (Canada) (the “Tax Act”), which exempts pension corporations from taxation under Part I of the Tax Act provided certain requirements are met.



**The Issuer**

Ontario Teachers' Finance Trust (the "Issuer") is a trust established under the laws of the Province of Ontario pursuant to an Amended and Restated Trust Agreement dated September 21, 2016 among OTFT Beneficiary I Inc. and OTFT Beneficiary II Inc., as settlors, and OTFT Trustee Limited, as trustee, each of which is a wholly-owned subsidiary of OTPPB. OTFT Beneficiary I Inc. and OTFT Beneficiary II Inc. were incorporated under the laws of the Province of Ontario on September 30, 2015. OTFT Trustee Limited is a limited liability company incorporated pursuant to the laws of the Province of Nova Scotia on October 1, 2015. The directors of OTFT Trustee Limited are appointed and removed by OTFT Appointer Inc., an Ontario corporation that is wholly-owned by OTPPB. The Issuer is primarily engaged in borrowing funds, raising capital and otherwise incurring indebtedness, and may use the proceeds to buy securities of and otherwise to make investments in and to provide financing to third parties and direct and indirect subsidiaries of OTPPB. These activities may be carried out directly by the Issuer or indirectly through one or more subsidiaries of the Issuer. The Issuer has issued commercial paper guaranteed by the Guarantor under its U.S. and Canadian commercial paper programs and has entered into a credit facility with two Canadian chartered banks, each as more fully described in the section entitled "Description of Other Indebtedness."



investment professionals to build even stronger relationships with key players in business and finance throughout the region, with its unique and dynamic mix of developing and emerging economies.

***In-House Talent:*** Approximately 80% of the investment portfolio is managed in-house by highly skilled, specialized teams. As one of Canada's largest pension funds based on net assets, OTPPB provides employees with the resources, training and career opportunities needed to achieve the highest professional standards. Talent development is critically important to building and retaining the intellectual capital and in-house expertise required to employ sophisticated and innovative strategies.

***Funds and Partnerships:*** Externally managed investments consist of alternative investments (hedge funds), private equity funds and public equity funds. External hedge fund managers provide access to unique investment approaches that both add to performance and diversify risk. OTPPB also has strategic investments with many of the world's leading private equity firms, which open up private capital opportunities in markets not easily accessed directly. OTPPB also partners with carefully chosen global and regional managers of public equity funds, who deliver value-added returns and provide local expertise in key global markets.

***Global Strategic Relationships:*** Relationships with key external partners are a significant component of OTPPB's success. OTPPB created a new Global Strategic Relationships department in 2016 to develop and cultivate mutually beneficial investment relationships around the world. Members of this department will work across asset classes and in all global regions to strengthen existing relationships and build new ones.

***Responsible Investing:*** Ontario Teachers' carefully considers a variety of risks and opportunities when making investment decisions, consistent with OTPPB's fiduciary duty to Plan members. Ontario Teachers' employs a thoughtful approach to responsible investing as environmental, social and governance factors become increasingly important to the management of the Plan's risk exposure and sustainability.

## **Strategy**

***Asset-Mix Selection:*** Recognizing that asset-mix selection is an important driver of long-term performance, OTPPB devotes considerable attention to choosing the types of assets owned and the relative emphasis placed on each asset class and geography. With oversight from OTPPB's board members, OTPPB's management now manages both investment policy and asset mix together under OTPPB's expanded OneTeachers' total-fund strategy. OneTeachers' integrates total returns, portfolio risk management and value-added returns into the total-fund strategy, positioning OTPPB for the future in a complex and fast-paced environment. Management determines exposure to each asset class within ranges approved by OTPPB's board members.

***Diversification and Balance:*** Total-fund diversification, through effective portfolio construction, is fundamental to OTPPB's success. Diversification allows OTPPB to spread risk across key factors such as time, investment periods, geographies and economic outcomes, which reduces the adverse impact of any one investment loss on the Fund overall. Exposure to the economies and currencies of different countries reduces overall volatility and offers the potential for higher returns.

***Proactive Risk Management:*** OTPPB actively manages funding and investment risk together. Each year, OTPPB determines the level of total risk that is appropriate to meet its objectives. Risk budgeting is then used to spread active risk across asset classes. The Board Investment Committee of OTPPB reviews and approves the risk budget annually, monitors overall investment risk exposure and reviews and approves risk management policies that affect the total portfolio, as well as new investment programs. OTPPB has continually advanced its risk culture with sophisticated tools and processes to support risk measurement and management on a coordinated basis across the entire Fund, all asset classes and all departments, as well as within each portfolio. In 2016, OTPPB launched a new and more robust risk management system called OneRisk after more than four

years of development and testing. The OneRisk system is the cornerstone of OTPPB's risk management efforts. With greater precision and consistency in risk numbers, it provides improved oversight of the Fund's risk-taking activities. On a daily basis, OneRisk calculates over a billion numbers and generates more than 30 reports to enable informed portfolio decision making.

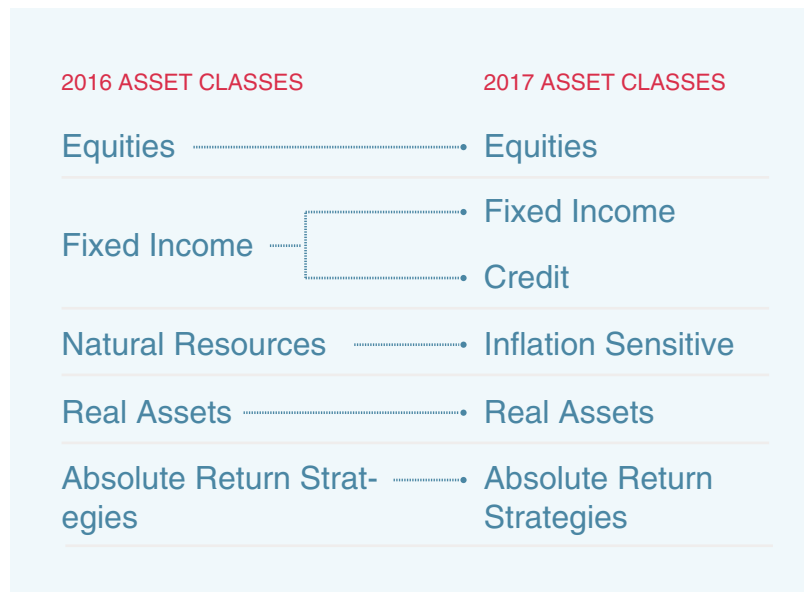
***Liquidity Management:*** OTPPB manages its liquidity position carefully to ensure that it maintains sufficient cash on hand to meet current liabilities while seeking to take advantage of investment opportunities. OTPPB has an established liquidity governance framework, limits and reporting requirements. OTPPB tests its liquidity position regularly through simulations of major market events. OTPPB's Board Investment Committee receives regular updates on the Plan's liquidity position. OTPPB's management continues to adapt and enhance the way that it manages, oversees, measures and reports on liquidity.

***Investment Funding Strategy:*** OTPPB is pursuing an investment funding strategy designed to diversify its sources of investment funding, reduce costs and manage portfolio risk. OTPPB has used bond repurchase agreements for cash management since the early 1990s because it is cost effective and allows OTPPB to retain economic exposure to government bonds. In 2016, the strategy was reviewed in the context of changing regulations. New funding sources are being considered to manage the maturity profile of OTPPB's investment assets and financial liabilities, reduce the overall cost of funding and manage currency exposure. In 2015, the Issuer, a new cost-effective funding vehicle for Ontario Teachers', began issuing commercial paper to U.S. and Canadian investors through private placements. The Guarantor also guarantees this commercial paper and a related credit facility entered into by the Issuer solely to assist in the repayment of the commercial paper. As of December 31, 2016 and June 30, 2017, C\$9.1 billion and C\$8.8 billion, respectively, of commercial paper was outstanding. See "Description of Other Indebtedness."

## **Assets**

OTPPB's net assets increased to C\$175.6 billion as of December 31, 2016 and to a record C\$180.5 billion as of June 30, 2017. As of January 1, 2017, for the fourth consecutive year, the Plan had a preliminary surplus. Recognizing that asset-mix selection is the primary driver of long-term performance, OTPPB devotes considerable attention to choosing the types of assets it owns and the relative emphasis placed on each asset group and geography.

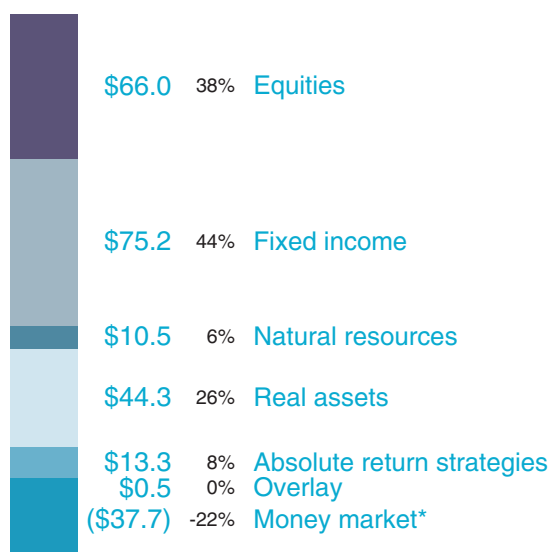
OTPPB's diverse asset mix in 2016 included Equities (public and private), Fixed Income (a variety of government bonds, provincial bonds, corporate bonds and real-return bonds), Real Assets (real estate, infrastructure), Natural Resources and Absolute Return Strategies. As of January 1, 2017, as part of the implementation of the OneTeachers' investment strategy, OTPPB redefined the asset classes and reorganized the Plan's existing holdings. The asset classes were redefined as follows: Equities asset class continues to comprise public and private equities. The Fixed Income asset class includes nominal bonds, real-rate products and short-term investments, while corporate and emerging market debt moved into the Credit asset class. Natural resources and other securities that provide exposure to inflation form the Inflation Sensitive asset class. The Real Assets asset class continues to include real estate and infrastructure. The Absolute Return Strategies asset class encompasses the portfolio's hedge funds and innovative strategies.



The following charts show OTPPB's net investments by asset class as of December 31, 2016, presented in accordance with the prior organization of asset classes, and June 30, 2017, presented in accordance with the new OneTeachers' organization of asset classes.

#### NET INVESTMENTS BY ASSET CLASS

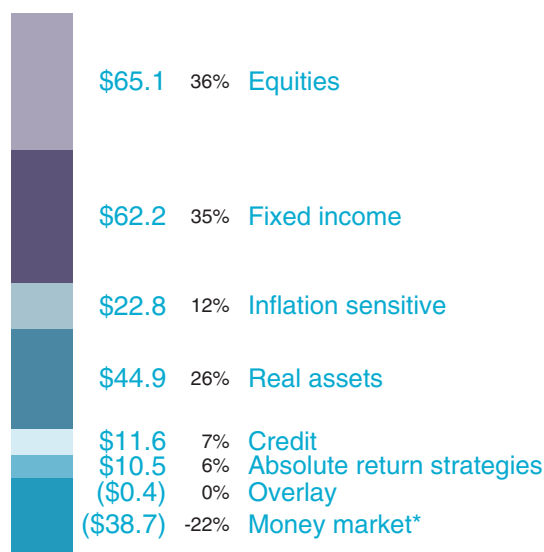
As at December 31, 2016 (Canadian \$ billions)



\* Money market asset class provides funding for investments in other asset classes.

#### NET INVESTMENTS BY ASSET CLASS

As at June 30, 2017 (Canadian \$ billions)



\* Money market asset class provides funding for investments in other asset classes.

## Returns

OTPPB's new OneTeachers' strategy is a unified approach to investment strategy and risk management that emphasizes that earning total-fund real returns and reducing risk are as important for OTPPB's sustainability as value-added returns. OTPPB's organizational structure and compensation program have been changed to implement the OneTeachers' strategy and support the total-fund focus.

The Plan produced a total-fund gross return in 2016 of 4.2%, net of trading costs, investment management expenses and external management fees but before Ontario Teachers' internal investment administrative costs, and a total-fund net return of 4.0% after all investment costs. Strong performance within OTPPB's Real Assets and Natural Resources asset classes was partially offset by currency losses due to the appreciation of the Canadian dollar.

The Plan produced a total-fund gross return in the first six months of 2017 of 3.7%, net of trading costs, investment management expenses and external management fees but before Ontario Teachers' internal investment administrative costs, and a total-fund net return of 3.6% after all investment costs.

OTPPB compares its total-fund gross return to a Canadian dollar-denominated composite benchmark, which is calculated by aggregating results from each of the asset-class benchmarks using the same weightings as OTPPB's asset-mix weightings. The following table shows OTPPB's investment performance as compared to these benchmarks for the six months ended June 30, 2017, for each of the two years ended December 31, 2016 and 2015, for the four, five and ten years ended December 31, 2016 and since the inception of the current investment program in 1990 to December 31, 2016.

### ***Investment Performance***

(percent)

	<b>Six Months Ended June 30, 2017</b>	<b>2016</b>	<b>2015</b>	<b>4-Year</b>	<b>5-Year</b>	<b>10-Year</b>	<b>Since Inception</b>
Total-Fund Gross Return <sup>(1)</sup> . . . . .	3.7%	4.2%	13.0%	9.9%	10.5%	7.3%	10.1%
Total-Fund Net Return <sup>(2)</sup> . . . . .	3.6%	4.0%	12.7%	9.7%	10.3%	7.1%	9.9%
Benchmark . . . . .	N/A	3.5%	10.1%	8.2%	8.7%	6.3%	7.9%
Dollars earned above benchmark (C\$ in billions) <sup>(3)</sup> . . . . .	N/A	C\$1.3	C\$4.2	C\$10.1	C\$12.3	C\$14.2	C\$36.9

(1) OTPPB Total-Fund Gross Returns are presented net of trading costs, investment management expenses and external management fees, but before Ontario Teachers' internal investment administrative costs.

(2) Total-Fund Net Returns are presented net of trading costs, investment management expenses, external management fees, and Ontario Teachers' internal investment administrative costs. We provide the Total-Fund Net Return measure as it facilitates the evaluation of the total-fund performance net of all internal investment administrative costs.

(3) Based on Total-Fund Net Return.

### **Recent Developments**

#### ***2017 Funding Valuation***

On June 12, 2017, the Plan's Sponsors announced their intention to use a portion of the C\$11.5 billion surplus in the Plan (as of January 1, 2017) to complete the restoration of inflation protection for teachers who retired after 2009 and to reduce the contribution rate for the Plan's active members by 1.1%, for a contribution rate of approximately 11%. Both changes are effective January 1, 2018 and will be reflected in the 2017 funding valuation when filed.



## THE OFFERING

*The following is a brief summary of certain terms of the offering. For a more complete description of the Notes and the Guarantee, see “Description of Notes.”*

<b>Issuer</b> .....	Ontario Teachers’ Finance Trust
<b>Guarantor</b> .....	Ontario Teachers’ Pension Plan Board
<b>Notes</b> .....	US\$1,750,000,000 2.125% Senior Notes due 2022
<b>Principal Amount</b> .....	US\$1,750,000,000 aggregate principal amount
<b>Interest Rate</b> .....	2.125% per annum
<b>Issue Date</b> .....	September 19, 2017
<b>Interest Payment Dates</b> .....	Interest on the Notes will be payable semi-annually in arrears on March 19 and September 19 of each year, commencing on March 19, 2018. Interest on the Notes will accrue from September 19, 2017.
<b>Maturity Date</b> .....	September 19, 2022
<b>Issue Price</b> .....	99.774% of the principal amount, plus accrued interest, if any, from September 19, 2017
<b>Form and Denomination</b> .....	The Issuer issued the Notes in minimum denominations of US\$250,000 and integral multiples of US\$1,000 in excess thereof and the Notes will be initially represented by one or more global notes.
<b>Ranking</b> .....	The Notes are, unsecured and unsubordinated obligations of the Issuer and rank equally and ratably in right of payment with all other present and future unsecured and unsubordinated indebtedness of the Issuer. The Guarantor’s guarantee of the Notes (the “Guarantee”) is a direct, unsecured and unsubordinated obligation of the Guarantor and ranks equally and ratably in right of payment with the Guarantor’s other unsecured and unsubordinated indebtedness. Upon an insolvency or winding-up of the Plan, claims under the Guarantee would be entitled to priority of payment ahead of the accrued benefit entitlements of members, former members, retired members and any other persons entitled to a benefit under the Plan in respect of a member, former member, or retired member before any other distribution is made upon an insolvency or winding-up of the Plan. The Notes are effectively subordinated to any future secured indebtedness of the Issuer and the claims under the Guarantee are effectively subordinated to any future secured indebtedness of the Guarantor, in each case, to the extent of the value of the assets securing such indebtedness. In addition, claims under the Notes are structurally subordinated to any existing and future indebtedness and other liabilities of the Issuer’s subsidiaries and claims under the

Guarantee are structurally subordinated to any existing and future indebtedness and other liabilities of the Guarantor's subsidiaries (other than the Issuer).

The Government of Ontario has no obligations under the Notes or the Guarantee.

**Use of Proceeds** ..... The Issuer received net proceeds from the offering of approximately US\$1,738,986,000, after deducting the underwriting discounts and commissions and estimated offering expenses.

The Issuer intends to use the net proceeds from the sale of the Notes for investment purposes, which may include, among other things, making investments in, buying securities of, or otherwise providing financing to third parties and/or to one or more direct or indirect subsidiaries of the Guarantor. See "Use of Proceeds."

**Additional Amounts** ..... If either the Issuer or the Guarantor is required to deduct or withhold taxes in respect of any payment on the Notes or the Guarantee, as applicable, for the account of taxes imposed by Canada, it will, subject to certain exceptions described in these listing particulars, pay additional amounts to holders of Notes. See "Description of Notes—Payment of Additional Amounts."

**Redemption for Tax Reasons** ..... As more fully described herein, if, as a result of certain tax related developments, the Issuer or the Guarantor, as applicable, would be required to pay certain additional amounts, the Issuer may at its sole discretion elect to redeem the Notes, in whole but not in part, at 100% of their principal amount, together with accrued and unpaid interest and additional amounts, if any, to, but excluding, the redemption date. See "Description of Notes—Tax Redemption."

**Listing** ..... Application has been made for the Notes to be listed on the ISE and admitted to trading on the GEM.

**Further Issuances** ..... The Issuer may, from time to time, without notice to, or the consent of, the holders of the Notes, issue additional notes under the Fiscal and Paying Agency Agreement (as defined below), which will be part of the same issue as the Notes being issued in the offering and will be treated as Notes of the same series, including for purposes of voting status, redemptions, offers to purchase and otherwise and will rank equally and have the same terms as the Notes offered hereby in all respects (except for the original issue price, the issue date of the additional notes and the initial interest payment date; *provided* that such additional Notes will not be issued with the same CUSIP or ISIN, as applicable, as Notes existing at such time unless such additional Notes are fungible with such Notes. See "Description of the Notes—Further Issuances."

**Transfer Restrictions** ..... The offering of the Notes was made in accordance with Rule 144A and Regulation S under the Securities Act. The Notes and the related Guarantee have not been and will not be registered under the Securities Act, any U.S. federal or state securities laws or with the securities regulatory authority of any other jurisdiction. The Issuer and the Guarantor will not be registered as investment companies under the Investment Company Act. Accordingly, the Notes may be offered, sold, pledged or otherwise transferred or delivered only (i) to U.S. persons reasonably believed to be QIBs who are also QPs and (ii) to non-U.S. persons outside the United States in compliance with Regulation S. See “Transfer Restrictions.”

The Notes have not been and will not be qualified for distribution in Canada by a prospectus and will be subject to resale restrictions in Canada. As a result of these restrictions, investors are advised to consult legal counsel prior to making any reoffering, resale, pledge or transfer of the Notes.

**Forced Transfer** ..... If the Issuer determines that any holder of a Note that was initially offered pursuant to Rule 144A is a U.S. Person or acquiring such interest within the United States and is not both a QIB and a QP at the time it acquires such Note (such person, a “Non-Permitted Holder”), the Issuer shall require such Non-Permitted Noteholder to transfer its interest in such Note to a person that is not a Non-Permitted Noteholder as soon as practicable. See “Description of the Notes—Forced Transfer.”

**Fiscal and Paying Agency**

**Agreement** ..... The Notes were issued pursuant to a fiscal and paying agency agreement (the “Fiscal and Paying Agency Agreement”), dated as of September 19, 2017 among the Issuer, the Guarantor and The Bank of New York Mellon, as the fiscal agent, registrar, transfer agent and paying agent.

**Governing Law** ..... The Notes, the Guarantee and the Fiscal and Paying Agency Agreement are governed by, and construed in accordance with, the laws of the State of New York.

**Fiscal Agent, Registrar, Paying Agent  
and Transfer Agent** .....

The Bank of New York Mellon

**Irish Listing Agent** ..... Matheson

**Securities Identification Numbers** .... 144A CUSIP: 68329A AA6  
144A ISIN: US68329AAA60  
Regulation S CUSIP: C69798 AA1  
Regulation S ISIN: USC69798AA18

**Taxation** ..... For a summary of certain U.S. and Canadian federal income tax consequences of an investment in the Notes, see “U.S. Federal

Income Taxation” and “Canadian Federal Income Taxation,” respectively.

**Risk Factors** ..... Investing in the Notes involves risks. See “Risk Factors” and the other information in these listing particulars for a discussion of factors you should carefully consider before deciding to invest in the Notes.

## SUMMARY CONSOLIDATED FINANCIAL DATA OF THE GUARANTOR

The following tables present a summary of OTPPB's consolidated financial information for and as at the years ended December 31, 2016, 2015 and 2014, which has been derived from the Audited Consolidated Financial Statements and for and as at the six months ended June 30, 2017, which has been derived from the Unaudited Consolidated Financial Statements. In the opinion of management, the unaudited consolidated financial information as at and for the six months ended June 30, 2017 presented below reflects fairly the results for such period. The financial information for the interim period is not necessarily indicative of the results to be expected for the full year or for any future period.

These tables should be read in conjunction with the Audited Consolidated Financial Statements and the Unaudited Consolidated Financial Statements and the notes to those statements and the 2016 Management's Discussion & Analysis and 2015 Management's Discussion & Analysis, each included elsewhere in these listing particulars and are qualified in their entirety by the information contained therein. See "Presentation of Financial and Certain Other Information." OTPPB's historical results are not necessarily indicative of the results that should be expected in the future.

### Consolidated Statements of Financial Position

	As at June 30, 2017	As at December 31,		
(C\$ in millions)		2016	2015	2014
<b>Net assets available for benefits</b>				
<b>ASSETS</b>				
Cash .....	C\$ 449	C\$ 241	C\$ 340	C\$ 129
Receivable from the Province of Ontario .....	2,482	3,273	3,208	3,098
Receivable from brokers .....	799	907	39	49
Investments .....	259,974	255,716	262,912	225,172
Premises and equipment .....	52	57	64	44
	<u>263,756</u>	<u>260,194</u>	<u>266,563</u>	<u>228,492</u>
<b>LIABILITIES</b>				
Accounts payable and accrued liabilities .....	303	382	377	295
Due to brokers .....	926	608	80	935
Investment-related liabilities .....	81,987	83,634	94,666	72,786
	<u>83,216</u>	<u>84,624</u>	<u>95,123</u>	<u>74,016</u>
<b>Net assets available for benefits</b> .....	<u>C\$180,540</u>	<u>C\$175,570</u>	<u>C\$171,440</u>	<u>C\$154,476</u>
<b>Accrued pension benefits and deficit</b>				
Accrued pension benefits .....	C\$193,443	C\$189,397	C\$173,266	C\$172,725
Deficit .....	(12,903)	(13,827)	(1,826)	(18,249)
<b>Accrued pension benefits and deficit</b> .....	<u>C\$180,540</u>	<u>C\$175,570</u>	<u>C\$171,440</u>	<u>C\$154,476</u>

### Consolidated Statements of Changes in Net Assets Available for Benefits

(C\$ in millions)	For the six months ended	For the year ended December 31,		
	June 30, 2017	2016	2015	2014
<b>Net assets available for benefits, beginning of period . .</b>	<b>C\$175,570</b>	<b>C\$171,440</b>	<b>C\$154,476</b>	<b>C\$140,764</b>
<b>Investment operations</b>				
Net investment income . . . . .	6,417	6,998	19,672	16,260
Administrative expenses . . . . .	(217)	(451)	(429)	(409)
Net investment operations . . . . .	<b>6,200</b>	<b>6,547</b>	<b>19,243</b>	<b>15,851</b>
<b>Member service operations</b>				
Contributions . . . . .	1,719	3,363	3,310	3,216
Benefits paid . . . . .	(2,923)	(5,725)	(5,537)	(5,306)
Administrative expenses . . . . .	(26)	(55)	(52)	(49)
Net member service operations . . . . .	<b>(1,230)</b>	<b>(2,417)</b>	<b>(2,279)</b>	<b>(2,139)</b>
<b>Increase in net assets available for benefits . . . . .</b>	<b>4,970</b>	<b>4,130</b>	<b>16,964</b>	<b>13,712</b>
<b>Net assets available for benefits, end of period . . . . .</b>	<b>C\$180,540</b>	<b>C\$175,570</b>	<b>C\$171,440</b>	<b>C\$154,476</b>

### Consolidated Statements of Changes in Accrued Pension Benefits

(C\$ in millions)	For the six months ended	For the year ended December 31,		
	June 30, 2017	2016	2015	2014
<b>Accrued pension benefits, beginning of period . . . . .</b>	<b>C\$189,397</b>	<b>C\$173,266</b>	<b>C\$172,725</b>	<b>C\$148,571</b>
<b>Increase in accrued pension benefits</b>				
Interest on accrued pension benefits . . . . .	3,078	5,679	5,804	6,239
Benefits accrued . . . . .	3,202	5,303	5,246	4,367
Changes in actuarial assumptions and methods . . . . .	—	9,394	—	18,264
Changes in level of conditional indexing . . . . .	1,207	1,674	675	451
Experience losses . . . . .	—	—	—	139
	<b>7,487</b>	<b>22,050</b>	<b>11,725</b>	<b>29,460</b>
<b>Decrease in accrued pension benefits</b>				
Benefits paid . . . . .	2,923	5,725	5,537	5,306
Change in actuarial assumptions and methods . . . . .	518	—	3,538	—
Experience gains . . . . .	—	194	2,109	—
	<b>3,441</b>	<b>5,919</b>	<b>11,184</b>	<b>5,306</b>
<b>Net increase in accrued pension benefits . . . . .</b>	<b>4,046</b>	<b>16,131</b>	<b>541</b>	<b>24,154</b>
<b>Accrued pension benefits, end of period . . . . .</b>	<b>C\$193,443</b>	<b>C\$189,397</b>	<b>C\$173,266</b>	<b>C\$172,725</b>

## Consolidated Statements of Changes in Deficit

(C\$ in millions)	For the six months ended June 30, 2017	For the year ended December 31,		
		2016	2015	2014
<b>Deficit, beginning of period</b> . . . . .	<b>C\$(13,827)</b>	<b>C\$ (1,826)</b>	<b>C\$(18,249)</b>	<b>C\$ (7,807)</b>
Increase in net assets available for benefits . . . . .	4,970	4,130	16,964	13,712
Net increase in accrued pension benefits . . . . .	(4,046)	(16,131)	(541)	(24,154)
<b>Deficit, end of period</b> . . . . .	<b>C\$(12,903)</b>	<b>C\$(13,827)</b>	<b>C\$ (1,826)</b>	<b>C\$(18,249)</b>



## RISK FACTORS

*An investment in the Notes involves risks. Before making a decision to buy the Notes, you should carefully consider the following risk factors in addition to all other information contained in these listing particulars. Any of the following risks could materially and adversely affect our business, prospects, financial condition, liquidity and results of operations, referred to as a “material adverse effect on us” (and comparable phrases). In such case, you could lose all or part of your investment. The risks described below are those that we currently believe may materially and adversely affect us. There may be additional risks not described below or not presently known to us or that we currently deem immaterial that turn out to materially and adversely affect our business. Some of the risks set out below have been expressed to affect either the Issuer or the Guarantor. However, if one or more of such events were to occur, there is a significant possibility that it would affect both the Issuer and the Guarantor and their respective subsidiaries. Some statements in these listing particulars, including statements in the following risk factors, constitute forward-looking statements. Please refer to the section entitled “Forward-Looking Statements.”*

### **Risks Related to Our Business and Operations**

***Our business, results of operations and financial condition are materially affected by the condition of global financial markets and macroeconomic conditions generally.***

Macroeconomic conditions, including recessions, along with global financial market turmoil and volatility, may affect our performance. In particular, the value of our assets is susceptible to general fluctuations in the capital markets and to volatile increases and decreases in value in response to various factors that are not within our control, such as the financial performance of individual issuers, market confidence, inflation, economic expansion or contraction, commodity prices, exchange rates, interest rates, environmental risks, political risks, issues relating to government regulation and other financial market conditions.

Weakness or significant deterioration in the Canadian and global economies or volatility in financial markets may affect us in one or more of the following ways, which, should such events occur, could have a material adverse effect on us:

- We hold investments representing a variety of asset classes, including equity, bonds, natural resources, real estate, infrastructure and money market investments, which expose us to risks associated with (but not limited to) fluctuations in interest rates, equity and other securities prices, credit default rates, the value of real estate assets, fluctuations in currency exchange rates and credit spreads. As a result, the value of the investment portfolio has been, and may in the future be, negatively impacted by adverse conditions in the financial markets and global economy.
- We hold certain assets that have low liquidity, such as privately placed fixed income securities, private equity investments, infrastructure and real estate. In times of market stress, our assets (including those with low liquidity) may be less liquid, resulting in realized losses if such assets were sold. A downturn in the financial markets may exacerbate the low liquidity of these assets and may also reduce the liquidity of assets that are typically liquid.
- Our portfolio has significant investments in international markets that are subject to risk of loss from political or diplomatic developments, government policies, civil unrest, currency fluctuations, and changes in legislation related to foreign ownership. International markets, particularly emerging markets, which are often smaller, do not have the liquidity of established markets, often lack established regulations and present increased risk of corruption and fraud, and often experience significantly more volatility than established markets. We may also have less experience and knowledge of these markets, which may exacerbate these risks.

Disruptions, uncertainty or volatility in financial markets may limit or otherwise adversely impact our ability to access the public markets for debt. This may in turn force us to (a) delay raising additional capital,

(b) issue debt securities or other debt financing of different types or under less favorable terms than otherwise available, or (c) incur a higher cost of capital than we would otherwise have incurred, each of which may have a material adverse effect on our liquidity position. Insufficient liquidity in public markets may force us to reduce planned investment activities, and may adversely affect our ability to meet rating agency requirements.

***Fluctuations in interest rate levels could have a material adverse effect on us.***

We are exposed to interest rate risk primarily through holdings of fixed income securities, certain investment liabilities and interest rate derivative instruments. If interest rates rise, the value of our fixed income portfolio may decrease. This may result in unrealized losses. Furthermore, rising interest rates could require that we post collateral in relation to our interest rate derivative holdings or agreements to repurchase securities. The occurrence of any of the risks set out above could have a material adverse effect on us.

***Our derivative transactions may adversely affect our liquidity and expose us to counterparty credit risk.***

The derivative instruments we hold to hedge and manage risks associated with our business might not perform as intended or expected, resulting in higher realized losses and unforeseen stresses on liquidity. Market conditions can limit availability of hedging instruments and require us to post collateral. Our derivative-based strategies also rely on the performance of counterparties to such derivatives. These counterparties may fail to perform for various reasons resulting in losses on uncollateralized positions.

***Funding requirements or benefit payment costs could impact our financial results and condition.***

At December 31, 2016 and June 30, 2017, we had assets of approximately C\$260.2 billion and C\$263.8 billion, respectively, compared to liabilities of approximately C\$84.6 billion and C\$83.2 billion, respectively, with approximately 136,000 pensioners as of December 31, 2016. The costs of providing benefits depend upon a number of factors, including, but not limited to, provisions of the Plan; changing experience and assumptions related to terminations, retirements, and mortality; rates of increase in compensation levels; rates of return on Plan assets; discount rates used in determining future benefit obligations and required funding levels; and levels of contributions made to the Plan. Any of these factors or any number of these factors could keep at high levels, or even increase, the costs of providing benefits. Any significant increase in pension plan funding requirements could have a material adverse effect on us.

***OTPPB's pension obligations are subject to longevity risk, which is the risk that members live longer than assumed, with the result that OTPPB must continue paying out pension benefits longer than anticipated, which could have a material adverse effect on OTPPB.***

Teachers in Ontario live longer than the general Canadian population and their life expectancy continues to increase. It costs more to pay lifetime pensions when members live longer. Members are contributing to the Plan for fewer years than in the 1990s, and their retirement periods are longer. We use assumptions to model future benefit payments, which may be different from the actual benefit payments that will become due in the future if Plan members live longer than we assumed. We regularly update our mortality assumptions (most recently for the January 1, 2015 valuation), but we cannot guarantee that these assumptions will be accurate. There is additional uncertainty associated with longevity risk due to the difficulty in predicting future drivers of longevity improvements.

***Fluctuations in exchange rates could have a material adverse impact on our investment portfolio, which could in turn have a material adverse effect on us.***

We make investments globally that are denominated in a variety of currencies and may not actively hedge these exposures. If the value of one or more of these currencies declines materially, or if there are fluctuations in the relative value of such foreign currencies against the Canadian dollar, it could have a material adverse impact

on our investment portfolio, which could in turn have a material adverse effect on us. Among the factors that may affect currency values are trade balances, the level of short-term interest rates, differences in relative values of similar assets in different currencies, long-term opportunities for investment and capital appreciation, and political developments.

***Increased competition may cause our investment income to decline.***

We face increasing competition when bidding for assets, such as infrastructure assets and real estate assets, from other investment entities, including other large scale pension funds, asset managers and sovereign wealth funds. Such competitors are becoming increasingly more sophisticated and seeking opportunities in the same diverse set of asset classes in which we participate. Increased competition for such investments could cause our investment income to decline and have a material adverse effect on us.

***Our performance and value and the liquidity of our real estate investments are subject to general risks associated with the real estate industry.***

Periods of extended negative economic factors, including increases in inflation, negative gross domestic product growth, increases in interest rates and increases in unemployment levels in Canada, would have a negative impact on consumers, retailers and business owners, which would negatively impact the major tenants in our real estate investments.

Increases in interest rates could have a material impact on capitalization rates, which are a key variable in the determination of the fair value of our properties. Increases in capitalization rates would have a negative impact on the fair value of our properties.

Acquired properties may be located in new markets where we may face risks associated with a lack of market knowledge or understanding of the local economy, lack of business relationships in the area and unfamiliarity with local governmental and permitting procedures.

We may be unable to sell properties when appropriate because real estate investments are illiquid. Our ability to sell one or more of our properties in response to any changes in economic, industry or other conditions may be limited. The real estate market is affected by many factors that are beyond our control, such as general economic conditions, supply and demand for space, availability and terms of financing, interest rates and other factors. If we want to sell a property, we cannot be certain that we will be able to dispose of it in the desired time period or at all or that the sales price of a property will be attractive at the relevant time or even exceed the carrying value of our investment. Moreover, if a property is mortgaged, we may not be able to obtain a release of the lien on that property without payment of the associated debt and/or a substantial prepayment penalty, which could restrict our ability to dispose of the property, even though the sale might otherwise be desirable.

***In the ordinary course of business, we make extensive use of assumptions and quantitative models to inform investment decisions, monitor and value our portfolio investments and to assess risk. Differences in experience compared with assumptions, as well as updates of the assumptions and quantitative models, may have a material adverse effect on us.***

In the ordinary course of business, we make extensive use of quantitative models to inform investment decisions, monitor and value our portfolio investments, and to assess risk, as well as to estimate expenditures (including operating expenses, investment expenses, commissions payable and tax expenses), which are used for various purposes, including pricing, valuation, liquidity management, and hedging.

A portion of our investment portfolio is valued using methods that rely on inputs for the relevant assets that are not based on observable market data. The fair value of these assets is based on accepted industry valuation methods that may include the use of estimates made by management, appraisers or both where significant judgment is required. While we believe our valuation techniques are appropriate, the use of different techniques or assumptions could result in different estimates of fair value.

Furthermore, the quantitative models that we use to derive such valuations and for other aspects of our business outlined above may include, among others, statistics, observed historical market data, our own judgment, expertise and experience, and include assumptions as to bond prices, credit spreads, interest rates, foreign currency exchange rates, public equity and equity index prices, commodity prices, and price volatilities and correlations. Quantitative and risk models are complex and may not identify all relevant elements, or may not accurately estimate the magnitude of the impact of identified elements. The effectiveness of these models depends on the quality of information used, which may not always be accurate, complete, or up-to-date, or the significance of which may not always be properly evaluated. Quantitative and risk models are inherently uncertain and involve the exercise of significant judgment.

If actual experience differs from assumptions or estimates, we may incur losses. From time to time, we may need to update our assumptions and quantitative and risk models to reflect actual experience and other new information. Changes to assumptions and these models could impact our business and investments in a number of ways, including by requiring that we update our investment positions, in which case we may incur losses.

***The impairment or failure of financial institution counterparties may impact our investment return.***

Our investment management activities expose us to different industries and counterparties, including brokers and dealers, commercial and investment banks, clearing organizations, mutual and hedge funds, and other institutional clients. Transactions with counterparties expose us to credit risk if the applicable counterparty defaults. Such counterparties may be subject to sudden swings in the financial and credit markets that may impair their ability to perform or they may otherwise fail to meet their obligations.

In addition, a default by any financial institution, or by a sovereign, could lead to additional defaults by other market participants. The failure of a sufficiently large and influential financial institution or sovereign has in the past, and could in the future, disrupt securities markets or clearance and settlement systems, and could lead to a chain of defaults because the commercial and financial soundness of many financial institutions may be closely related as a result of credit, trading, clearing or other relationships. Even the perceived lack of creditworthiness of one or more counterparties may lead to market-wide liquidity problems and losses or defaults by us or by other institutions. This risk is sometimes referred to as “systemic risk” and may adversely affect financial intermediaries, such as clearing agencies, clearing houses, banks, securities firms and exchanges with which we interact on a daily basis. Systemic risk could have a material adverse effect on us.

***We are exposed to the risk of damage to our reputation.***

We operate in an industry where integrity, trust and confidence are paramount. We are exposed to the risk that litigation, employee fraud and other misconduct, operational failures, press speculation, negative publicity and other events or accusations, whether or not founded, could damage our reputation.

Negative publicity could be based, for instance, on our internal business practices or those of our business partners or the companies in which we invest. Business partners include third parties hired to perform some of our administrative functions, external managers of certain investments consisting of alternative investments (hedge funds), private equity funds and public equity funds, as well as investment organizations with which we have a contractual arrangement.

Any damage to our reputation or implications of negative publicity could impede our ability to execute our strategy and have a material adverse effect on us.

***Interruption or other operational failures in telecommunication, IT and other operational systems, or a failure to maintain the security, integrity, confidentiality or privacy of sensitive data in those systems, including as a result of human error, could have a material adverse effect on us.***

We are highly dependent on automated and IT systems to adequately secure confidential and business information, and to maintain the confidentiality, integrity and availability of our members’ information. We

could experience a failure of these systems, or our employees could fail to monitor and implement enhancements or other modifications to a system in a timely and effective manner. Despite the implementation of security and back-up measures, our IT systems may be vulnerable to physical or electronic intrusions, viruses or other attacks, programming errors and similar disruptions. We may also be subject to disruptions of any of these systems arising from events that are wholly or partially beyond our control (such as natural disasters, acts of terrorism, epidemics, computer viruses and electrical or telecommunications outages).

Furthermore, we rely on third party suppliers to provide certain critical information technology and telecommunication services to us and our members. The failure of a third party supplier to meet its obligations, for any reason, or errors made by the third party supplier, could cause significant interruptions to our operations, harm our reputation and have a material adverse effect on us.

We retain confidential information in our IT systems, and rely on industry standard commercial technologies to maintain the security of those systems. Anyone who is able to circumvent our security measures and penetrate our IT systems could access, view, misappropriate, alter, or delete information in the systems, including personally identifiable member information and proprietary business information. In addition, the laws of an increasing number of jurisdictions require that customers be notified if a security breach results in the disclosure of personally identifiable customer information. Any compromise of the security of our IT systems that results in unauthorized disclosure or use of personally identifiable member information could harm our reputation, and subject us to significant technical, legal and other expenses, each of which could have a material adverse effect on us.

***We are subject to laws, regulations and rules of Canada and the Province of Ontario, which govern the operation, management and administration of Ontario Teachers' and the investment of the Plan's assets. Failure to comply with or changes to such requirements could result in financial penalties, tax liabilities or portfolio losses and damage to our reputation.***

We are subject to laws, regulations and rules of Canada and the Province of Ontario, including the TPA, the PBA and the Tax Act, which govern our operations, management and administration and investment of our assets. Failure to comply with such requirements could result in financial penalties, tax liabilities or portfolio losses and damage to our reputation. Also, such laws, regulations and rules may be amended, repealed or enforced, or new laws, regulations or rules may be enacted, in a manner which may adversely affect us or our ability to fulfill our obligations under the Notes and the Guarantee. See “—Risks Related to Tax Issues” for information regarding the potential impact of changes in tax laws.

***We are subject to operational risks, which can be triggered by both internal and external events that may be beyond our control. Should these events occur, they may lead to direct financial losses, indirect financial losses resulting from operating inefficiencies, penalties or damage to our reputation.***

We are subject to operational risks, which include, among others:

- Failure to properly perform or oversee Fund or portfolio responsibilities;
- Inadequate human resource management and employment practices;
- Employee misconduct including breaches of the code of conduct, fraud and unauthorized trading;
- Inability to recover from business interruptions and disasters;
- Errors or inefficiencies in transaction processing, operations and project execution;
- Failure of or breaches in security and cybersecurity;
- Inaccuracy of or failure in data, models, user-developed applications and information security;
- Failure to adequately manage rapid and significant organizational change;

- Failure of third-party vendors who, now or in the future, may perform or support important parts of our operations; and
- Deficiencies or weaknesses in financial reporting.

If any of these operational risks were to occur, it could result in direct financial losses, indirect financial losses resulting from operating inefficiencies, penalties or damage to our reputation. Such operational risk can also directly impact our ability to manage other key risks.

***We may review and pursue strategic transaction opportunities in order to maintain or enhance our competitive position.***

Any strategic transaction, such as acquisitions, dispositions, consolidations, joint ventures and similar transactions, can involve a number of risks, including additional demands on our staff; unanticipated problems regarding integration, additional or new regulatory requirements, operating facilities and technologies, and new employees; adverse effects in the event acquired intangible assets or goodwill become impaired; and the existence of liabilities or contingencies not disclosed to or otherwise known by us prior to closing a transaction.

***Natural disasters and other unpredictable events could adversely affect our operations.***

Armed conflict, terrorist attacks, cyber-attacks, power failures and natural disasters could adversely affect our results and financial condition by:

- Decreasing investment valuations in, and returns on, the investment portfolios that we manage;
- Causing disruptions in national or global economies that decrease investor confidence and make investment products generally less attractive;
- Incapacitating or inflicting loss of life among our associates;
- Interrupting our business operations or those of critical service providers;
- Triggering technology delays or failures; and
- Requiring substantial capital expenditures and operating expenses to remediate damage, replace our facilities and restore our operations.

If we lose the availability of any associates or outside vendors, or if we are unable to respond adequately to such an event in a timely manner, we may be unable to timely resume our business operations, which could lead to a tarnished reputation and have a material adverse effect on us.

***Our insurance policies may be insufficient to protect us against large losses.***

We can make no assurance that a claim or claims will be covered by our insurance policies or, if covered, will not exceed the limits of available insurance coverage, or that our insurers will remain solvent and meet their obligations.

***The loss of key personnel, and the failure to attract and retain key personnel with appropriate qualifications and experience or renew our collective bargaining agreement, could have a material adverse effect on our business and impair our ability to implement our business strategy.***

Our success depends in large part on our ability to attract and retain key personnel with appropriate knowledge and skills, particularly financial, investment, IT, risk management and other specialist skills and experience. Competition for talent in the marketplace may result in increased costs to attract and retain such personnel or an inability to attract the right skill sets. Any failure on our part to attract or retain qualified



personnel could have a material adverse effect on us. OTPPB's collective bargaining agreement with its union employees expires on December 31, 2017, a failure to renew the contract could have a material adverse effect on OTPPB's business.

### **Risks Related to the Notes, the Offering and the Guarantor**

#### ***Your recourse as a holder of Notes may be limited.***

The Notes and the Guarantee are not obligations of, or guaranteed by, the government of Ontario. Your recourse as a holder of Notes in respect of the repayment of the Note is limited solely to: (i) the assets of the Issuer; and (ii) any obligation of the Guarantor that may arise under the Guarantee.

#### ***The Issuer is an indirect wholly-owned subsidiary of the Guarantor. The Notes are structurally subordinated to claims of the creditors of all the subsidiaries of the Issuer. The obligations of the Guarantor under the Guarantee are structurally subordinated to claims of creditors of all the subsidiaries of the Guarantor (other than the Issuer).***

The Issuer is an indirect wholly-owned subsidiary of the Guarantor. The Issuer's primary activity is borrowing funds, raising capital and otherwise incurring indebtedness, and may use the proceeds to buy securities of and otherwise to make investments in and to provide financing to third parties and direct and indirect subsidiaries of OTPPB. As a result, the Issuer may have very limited sources of revenues and in order to make payments on the Notes may rely on the extension of loans or capital contributions by the Guarantor or other subsidiaries of the Guarantor. The Issuer's ability to make payments of principal of and interest on the Notes will depend in large part on Ontario Teachers' financial condition and Ontario Teachers' ability to satisfy its obligations towards the Issuer. None of the subsidiaries of the Guarantor (other than the Issuer) or any of the other entities in which the Guarantor invests, have any obligations in respect of the Notes or the Guarantee. Accordingly, the Notes are structurally subordinated to claims of creditors (including trade creditors, if any) of all the subsidiaries of the Issuer. Further, the obligations of the Guarantor under the Guarantee is structurally subordinated to claims of creditors (including trade creditors, if any) of all the subsidiaries of the Guarantor (other than the Issuer). For example, the obligations of the Guarantor under the Guarantee is structurally subordinated to the claims of the holders of the outstanding notes issued by Ontario Teachers' Cadillac Fairview Properties Trust, a subsidiary of the Guarantor, with respect to assets held by Ontario Teachers' Cadillac Fairview Properties Trust. See "Description of Other Indebtedness."

#### ***An active secondary market in respect of the Notes might never be established or might be illiquid and this could adversely affect the value at which you could sell the Notes.***

At the time of issuance, the Notes had no established trading market, and despite application having been made to the ISE for the Notes to be admitted to the ISE and to be admitted to trading on the GEM, one might never develop. If a market does develop, it might not be liquid. Therefore, investors may not be able to sell their Notes easily or at prices that will provide them with a yield comparable to similar investments that have a developed secondary market. If an active trading market for investments in the Notes is not developed or maintained, then the market or trading price and liquidity of investments in the Notes may be adversely affected.

#### ***There is limited publicly available information related to the Issuer and the Guarantor.***

Neither the Issuer nor the Guarantor is a reporting issuer in any jurisdiction in Canada or the United States and neither has a current intention of becoming a reporting issuer. As a result, neither the Issuer nor the Guarantor is required to file continuous disclosure documents, reports or other information with any securities commission or similar regulatory authority in any province or territory of Canada or with the SEC. Although OTPPB publishes certain disclosure, this disclosure may not be consistent with the level of disclosure required of reporting issuers in any jurisdiction in Canada or the United States.



***Credit ratings are subject to change and may adversely affect the market value of the Notes.***

A credit rating is not a recommendation to buy, sell or hold the Notes and may be lowered or withdrawn by the rating agency at any time. Real or anticipated changes in the credit ratings may affect the market price or value of the Notes. A lowering of any credit ratings applied to the Notes or with respect to the Guarantor may have an adverse effect on the market price or value or the liquidity of the Notes. There is no assurance that any credit rating will remain in effect for any given period of time or that any credit rating will not be revised or withdrawn entirely by a rating agency in the future if, in its judgment, circumstances so warrant.

***The Issuer may incur additional indebtedness.***

While there are internal limits on the Guarantor's ability to guarantee debt, these can be changed by the board members of the Guarantor. Additionally, there is currently no limit on the Issuer's ability to incur additional debt.

***An increase or decline in interest rates will affect the value of the Notes.***

Prevailing interest rates will affect the market value of the Notes, which carry a fixed interest rate. Assuming all other factors remain unchanged, the market value of the Notes, if any market exists, may decline as prevailing interest rates for comparable debt instruments rise, and increase as prevailing rates for comparable debt instruments decline.

***The Fiscal and Paying Agency Agreement and the Notes provide limited covenants and protection for the holders of the Notes and no trustee has been appointed to act on behalf of the holders of the Notes.***

While the Fiscal and Paying Agency Agreement, the Notes and the Guarantee contain terms intended to provide you protection upon the occurrence of certain events involving significant corporate transactions, these terms are limited and may not be sufficient to protect your investment in the Notes. For example, there is no limitation on liens, debt or restricted payments and there are no financial covenants in the Fiscal and Paying Agency Agreement or the Notes. In addition, the Issuer has not appointed a trustee to act on behalf or for the benefit of the holders of the Notes. The fiscal and paying agent is the agent of the Issuer and the Guarantor, is not trustee for the holders of the Notes and does not have any of the responsibilities or duties to act for such holders that a trustee would. As a result, it may be difficult for the holders of the Notes to coordinate collective action to enforce their rights under the Notes.

***Your claims as a holder of Notes are subordinated to the secured indebtedness of the Issuer. Your claims under the Guarantee are subordinated to the secured indebtedness of the Guarantor.***

The Notes are not secured by any of the assets of the Issuer and the Guarantee is not secured by any of the assets of the Guarantor. Accordingly, any of the Issuer's future secured indebtedness would rank prior to your claims as a holder of Notes, and any of the Guarantor's future secured indebtedness would rank prior to your claims under the Guarantee, in each case, to the extent of the value of the assets securing such indebtedness.

***The Notes and the related Guarantee are subject to transfer restrictions.***

The Notes and the related Guarantee have not been and will not be registered under the Securities Act, any other U.S. federal or state securities laws or the securities laws of any other jurisdiction. Neither the Issuer nor the Guarantor will be registered as investment companies under the Investment Company Act. Purchasers may not offer the Notes or the related Guarantee in the United States except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act and applicable U.S. federal or state securities laws, or pursuant to an effective registration statement. The Notes and the Fiscal and Paying Agency

Agreement contain provisions that will restrict the Notes and the related Guarantee from being offered, sold, pledged or otherwise transferred except pursuant to the exemptions available pursuant to Rule 144A to persons reasonably believed to be QIBs and QPs and to non-U.S. persons outside of the United States pursuant to Regulation S. It is the holders' obligation to ensure that any offers and sales of the Notes and the related Guarantee within the United States and other countries comply with applicable securities laws. If the Issuer determines that any holder of a Note that was initially offered pursuant to Rule 144A is a Non-Permitted Holder, the Issuer shall require such Non-Permitted Holder to transfer its interest in such Note to a person that is not a Non-Permitted Holder as soon as practicable. Each purchaser of the Notes, in making its purchase, will be deemed to make the acknowledgements, representations, warranties and agreements set forth in "Transfer Restrictions." Furthermore, in Canada, the Notes are being offered pursuant to exemptions from prospectus requirements available under securities legislation in each Province and territory of Canada, which exemptions impose restrictions on the initial offering of, and subsequent resale of, the Notes. As a result of these restrictions, despite any listing on GEM, there can be no assurance as to the creation of a secondary market for the Notes or the liquidity of such market if one develops. Consequently, you must be able to bear the economic risk of an investment in the Notes for an indefinite period of time.

***In the event that the Issuer or the Guarantor becomes insolvent, insolvency proceedings will be governed by Canadian law.***

Your ability to enforce your rights or remedies under the Fiscal and Paying Agency Agreement, the Notes and the Guarantee may be significantly impaired by the provisions of applicable Canadian federal bankruptcy, insolvency, liquidation, reorganization and other similar or analogous restructuring legislation or by Canadian federal or provincial receivership laws, if the benefit of such legislation is sought with respect to the Issuer or the Guarantor. For example, the *Bankruptcy and Insolvency Act* (Canada) (the "BIA") and the *Companies' Creditors Arrangement Act* (Canada) (the "CCAA") contain provisions enabling an insolvent person or debtor (and a trust related to an insolvent person or debtor) to obtain a stay of proceedings against its creditors and others and to prepare and file a proposal or a plan of compromise or arrangement for consideration by all or some of its creditors, to be voted on by the various classes of its affected creditors. Such a proposal or a plan of compromise or arrangement, if accepted or approved by the requisite majority of each class of affected creditors and if approved or sanctioned by the relevant Canadian court, would be binding on all creditors or the affected classes of creditors, as the case may be, and the Issuer and the Guarantor, as applicable. Moreover, certain provisions of the relevant Canadian insolvency legislation permit an insolvent debtor (or a trust related to an insolvent debtor) to retain possession and administration of its property in certain circumstances, subject to court oversight, even though such debtor may be in default in respect of certain of its obligations under the Fiscal and Paying Agency Agreement, the Notes or the Guarantee, as applicable, or otherwise during the period that the stay of proceedings remains in place.

In BIA and CCAA restructuring proceedings, the court may, subject to certain conditions, create court-ordered charges on the assets of the debtor to secure new financing, professional fees, post-filing amounts owing to critical suppliers, statutory director liabilities or other amounts, which would be effectively senior to the Notes and the Guarantee which are unsecured. One of the factors that a court is required to consider before granting such court-ordered charges is whether any creditor would be materially prejudiced by the granting of such a charge; however, this is only one of the factors that the court will assess in such circumstances, and there is no express concept of "adequate protection" under Canadian insolvency law.

The powers of the court under Canadian bankruptcy, insolvency and restructuring legislation and Canadian federal and provincial receivership laws, and particularly under the CCAA, are exercised broadly to protect an insolvent person or debtor and its estate from actions taken by creditors and others. We cannot predict whether payments under the Notes would be made during any proceedings in bankruptcy, insolvency or other similar or analogous restructuring, whether, and to what extent, you could exercise your rights under the Fiscal and Paying Agency Agreement or the Notes or whether, and to what extent, the holders of the Notes would be compensated for any delays in payment of principal, interest and costs, including fees and disbursements of the fiscal and

paying agent. Accordingly, if the Issuer were to become subject to such proceedings, the Issuer may cease making payments on the Notes, and you may not be able to exercise your rights under the Fiscal and Paying Agency Agreement or the Notes following commencement of or during such proceedings without leave of the relevant Canadian court.

In addition to the BIA and the CCAA, applicable corporate governing statutes also contain provisions that enable a company to obtain a stay of proceedings against creditors and to restructure debt such as the Notes pursuant to a plan of arrangement that could reduce, eliminate or otherwise compromise debt such as the Notes that, if accepted or approved by the requisite majorities of each affected class of stakeholder, and if approved or sanctioned by the relevant Canadian court, would be binding on all creditors within each affected class that voted in favor of the arrangement, including those creditors in the class that voted against the arrangement.

The above considerations apply to both the Issuer and the Guarantor. In addition, regarding the Guarantor, Ontario pension law addresses the possibility that an Ontario pension plan can be wound up. The administrator of a multi-employer pension plan (the Plan is a multi-employer pension plan) may wind up the plan unless the documents that create and support the plan authorize another person or entity to do so. Neither the TPA or the Partners' Agreement between the Minister of Education and Training, on behalf of the Province of Ontario, and the OTF dated January 5, 2014, authorize a person or entity, other than OTPPB (the Plan administrator) to wind up the Plan.

Section 69 of the PBA empowers the Superintendent of Financial Services of Ontario to order the winding up of an Ontario registered pension plan in certain enumerated circumstances—none of which would reasonably be expected to apply to the Plan considering that it is a jointly-sponsored, multi-employer, public sector pension plan exempt from both the solvency funding rules under the PBA and the application of the Ontario Pension Benefits Guarantee Fund.

The Issuer and the Guarantor are formed under the laws of the Province of Ontario and the Issuer's and the Guarantor's principal place of business and the majority of the Issuer's and the Guarantor's assets are currently located in Canada. Therefore, Canada would be the more likely jurisdiction than the United States for the commencement of any bankruptcy or insolvency proceedings. Chapter 15 of the U.S. Bankruptcy Code, Part XIII of the BIA and Part IV of the CCAA provide for the recognition of foreign insolvency proceedings. Courts in either jurisdiction have the authority to recognize a foreign insolvency proceeding as either a foreign main proceeding or a foreign non-main proceeding, on the proof of certain threshold requirements. In order for a Canadian court to recognize a U.S. insolvency proceeding as a foreign main proceeding, it would have to be satisfied, among other things, that the United States is the jurisdiction of the debtor's center of main interest. In Canada, in the absence of proof to the contrary, a debtor company's registered office is deemed to be the center of its main interest. Because our registered office is located in Canada, it is uncertain whether we would be an eligible debtor under the U.S. Bankruptcy Code and, if we were to seek protection under U.S. bankruptcy laws, it is uncertain whether such proceedings would be recognized by Canadian courts as a foreign main proceeding or if Canadian courts would grant any relief, including a stay of proceedings in Canada. Likewise, if we were to seek protection in the Canadian courts under Canadian bankruptcy and insolvency laws, it is uncertain whether an appropriate foreign representative would seek to commence an ancillary proceeding under Chapter 15 of the U.S. Bankruptcy Code and, if so, whether such foreign proceedings would be recognized under U.S. Bankruptcy courts as a foreign main or a foreign non-main proceeding.

***You might have difficulty enforcing your rights against the Issuer, the Guarantor and their respective directors and officers.***

The Issuer is a trust established under the laws of Ontario. The Guarantor is an Ontario corporation without share capital continued under the TPA. Their registered offices, as well as a substantial portion of their assets, are located outside the United States. The directors and executive officers of the Issuer and the Guarantor reside in Canada and all or a substantial portion of their assets are located outside the United States. The Issuer and the

Guarantor have appointed CT Corporation as an agent to receive service of process with respect to any action brought against them in any federal or state court in the State of New York arising from the offering and will agree in the Fiscal and Paying Agency Agreement to submit to the jurisdiction of such courts in connection with such suits, actions or proceedings arising from the offering of Notes. However, it may be difficult for holders of the Notes to effect service of process within the United States or in any other jurisdiction outside Canada upon the Issuer, the Guarantor or such persons who are not residents of the United States or to enforce against them in courts of any jurisdiction outside Canada judgments predicated upon the civil liability provisions of the federal or state securities laws of the United States or any other jurisdiction outside Canada. In addition, it may be difficult for investors to enforce civil liabilities predicated upon the federal and state securities laws of the United States in Canadian courts or in original actions or actions for enforcement of judgments obtained in courts of jurisdictions outside of Canada. The Fiscal and Paying Agency Agreement contains provisions that permit the modification of the terms of the Notes and the Guarantee without the consent of all holders of the Notes.

The Fiscal and Paying Agency Agreement contains provisions for amending the terms of the Notes and the Guarantee that affect the interests of all holders of the Notes generally. These provisions permit defined majorities to bind all holders of the Notes, including holders of the Notes who did not consent. As a result, decisions might be taken by the holders of the Notes that are contrary to the preferences of any particular holder.

***The Volcker Rule may affect the ability of certain financial institutions to hold the Notes and otherwise limit their dealings with us, which could have an adverse effect on the trading prices for the Notes and/or our business.***

While we consider ourselves to be an asset manager as a result of how we are structured and the activities we pursue, we may be considered to be an investment company, potentially subject to regulation as such under the Investment Company Act and similar laws. However, we have taken various steps, including limiting the persons and entities that may acquire Notes in order to be able to rely on exemptions from the requirement to register as an investment company. See “Transfer Restrictions”. Specifically, we have structured ownership and offering of the Notes to qualify for an exemption from registration as an investment company pursuant to Section 3(c)(7) of the Investment Company Act.

Reliance on Section 3(c)(7) also presents potential issues under the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Volcker Rule”). The Volcker Rule limits the ability of many U.S. and non-U.S. financial institutions to engage in certain market making and fund-related activities, including direct and indirect investments in investment companies that hold securities of third party companies. U.S. and other financial institutions that are subject to the Volcker Rule, including most global banks and their broker dealer affiliates, thus may be subject to limitations on their ability to hold the Notes and potentially on other dealings with us. Any reduction in the willingness of these financial institutions to engage in transactions in the Notes, or otherwise transact with us, could have an adverse effect on the trading prices for the Notes. Although the Issuer does not believe that the Notes and the Guarantee should be considered “ownership interests” in a “covered fund” for purposes of Section 619 of the Volcker Rule, prospective purchasers that are “banking entities” for purposes of the Volcker Rule should consider whether they are authorized to purchase the Notes.

***Notes denominated and payable in a currency other than the investor’s currency are subject to exchange rate and exchange control risks.***

If your financial activities are denominated principally in one currency (the “Investor’s Currency”) other than U.S. dollars, the currency in which the Notes are denominated (the “Relevant Currency”), you will be subject to significant risks not associated with an investment in a Note denominated and payable in the Investor’s Currency, including the possibility of material changes in the exchange rate between the Investor’s Currency and the Relevant Currency and the imposition or modification of exchange controls by the applicable governments. Neither the Issuer nor the Guarantor have any control over the factors that generally affect these risks, including economic, financial and political events and the supply and demand for the applicable currencies. Depreciation of

the Relevant Currency would result in a decrease in the Investor's Currency equivalent yield of the Notes, in the Investor's Currency equivalent value of the principal and any premium payable at the stated maturity or any earlier redemption of such Notes and, generally, in the Investor's Currency equivalent market value of such Notes.

### **Risks Related to Tax Issues**

***The Guarantor or its subsidiaries could become liable for Canadian income tax, which could impair the Guarantor's ability to meet its obligations under the Guarantee.***

The Guarantor and certain of its subsidiaries are exempt from Canadian income tax provided that they meet certain conditions. We intend to manage the affairs of the Guarantor and these subsidiaries so that they will remain exempt from Canadian income tax. However, if the Guarantor or these subsidiaries were to lose their tax exempt status, they could be subject to Canadian income tax. A liability for Canadian income tax of the Guarantor or these subsidiaries could impair the Guarantor's ability to meet its obligations under the Guarantee and could adversely affect the credit ratings of the Guarantor, the Issuer or the Notes.

***Tax filings may be successfully challenged by tax authorities, and any resulting increased liability for income tax could negatively affect the Issuer's ability to make interest or principal payments on the Notes or the Guarantor's ability to meet its obligations under the Guarantee.***

The Guarantor has, and the Issuer may have, subsidiaries that are subject to income taxes in a number of jurisdictions, and to audits from tax authorities in those jurisdictions. Any audits could materially affect the income taxes payable or receivable in any jurisdiction, which changes could impair the Issuer's ability to make interest or principal payments on the Notes in accordance with their terms and conditions or the Guarantor's ability to meet its obligations under the Guarantee.

***Changes in tax laws could materially and adversely affect the financial stability of the Issuer, subsidiaries of the Issuer, the Guarantor and subsidiaries of the Guarantor.***

Changes in tax laws (including any that could change the tax status of the Issuer or its subsidiaries) could materially and adversely affect the financial stability of the Issuer, subsidiaries of the Issuer, the Guarantor and subsidiaries of the Guarantor. No assurance can be given that the tax laws currently in force affecting the Issuer, subsidiaries of the Issuer, the Notes, the Guarantor or subsidiaries of the Guarantor will not change in the future.

## **USE OF PROCEEDS**

The Issuer received net proceeds from the offering of approximately US\$1,738,986,000, after deducting the underwriting discounts and commissions and estimated offering expenses. The Issuer intends to use the net proceeds from the sale of the Notes for investment purposes, which may include, among other things, making investments in, buying securities of, or otherwise providing financing to third parties and/or to one or more direct or indirect subsidiaries of the Guarantor.

## CAPITALIZATION

The following table sets forth OTPPB cash and cash equivalents and capitalization on a consolidated basis as of June 30, 2017 (i) on a historical basis and (ii) as adjusted to reflect the offering and the application of the net proceeds as described under “Use of Proceeds.”

You should read this table together with the information under the sections entitled “2016 Management’s Discussion & Analysis” (Annex B hereto), “2015 Management’s Discussion & Analysis” (Annex D hereto), “Use of Proceeds” and the Audited Consolidated Financial Statements and the Unaudited Consolidated Financial Statements included elsewhere in these listing particulars.

	As of June 30, 2017	
	Actual	As adjusted
	(in millions of C\$)	
<b>Cash and cash equivalents</b> .....	<b>C\$ 12,547</b>	<b>C\$ 14,806</b>
Commercial paper <sup>(1)</sup> .....	C\$ 8,839	C\$ 8,839
Revolving credit facility .....	—	—
Notes offered hereby <sup>(1)</sup> .....	—	2,273
Repurchase agreements .....	49,853	49,853
Real Estate debt .....	4,488	4,488
<b>Total liabilities</b> .....	<b>63,180</b>	<b>65,453</b>
<b>Total net assets</b> .....	<b>180,540</b>	<b>180,526</b>
<b>Total capitalization</b> .....	<b>C\$243,720</b>	<b>C\$245,979</b>

(1) Outstanding amounts denominated in U.S. dollars converted to Canadian dollars using the 4pm London fix closing rate published by WM/Reuters on June 30, 2017.



## **BUSINESS**

### **The Guarantor**

The Guarantor is a globally active investor with holdings in more than 50 countries across diversified sectors and asset classes. It administers the assets of the Plan, earns money through investing, pays benefits to Plan members and their survivors and reports and advises on the Plan's funding status and regulatory requirements. OTPPB is an Ontario corporation without share capital continued under the TPA. It is responsible for administering the Plan and managing the assets of the Plan for the benefit of approximately 387,000 active, deferred and retired teachers, as of December 31, 2016, who are providing, or before retirement were providing, elementary and secondary school education in the Canadian Province of Ontario.

The Plan is a Canadian based contributory defined benefit pension plan, established in 1917 and co-sponsored by the Ontario government, through the Minister of Education, and the OTF, on behalf of teachers in the Province of Ontario's publicly funded schools. Its mission is to provide outstanding service and retirement security for its members—today and tomorrow. The Plan benefits are funded by contributions and investment earnings. Contributions are made by active members of the Plan (predominantly teachers employed in public schools in the Province of Ontario) and are matched by the government of Ontario and designated employers. All teachers in primary and secondary public schools in Ontario are required to participate in the Plan, as well as teachers at designated private schools in Ontario. Contributions are mandatory. Voluntary contributions by members of the Plan are not permitted.

As of December 31, 2016, OTPPB managed investments and provided for the retirement income for approximately 182,000 active and 69,000 deferred elementary and secondary school teachers and paid retirement benefits to approximately 136,000 retired teachers. The Plan is Canada's largest single profession pension plan with C\$175.6 billion and C\$180.5 billion in net assets in the Fund as of December 31, 2016 and June 30, 2017, respectively. The Plan produced a total-fund gross return in 2016 of 4.2%, net of trading costs, investment management expenses and external management fees but before Ontario Teachers' internal investment administrative costs, and a total-fund net return of 4.0% after all investment costs. In 2016, its portfolio generated C\$7.0 billion of investment income. For the six months ended June 30, 2017, the Plan produced a total-fund gross return of 3.7%, net of trading costs, investment management expenses and external management fees but before Ontario Teachers' internal investment administrative costs, and a total-fund net return of 3.6% after all investment costs and its portfolio generated C\$6.4 billion of investment income.

OTPPB's board has eleven independent board members, five of whom are appointed by the government of Ontario and five of whom are appointed by OTF. The chair is appointed jointly by the government of Ontario and OTF. These board members oversee the management of the Fund and administration of the Plan. The board members are required to act independently of both the Plan Sponsors and management, and to make decisions in the best interests of all beneficiaries of the Plan.

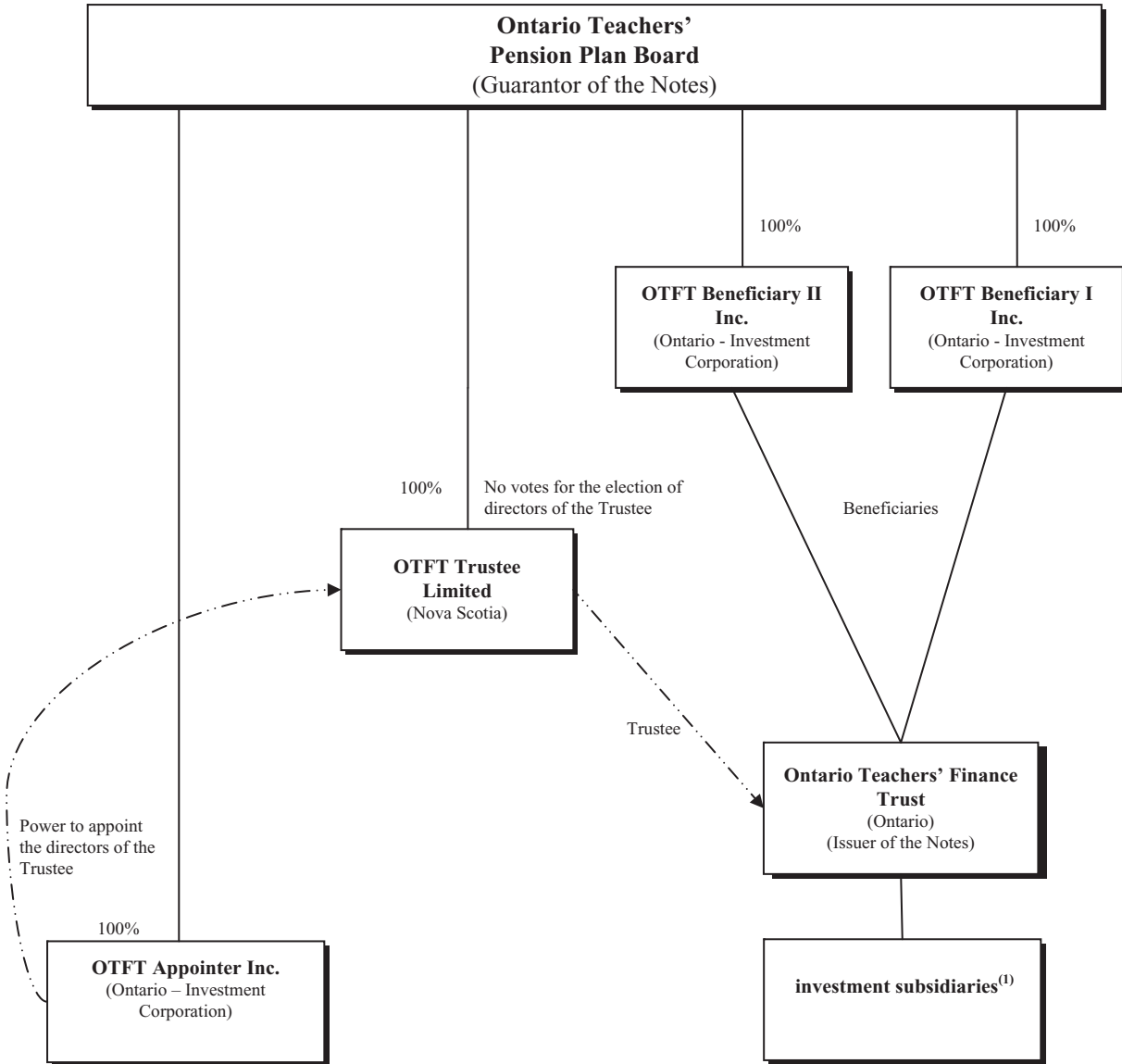
OTPPB's mandate is to administer the Plan and to manage the Fund in accordance with the TPA, which is OTPPB's governing legislation, the PBA, which is the legislation governing all Ontario pension plans, and the Tax Act, which exempts pension corporations from taxation under Part I of the Tax Act provided certain requirements are met.

### **The Issuer**

The Issuer is a trust established under the laws of the Province of Ontario pursuant to an Amended and Restated Trust Agreement dated September 21, 2016 among OTFT Beneficiary I Inc. and OTFT Beneficiary II Inc., as settlors, and OTFT Trustee Limited, as trustee, each of which is a wholly-owned subsidiary of OTPPB. OTFT Beneficiary I Inc. and OTFT Beneficiary II Inc. were incorporated under the laws of the Province of Ontario on September 30, 2015. OTFT Trustee Limited is a limited liability company incorporated pursuant to



the laws of the Province of Nova Scotia on October 1, 2015. The directors of OTFT Trustee Limited are appointed and removed by OTFT Appointer Inc., an Ontario corporation that is wholly-owned by OTPPB. The Issuer is primarily engaged in borrowing funds, raising capital and otherwise incurring indebtedness, and may use the proceeds to buy securities of and otherwise to make investments in and to provide financing to third parties and direct and indirect subsidiaries of OTPPB. These activities may be carried out directly by the Issuer or indirectly through one or more subsidiaries of the Issuer. The Issuer has issued commercial paper guaranteed by the Guarantor under its U.S. and Canadian commercial paper programs and has entered into a credit facility with two Canadian chartered banks, each as more fully described in the section entitled “Description of Other Indebtedness.”



(1) As of December 31, 2016, the Issuer had total assets of C\$9.3 billion, C\$6.4 billion of which consisted of intercompany receivables held directly by the Issuer or through the Issuer's wholly owned subsidiaries.

## Investment Competitive Strengths

### *Global Presence*

OTPPB's investment professionals are based in Toronto, London and Hong Kong, sourcing and managing investments in the Americas, Europe, and the Asia-Pacific region. The Toronto office was established at Ontario Teachers' inception in 1990 and is the North American hub for investment staff.

OTPPB established its London office in 2007 and expanded it in 2015. From this base, investment professionals look for opportunities throughout Europe, the Middle East and Africa. The teams in London collaborate with colleagues in Toronto and Hong Kong, as well as local partners, to cultivate strategic relationships and identify and execute on a wide range of investment opportunities.

OTPPB has been investing in the Asia-Pacific region since 1991 and opened a Hong Kong office in 2013 to gain greater access to opportunities in the region. It enables OTPPB's investment professionals to build even stronger relationships with key players in business and finance throughout the region, with its unique and dynamic mix of developed, developing and emerging economies.

### ***In-House Talent***

Approximately 80% of the investment portfolio is managed in-house by highly skilled, specialized teams. As one of Canada's largest pension funds based on net assets, OTPPB provides employees with the resources, training and career opportunities needed to achieve the highest professional standards. Talent development is critically important to building and retaining the intellectual capital and in-house expertise required to employ sophisticated and innovative strategies.

### ***Funds and Partnerships***

Externally managed investments consist of alternative investments (hedge funds), private equity funds and public equity funds. External hedge fund managers provide access to unique investment approaches that both add to performance and diversify risk. OTPPB also has strategic investments with many of the world's leading private equity firms, which open up private capital opportunities in markets not easily accessed directly. OTPPB also partners with carefully chosen global and regional managers of public equity funds, who deliver value-added returns and provide local expertise in key global markets.

### ***Global Strategic Relationships***

Relationships with key external partners are a significant component of OTPPB's success. OTPPB created a new Global Strategic Relationships department in 2016 to develop and cultivate mutually beneficial investment relationships around the world. Members of this department will work across asset classes and in all global regions to strengthen existing relationships and build new ones.

### ***Responsible Investing***

Ontario Teachers' carefully considers a variety of risks and opportunities when making investment decisions, consistent with OTPPB's fiduciary duty to Plan members. Ontario Teachers' employs a thoughtful approach to responsible investing as environmental, social and governance factors become increasingly important to the management of the Plan's risk exposure and sustainability.

## **Strategy**

### ***Asset-Mix Selection***

Recognizing that asset-mix selection is an important driver of long-term performance, OTPPB devotes considerable attention to choosing the types of assets owned and the relative emphasis placed on each asset class and geography.

With oversight from OTPPB's board members, OTPPB's management now manages both investment policy and asset mix together under OTPPB's expanded OneTeachers' total-fund strategy. OneTeachers' integrates total returns, portfolio risk management and value-added returns into the total-fund strategy, positioning OTPPB for the future in a complex and fast-paced environment. Management determines exposure to each asset class within ranges approved by OTPPB's board members.

### ***Diversification and Balance***

Total-fund diversification, through effective portfolio construction, is fundamental to OTPPB's success. Diversification allows OTPPB to spread risk across key factors such as time, investment periods, geographies and economic outcomes, which reduces the adverse impact of any one investment loss on the Fund overall. Exposure to the economies and currencies of different countries reduces overall volatility and offers the potential for higher returns.

### ***Proactive Risk Management***

OTPPB actively manages funding and investment risk together. This work is guided by the Strategy & Risk group, which reports directly to the CEO of OTPPB. Each year, OTPPB determines the level of total risk that is appropriate to meet its objectives. Risk budgeting is then used to spread active risk across asset classes.

The Board Investment Committee of OTPPB reviews and approves the risk budget annually, monitors overall investment risk exposure and reviews and approves risk management policies that affect the total portfolio, as well as new investment programs.

Management oversees investment and risk decisions through a two-part Investment Committee composed of senior investment professionals. The Investment Committee—Total Fund is responsible for considerations around the overall investment program, including the ability of the total-fund portfolio to achieve the real-return and volatility targets. The Investment Committee—Global Private and Illiquids is responsible for oversight of major private market or illiquid transactions and the overall private portfolio composition.

OTPPB has continually advanced its risk culture with sophisticated tools and processes to support risk measurement and management on a coordinated basis across the entire Fund, all asset classes and all departments, as well as within each portfolio.

In 2016, OTPPB launched a new and more robust risk management system called OneRisk after more than four years of development and testing. The OneRisk system is the cornerstone of OTPPB's risk management efforts. With greater precision and consistency in risk numbers, it provides improved oversight of the Fund's risk-taking activities. On a daily basis, OneRisk calculates over a billion numbers and generates more than 30 reports to enable informed portfolio decision making.

### ***Liquidity Management***

OTPPB manages its liquidity position carefully to ensure that it maintains sufficient cash on hand to meet current liabilities while seeking to take advantage of investment opportunities. OTPPB has an established liquidity governance framework, limits and reporting requirements. OTPPB tests its liquidity position regularly through simulations of major market events. OTPPB's Board Investment Committee receives regular updates on the Plan's liquidity position. Having cash and liquid assets on hand is vital for several reasons. It allows OTPPB to (i) avoid selling high-quality long-term assets to meet short-term funding needs at inopportune times, (ii) adjust OTPPB's asset mix in response to market movements, (iii) invest in assets such as real estate, infrastructure, timberland and private equity that cannot be quickly monetized and (iv) meet short-term, mark-to-market payments embedded in OTPPB's derivative exposure.

The Plan's liquidity position remained strong in 2016 and during the first six months of 2017.

Changing rules and regulations affecting banks indirectly impact OTPPB as well, so OTPPB's management continues to adapt and enhance the way that it manages, oversees, measures and reports on liquidity. The 2016 reorganization of the Investment Division included the creation of a centralized treasury group within the Capital Markets team.

See note 2(h) in the 2016 Annual Audited Consolidated Financial Statements included herein as Annex C and note 2(h) in the June 30, 2017 Interim Unaudited Consolidated Financial Statements included herein as Annex A for additional details on liquidity risk management, liquid assets and investment-related liabilities.

### ***Investment Funding Strategy***

OTPPB is pursuing an investment funding strategy designed to diversify its sources of investment funding, reduce costs and manage portfolio risk. OTPPB has used bond repurchase agreements for cash management since the early 1990s because it is cost effective and allows OTPPB to retain economic exposure to government bonds.

In 2016, the strategy was reviewed in the context of changing regulations. New funding sources are being considered to manage the maturity profile of OTPPB's investment assets and financial liabilities, reduce the overall cost of funding and manage currency exposure.

In 2015, the Issuer, a new cost-effective funding vehicle for Ontario Teachers', began issuing commercial paper to U.S. and Canadian investors through private placements. The Guarantor also guarantees this commercial paper and a related credit facility entered into by the Issuer solely to assist in the repayment of the commercial paper. As of December 31, 2016 and June 30, 2017, C\$9.1 billion and C\$8.8 billion, respectively, of commercial paper was outstanding. See "Description of Other Indebtedness."

### **Assets**

OTPPB's net assets increased to C\$175.6 billion as of December 31, 2016 and to a record C\$180.5 billion as of June 30, 2017. As of January 1, 2017, for the fourth consecutive year, the Plan had a preliminary surplus. Recognizing that asset-mix selection is the primary driver of long-term performance, OTPPB devotes considerable attention to choosing the types of assets it owns and the relative emphasis placed on each asset group and geography.

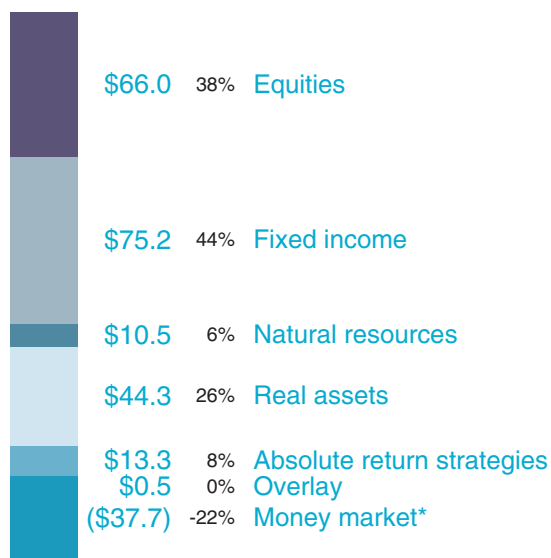
OTPPB's diverse asset mix in 2016 included Equities (public and private), Fixed Income (a variety of government bonds, provincial bonds, corporate bonds and real-return bonds), Real Assets (real estate, infrastructure), Natural Resources and Absolute Return Strategies. As of January 1, 2017, as part of the implementation of the OneTeachers' investment strategy, OTPPB redefined the asset classes and reorganized the Plan's existing holdings. The asset classes were redefined as follows: Equities asset class continues to comprise public and private equities. The Fixed Income asset class includes nominal bonds, real-rate products and short-term investments, while corporate and emerging market debt moved into the Credit asset class. Natural resources and other securities that provide exposure to inflation form the Inflation Sensitive asset class. The Real Assets asset class continues to include real estate and infrastructure. The Absolute Return Strategies asset class encompasses the portfolio's hedge funds and innovative strategies.



The following charts show OTPPB's net investments by asset class as of December 31, 2016, presented in accordance with the prior organization of asset classes, and June 30, 2017, presented in accordance with the new OneTeachers' organization of asset classes.

#### NET INVESTMENTS BY ASSET CLASS

As at December 31, 2016 (Canadian \$ billions)

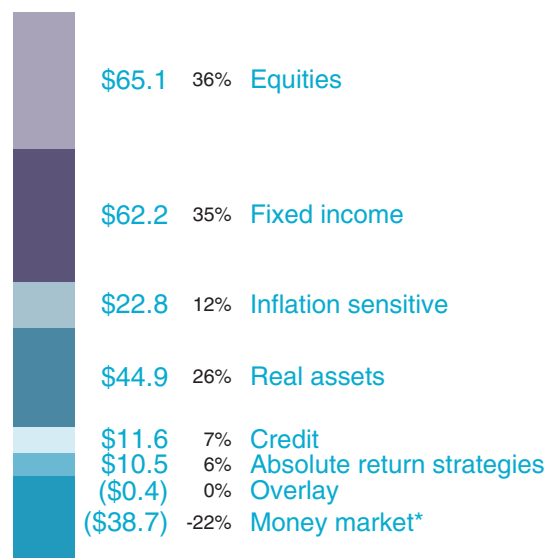


TOTAL \$172.1

\* Money market asset class provides funding for investments in other asset classes.

#### NET INVESTMENTS BY ASSET CLASS

As at June 30, 2017 (Canadian \$ billions)



TOTAL \$178.0

\* Money market asset class provides funding for investments in other asset classes.

## Returns

OTPPB's new OneTeachers' strategy is a unified approach to investment strategy and risk management that emphasizes that earning total-fund real returns and reducing risk are as important for OTPPB's sustainability as value-added returns. OTPPB's organizational structure and compensation program have been changed to implement the OneTeachers' strategy and support the total-fund focus.

The Plan produced a total-fund gross return in 2016 of 4.2%, net of trading costs, investment management expenses and external management fees but before Ontario Teachers' internal investment administrative costs, and a total-fund net return of 4.0% after all investment costs. Strong performance within OTPPB's Real Assets and Natural Resources asset classes was partially offset by currency losses due to the appreciation of the Canadian dollar.

The Plan produced a total-fund gross return in the first six months of 2017 of 3.7%, net of trading costs, investment management expenses and external management fees but before Ontario Teachers' internal investment administrative costs, and a total-fund net return of 3.6% after all investment costs.

OTPPB compares its total-fund gross return to a Canadian dollar-denominated composite benchmark, which is calculated by aggregating results from each of the asset-class benchmarks using the same weightings as OTPPB's asset-mix weightings. The following table shows OTPPB's investment performance as compared to these benchmarks for the six months ended June 30, 2017, for each of the two years ended December 31, 2016 and 2015, for the four, five and ten years ended December 31, 2016 and since the inception of the current investment program in 1990 to December 31, 2016.

### Investment Performance

(percent)

	Six Months Ended June 30, 2017	2016	2015	4-Year	5-Year	10-Year	Since Inception
Total-Fund Gross Return <sup>(1)</sup> .....	3.7%	4.2%	13.0%	9.9%	10.5%	7.3%	10.1%
Total-Fund Net Return <sup>(2)</sup> .....	3.6%	4.0%	12.7%	9.7%	10.3%	7.1%	9.9%
Benchmark .....	N/A	3.5%	10.1%	8.2%	8.7%	6.3%	7.9%
Dollars earned above benchmark (C\$ in billions) <sup>(3)</sup> .....	N/A	C\$1.3	C\$4.2	C\$10.1	C\$12.3	C\$14.2	C\$36.9

(1) OTPPB Total-Fund Gross Returns are presented net of trading costs, investment management expenses and external management fees, but before Ontario Teachers' internal investment administrative costs.

(2) Total-Fund Net Returns are presented net of trading costs, investment management expenses, external management fees, and Ontario Teachers' internal investment administrative costs. We provide the Total-Fund Net Return measure as it facilitates the evaluation of the total-fund performance net of all internal investment administrative costs.

(3) Based on Total-Fund Net Return.

## Investments

Ontario Teachers' is a globally active investor with holdings in more than 50 countries across diversified sectors and asset classes. The investment program is designed to help the Plan meet its obligations to pay pensions and minimize funding volatility. Since Ontario Teachers' inception in 1990, more than three-quarters of the Plan's income has come from investment returns, with the remainder from member and government contributions.

### OneTeachers' Strategy

OTPPB makes investments to pay pensions for generations. OTPPB began to implement its updated investment strategy, OneTeachers', in 2016. OneTeachers' integrates the Fund's well-proven top-down risk management and asset allocation processes with OTPPB's strong bottom-up approach to asset selection.

In 2016, OTPPB updated its investment team structure. OTPPB created a Portfolio Construction group, enhancing OTPPB's ability to ensure returns are sufficient to meet the Plan's needs while managing risk. OTPPB also combined its Fixed Income, Tactical Asset Allocation and Alternative Investments teams into the Capital Markets group, with an ongoing and substantial investment in treasury and execution capabilities.

In addition to in-house investment management, OTPPB relies on strong, intelligent partners around the world for investments and co-investments. OTPPB is committed to strengthening existing relationships and building new ones. With this priority in mind, OTPPB created new roles and announced promotions in 2016 to deepen these essential links.

### ***Investment Program Overview***

Ontario Teachers seeks to maximize investment returns at a level of risk that takes into account the cost and nature of future benefits (pension liabilities). The aim is to create a total portfolio with risk and return characteristics that support stable pension benefits and contribution rates.

OTPPB's view is that passive investing through market indices cannot, alone, generate the risk-adjusted returns needed to meet the Plan's obligations. To add value, the investment team employs active management strategies with a global perspective to identify and acquire undervalued investments and optimize returns.

### **Members and Member Services**

Outstanding service to members is central to OTPPB's mission. OTPPB delivers personalized service through digital and direct service channels to meet the needs of a broad range of active and retired members.

Member Services administers one of Canada's largest payrolls, with pension and benefit payments of C\$5.7 billion and C\$2.9 billion in 2016 and the six months ended June 30, 2017, respectively.

### ***Membership Profile***

Plan membership has grown every year since 1917, when the predecessor Ontario Teachers' Superannuation Fund was created.

### ***Service Performance***

Members consistently give the Plan very high ratings and the majority of service requests are completed within one day. In 2016, members had 540,000 interactions with Ontario Teachers' (including digital, contact center and personal interactions). More than 255,000 members have an online Ontario Teachers' account.

The Quality Service Index ("QSI") is OTPPB's primary performance measurement of member satisfaction. An independent company surveys a sample of members throughout the year about the quality of OTPPB's pension service and communications. OTPPB began testing a new survey methodology in 2016 as OTPPB's member demographics and the way members interact with the Plan have changed. The new methodology contacts members through multiple channels, not just by telephone, and addresses the full member experience, not just recent service received.

<b>Quality Service Index (on a scale of 0 to 10)</b>	<b>2016</b>	<b>2015</b>
Total QSI .....	9.1	9.1
Service QSI (85%) .....	9.2	9.2
Communications QSI (15%) .....	8.8	8.7



OTPPB's service is also measured against leading pension plans worldwide through surveys conducted by CEM Benchmarking Inc. ("CEM"), an independent research company that ranks plan performance in various categories.

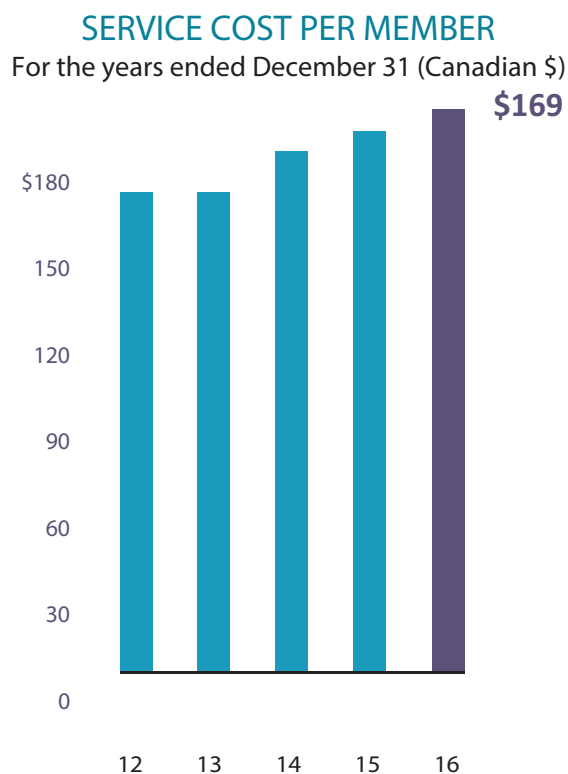
<b>Benchmarking Results—Service Level Score Comparison<sup>(1)</sup></b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>
Ontario Teachers' Pension Plan .....	92	93	93	92
CEM world average .....	78	77	76	76
Peer group average .....	82	81	80	80
Canadian CEM participants—average .....	76	75	74	74

(1) Scores are rounded and based on fiscal year data using current survey weights. Source: CEM Benchmarking Inc.

In 2016, the Plan was ranked second for pension service in its peer group and internationally.

### ***Service Costs***

The cost per member of administering the Plan was C\$169 in 2016, versus C\$162 in 2015. The cost of administering the Plan has increased in recent years due to investments in systems and service channels to meet operational, regulatory and service requirements and ongoing work to replace outdated administrative systems.



## **Legislative Overview**

### ***Regulatory oversight***

OTPPB administers the Plan and manages the Fund in accordance with the TPA, which is OTPPB's governing legislation. The TPA sets out, among other things, OTPPB's objects and powers as well as the terms of the Plan in Schedule 1 of the TPA.

The Plan is also subject to the PBA, which is the legislation governing all Ontario pension plans. The PBA sets minimum standards for administering and funding pension plans and pension benefits. It applies to every registered pension plan provided for people employed in Ontario. Among other things, the PBA requires pension plan administrators to invest plan assets with the same care, diligence and skill expected of a person of ordinary prudence dealing with another's property. The regulations to the PBA incorporate by reference several federal investment rules applicable to federally regulated pension funds. The federal investment rules contain quantitative and other rules on the investment of pension funds.

The Plan is also a "registered pension plan" under the Tax Act, which exempts pension corporations from taxation under Part I of that Act provided certain requirements are met.

### ***Compliance and advocacy***

OTPPB must comply with federal and provincial legislation and investment regulations that govern registered pension plans in Ontario. OTPPB also has to comply with various rules and regulations in countries where OTPPB invests.

OTPPB interacts with regulatory and government officials on a variety of investment and pension administrative matters, advocating for clear and consistent rules and sharing its expertise on public policy issues that are relevant to its mission of providing outstanding service and retirement security for OTPPB's members. OTPPB also works with the Plan's Sponsors to implement amendments to the Plan.

### ***Recent TPA changes***

Effective April 19, 2016, the TPA was amended to clarify that the Plan's re-employment rules prevail over the PBA to the extent of any conflict.

### **Corporate Headquarters**

The Issuer's corporate headquarters are located at 5650 Yonge Street, Toronto, Ontario M2M 4H5, and the Issuer's telephone number is 416-228-5900. The Guarantor's corporate headquarters are located at 5650 Yonge Street, Toronto, Ontario M2M 4H5, and the Guarantor's telephone number is 416-228-5900.

### **Employees**

The Guarantor has approximately 1,100 employees in Toronto, London and Hong Kong. Approximately 1,500 people work at OTPPB's real estate subsidiary, The Cadillac Fairview Corporation Limited. The Guarantor is currently party to a collective agreement between the Ontario Public Service Employee Union on behalf of its Local 598 and the Guarantor. The agreement is effective from January 1, 2014 to December 31, 2017.

### **Legal Proceedings**

Neither the Issuer nor the Guarantor are or have been involved in any governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened of which the Issuer or the Guarantor are aware) during the 12 months prior to September 12, 2017, which may have or has in such period had a significant effect on the financial position or profitability of the Issuer or the Guarantor.

Ontario Teachers' may from time to time be involved in routine litigation arising in the ordinary course of business.

## MANAGEMENT

### **Governance Policy and Structure**

OTPPB believes good governance is good business because it helps companies deliver long-term value. As a plan administrator, OTPPB measures themselves against best practices for governance, internal controls, risk management and stewardship because this helps OTPPB deliver long-term value to members.

Since OTPPB's inception, OTPPB has operated under the oversight of independent, professional board members who are required to make decisions in the best interest of all beneficiaries of the Plan. The Plan's Sponsors, the Ontario government and OTF, each appoint five board members and they jointly select the chair. This governance structure plays a crucial role in the Plan's success.

### ***Role of Plan Sponsors***

The Plan is jointly sponsored by the government of Ontario, through the Minister of Education and OTF. OTF represents teachers in the Province of Ontario's publicly funded schools.

OTF and the government of Ontario are equally responsible for ensuring the Plan has enough money to meet its long-term pension obligations. In addition, they appoint experienced, professional experts as board members.

Through a six-member partners' committee, the Sponsors jointly: set benefit levels, establish the contribution rate paid by Plan members (which is matched by the Ontario government and other designated employers) and decide how to address funding shortfalls or use surplus funds when they arise.

Members of the partners' committee are not board members.

### ***Role of the Board Members***

The OTPPB board members oversee management of the Fund and administration of the Plan. Board members are professionals with financial and governance expertise and are typically drawn from the fields of accounting, actuarial science, banking, business, economics, education and investment management.

Day-to-day investment management and Plan administration is delegated to the President and CEO and his team. No member of management is a board member.

Through six committees, board members review progress against management's stated objectives and confirm that management's strategies and decisions are in the best interests of all Plan beneficiaries. The committees are Investment, Audit & Actuarial, Governance, Human Resources & Compensation, Operational Risk, and Benefits Adjudication. The Board Investment Committee includes all board members. Board members are required to act independently of both the Plan's Sponsors and management.

Board members approve strategic plans, budgets, risk appetite (including asset-mix ranges), investment policies, benchmarks, performance, compensation planning and succession plans. They monitor enterprise and operational risks and ensure appropriate mitigation plans are in place. They review and approve the audited consolidated financial statements of OTPPB.

In addition, the board members oversee annual investment objectives and review proposed transactions that are above pre-set limits. Board members and management are responsible for investment decisions; the Plan's Sponsors are not involved in such decisions.

The board members conduct regular preliminary funding valuations to assess the Plan's long-term financial health. The results of the preliminary funding valuations are reported to the Plan Sponsors. The board members

work closely with the independent actuary in setting actuarial assumptions for these valuations, including the discount rate, with input from management and the Plan Sponsors. The Canadian Institute of Actuaries Standards of Practice require that each assumption is independently reasonable and that assumptions are appropriate in aggregate.

### ***Management's role***

Management of OTPPB has three main responsibilities: (i) invest Plan assets to help pay pensions; (ii) administer the Plan and pay pension benefits to members and their survivors; and (iii) report and advise on the Plan's funding status and regulatory requirements. Management sets long-term investment and service strategies that take member demographics, and economic, investment and market risks into account.

### **Conflicts of Interest**

Pursuant to the internal policies of the Guarantor, each director and board member of the Issuer or the Guarantor must avoid any actual conflict of interest or the appearance of a conflict of interest between his or her, as the case may be, private interests and his or her, as the case may be, duties to the Issuer or the Guarantor, as the case may be, and must recuse himself or herself, as the case may be, from any deliberations and decisions which may give rise to a conflict of interest. As of September 12, 2017, neither the Issuer nor the Guarantor is aware of any conflict of interest between any private interest of any director or board member and such director's or board member's duties to the Issuer or the Guarantor, as the case may be, including any actual or potential conflicts of interest that relate to the fact that certain of the directors may, from time to time, hold board positions with certain of the initial purchasers or their affiliates.

### **Guarantor**

#### ***Board Members***

The following table sets forth information regarding the board members of the Guarantor.

<u>Name and Country of Residence</u>	<u>Position/Title</u>	<u>Independent</u>	<u>Business Address</u>
Jean Turmel <sup>(3)</sup> . . . . . <i>Canada</i>	Member and Chairman	Yes	5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada
Rod Albert <sup>(1)(2)(3)(6)</sup> . . . . . <i>Canada</i>	Member	Yes	5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada
Bill Chinery <sup>(1)(2)(3)(4)</sup> . . . . . <i>Canada</i>	Member	Yes	5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada
Patti Croft <sup>(1)(3)(4)</sup> . . . . . <i>Canada</i>	Member	Yes	5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada
Lise Fournel <sup>(1)(3)(5)</sup> . . . . . <i>Canada</i>	Member	Yes	5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada
Steve McGirr <sup>(2)(3)(4)(5)</sup> . . . . . <i>Canada</i>	Member	Yes	5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada
John Murray <sup>(1)(3)(4)</sup> . . . . . <i>Canada</i>	Member	Yes	5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada
Kathleen O'Neill <sup>(1)(3)(5)</sup> . . . . . <i>Canada</i>	Member	Yes	5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada
Barbara Palk <sup>(2)(3)(5)</sup> . . . . . <i>Canada</i>	Member	Yes	5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada
David Smith <sup>(1)(3)(4)</sup> . . . . . <i>Canada</i>	Member	Yes	5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada
Daniel Sullivan <sup>(2)(3)(5)(6)</sup> . . . . . <i>Canada</i>	Member	Yes	5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada

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- (1) Member of the Audit & Actuarial Committee.
  - (2) Member of the Human Resources & Compensation Committee.
  - (3) Member of the Board Investment Committee.
  - (4) Member of the Governance Committee.
  - (5) Member of the Operational Risk Committee.
  - (6) Member of the Benefits Adjudication Committee.

### ***Board Committees***

Through six committees, OTPPB board members review progress against management's stated objectives and confirm that management's strategies and decisions are in the best interests of all Plan beneficiaries. The committees are Investment, Audit & Actuarial, Governance, Human Resources & Compensation, Operational Risk, and Benefits Adjudication. The Investment Committee includes all board members.

#### ***Investment Committee***

The Board Investment Committee assists OTPPB in fulfilling its responsibilities as manager of the Fund. It oversees the investment of Plan assets, investment-related liabilities and management of Plan surpluses or shortfalls.

#### ***Audit & Actuarial Committee***

The Audit & Actuarial Committee assists OTPPB in fulfilling its responsibilities in financial reporting and actuarial valuations. Primary responsibility for financial reporting, accounting systems and internal controls is vested in senior management and overseen by the members of the Audit & Actuarial Committee. The external actuary, external auditor and internal auditor are directly accountable to the Audit & Actuarial Committee.

#### ***Governance Committee***

The Governance Committee is responsible for overseeing OTPPB's system of governance. This includes, among other things, reviewing the terms of reference of each committee, benchmarking and adapting best practices for governance, education of the board members and disclosure of the system of governance to stakeholders.

#### ***Human Resources & Compensation Committee***

The Human Resources & Compensation Committee provides oversight and recommendations pertaining to the Chief Executive Officer and executive succession planning, all forms of compensation, performance results, employee relations and overall human resources strategy, policies and practices.

#### ***Operational Risk Committee***

The Operational Risk Committee assists the board members in fulfilling their strategic oversight responsibilities in relation to information technology, enterprise project management, operations and security, both IT and physical. This committee reviews and evaluates the risk operations framework and the relevant policies and procedures that management has in place to assess and manage significant risks in these areas to which OTPPB is exposed.

#### ***Benefits Adjudication Committee***

The Benefits Adjudication Committee considers and determines appeals regarding member benefits and entitlements, as provided in section 87 of Schedule 1 of the TPA. The Benefits Adjudication Committee consists

of 10 committee members, which includes two OTPPB board members (with preference that each be appointed by a different Sponsor) and eight external committee members. Five of these external committee members are nominated by OTF and three by the Ministry of Education.

### ***Key Executive Officers***

The following table sets forth information regarding the key executive officers of the Guarantor.

<b><u>Name, Province or State and Country of Residence</u></b>	<b><u>Position/Title</u></b>
Ron Mock . . . . . <i>Ontario, Canada</i>	President and Chief Executive Officer
Bjarne Graven Larsen . . . . . <i>Ontario, Canada</i>	Executive Vice-President, Investments, and Chief Investment Officer
Tracy Abel . . . . . <i>Ontario, Canada</i>	Chief Pension Officer
David McGraw . . . . . <i>Ontario, Canada</i>	Chief Financial Officer
Rosemarie McClean . . . . . <i>Ontario, Canada</i>	Chief Operating Officer
Barbara Zvan . . . . . <i>Ontario, Canada</i>	Chief Risk & Strategy Officer
Jeffrey Davis . . . . . <i>Ontario, Canada</i>	Chief Legal and Corporate Affairs Officer
Beth Tyndall . . . . . <i>Ontario, Canada</i>	Chief People Officer

### ***Biographical Information Regarding the Board Members and Executive Officers of the Guarantor***

***Jean Turmel, Director and Chairman***—Mr. Jean Turmel is Chairman of the Board of OTPPB. Mr. Turmel became president of Perseus Capital Inc., a fund management firm, in 2005. He serves on the board of Alimentation Couche-Tard Inc. Mr. Turmel enjoyed a 25-year career at the National Bank of Canada, where he retired as president of Financial Markets, Treasury and Investment Bank. His career spans more than 40 years of capital markets experience, with positions at Merrill Lynch, Royal Securities and Dominion Securities prior to joining National Bank as Vice-President, Treasury and Foreign Exchange in 1981. He is a former Chair of the Montreal Derivatives Exchange. Mr. Turmel holds a B.Comm. and an MA from Laval University and is a recipient of a Doctorate Honoris Causa. He is also a recipient of the Queen’s Diamond Jubilee medal for his contribution to the Canadian investment industry.

***Rod Albert, Director***—Mr. Rod Albert, a lifelong educator, has served as president and general-secretary of the Ontario Secondary School Teachers’ Federation (“OSSTF”) and as president and member of the executive of the OTF. As president of the OTF, Mr. Albert led negotiations with the Ontario government to establish the Plan as an independent organization in 1990. As an OTF executive member, he was extensively involved with the Sponsors’ efforts to balance the 2005 funding valuation. Mr. Albert is a fellow of the OTF, a life member of the OSSTF and is a graduate of the Institute of Corporate Directors.

***Bill Chinery, Director***—Mr. Bill Chinery was CEO of BlackRock Asset Management Canada (“BlackRock”) until early 2013. During his 13 years with BlackRock and its predecessor Barclays Global Investors, Mr. Chinery was a Managing Director in both the Toronto and San Francisco offices with various responsibilities including heading the Latin America and the Americas Institutional Business. Prior to BlackRock, Mr. Chinery spent six years as Senior Vice-President, Quantitative Products at YMG Capital Management Inc. He started his career at Mercer where he had account responsibility for some of the largest

pension plans in Canada. Mr. Chinery also started the Mercer Investment Consulting practice. Mr. Chinery holds a BMath from the University of Waterloo, is a Fellow of the Society of Actuaries, a Fellow of the Canadian Institute of Actuaries, and holds the Institute of Corporate Directors designation (ICD.D). He is currently Chair of the Salvation Army Investment Committee and Chair of the Independent Review Committee for the Sun Life Investment Management Institutional Pooled Funds.

**Patti Croft, Director**—Ms. Patti Croft has extensive expertise in global macroeconomics and the financial sector. She began her career at Burns Fry before moving on to CIBC Wood Gundy. Ms. Croft has been the Chief Economist with RBC Global Asset Management; Phillips, Hager and North; Sceptre Investment Counsel and TD Canada Trust. Ms. Croft is Vice Chair of the Ontario Pension Board. She is a past director and founding member of Women in Capital Markets and past director of the International Foundation for Employee Benefit Plans, Canadian Medical Association Holdings Inc. and the Boilermakers' National Pension Plan Canada. Ms. Croft holds a Bachelor's degree in Economics from the University of Toronto and the Institute of Corporate Directors designation (ICD.D).

**Lise Fournel, Director**—Ms. Lise Fournel was Senior Vice-President and Chief Information Officer at Air Canada until early 2017. She is a technology expert with a global perspective in marketing and revenue management and e-commerce. Over her more than 35 year career with Air Canada, Ms. Fournel has held increasingly senior positions in Technology, Strategic Planning and Passenger Commercial. She was also President of Destina.ca. Ms. Fournel sits on the board of l'Université de Montréal and is presently a member of its Technology Committee. She has also served on a number of not-for-profit boards, including Tourisme Montréal, CIREM and Musée Pointe-à-Callière, and is involved with the Canadian Muscular Dystrophy Association. Ms. Fournel earned a B.Sc. and M.Sc. in Mathematics from l'Université de Montréal and completed graduate studies in Business Administration at Hautes Études Commerciales (HEC) in Montreal.

**Steve McGirr, Director**—Mr. Steve McGirr was Senior Executive Vice-President and Chief Risk Officer of CIBC until 2007. Prior to that, he was President of CIBC World Markets, and held a number of key leadership positions over a 24-year career at CIBC World Markets and Wood Gundy. Mr. McGirr has served as a director of two public companies: TrustMark Auto Group Inc. and First Caribbean International Bank, as well as private companies including CIBC Offshore Banking Services Corporation (Barbados), CIBC Offshore Services Inc. and CIBC World Markets Plc (UK). Mr. McGirr is currently a Director and Chair of the Investment Committee of Wellspring, a cancer support network, a member of the Queen's University Cabinet, and Senior Advisor to Lazard Canada Inc. He has an MPA and BA (Hons) from Queen's University. In 2004 Mr. McGirr received the Distinguished Service Award from the Province of Saskatchewan in recognition of his outstanding contributions to numerous public projects.

**John Murray, Director**—Mr. John Murray served as Deputy Governor of the Bank of Canada from 2008 until his retirement from the Bank in 2014. As a member of the Bank's Governing Council, he shared responsibility for decisions on monetary policy, financial system stability, and strategic direction. Mr. Murray joined the Bank of Canada in 1980 and held progressively senior roles in his 34-year career. Mr. Murray holds a BComm from Queen's University, and an MA and PhD in Economics from Princeton University. After completing his PhD, Mr. Murray taught at the University of British Columbia as an assistant professor and at the University of North Carolina as a visiting assistant professor. He also lectured at Princeton University. He is an adjunct professor at Queen's University, as well as a visiting scholar and adviser at the International Monetary Fund. Mr. Murray also sits on the investment committee of the Canadian Medical Protective Association.

**Kathleen O'Neill, Director**—Ms. Kathleen O'Neill is an experienced corporate director, and is currently on the boards of Finning International Inc., ARC Resources Ltd. and Invesco Canada Funds. She was Executive Vice President, Personal & Commercial Development and Head of Small Business Banking at BMO Bank of Montreal until January 2005, and a partner at PricewaterhouseCoopers prior to that. Ms. O'Neill is on the Ontario Advisory Council for the Institute of Corporate Directors ("ICD") and is a frequent instructor and examiner for the ICD. She is also a member of the Accounting Advisory Committee for the ICD and sits on CPA Canada's



Corporate Oversight and Governance Advisory Board. Ms. O'Neill is past chair of both St Joseph's Health Centre Foundation and St. Joseph's Health Centre in Toronto and served on the board of The Cadillac Fairview Corporation Limited until early 2017. Ms. O'Neill is a chartered accountant (CPA), a Fellow of the Institute of Chartered Accountants of Ontario (FCPA), and holds the Institute of Corporate Directors designation (ICD.D). She earned a BCom from the University of Toronto. In 2014, 2015 and 2016 she was selected as one of Canada's Top 100 Most Powerful Women by WXN, and in 2009 she received the World of Difference Award from the International Alliance for Women.

**Barbara Palk, Director**—Ms. Barbara Palk retired from TD Asset Management as president, with three decades of institutional investment management experience. She now serves on the boards of Crombie REIT, First National Financial and TD Asset Management USA Funds Inc. Previously, Ms. Palk served on the boards of the Canadian Coalition of Good Governance, the Investment Counselling Association of Canada, the Shaw Festival, the Perimeter Institute, Greenwood College School and Unicef Canada. She is the former Chair of the Board of Trustees at Queen's University. Ms. Palk is a member of the Institute of Corporate Directors, a Fellow of the Canadian Securities Institute and a CFA charterholder. She earned a BA (Hons) in Economics from Queen's University and is a recipient of the Ontario Volunteer Award and the Queen's Jubilee Medal. She has been named one of Canada's Top 100 Most Powerful Women.

**David Smith, Director**—Mr. David Smith is former chair and senior partner of PricewaterhouseCoopers and former CEO of the Canadian Institute of Chartered Accountants. Mr. Smith has served on numerous boards throughout his 40-year career. He is currently Chair (and founding chair) of the Small Departments Audit Committee of the Government of Canada. Mr. Smith is the former chair of the Government of Canada Audit Committee. He is a chartered accountant, a Fellow of the Chartered Professional Accountants of Ontario (FCPA, FCA), and a graduate of the Institute of Corporate Directors (ICD.D). He holds a B.Comm. (Hons) from the University of Windsor.

**Daniel Sullivan, Director**—Mr. Daniel Sullivan was consul general of Canada in New York from 2006 to 2011. He is the former Deputy Chair of Scotia Capital Inc., the corporate and investment banking division of Scotiabank, where he enjoyed a 38-year career. Mr. Sullivan also served as Chair and Director of the Toronto Stock Exchange and is former Chair of the Investment Dealers Association of Canada. Mr. Sullivan has served on numerous boards, including Allied Properties, Allstream Inc., The Cadillac Fairview Corporation Limited, Camco Inc., Choice Properties, Monarch Development and Schneider Corp. He was chair of the board of St. Michael's Hospital and currently sits on the board of the hospital's foundation. Mr. Sullivan is a recipient of the Queen's Diamond Jubilee medal for his contribution to the Canadian investment industry.

**Ron Mock, President and Chief Executive Officer**—Mr. Ron Mock joined OTPPB in 2001, serving as President and CEO since January 1, 2014. He is a recognized leader in both long-term fund investing and pension administration and advocacy. Earlier in his tenure, as Senior Vice-President, Fixed Income and Alternative Investments, Mr. Mock oversaw \$60 billion of OTPPB's assets, including the policy mix in fixed income, credit investing, hedge fund activities, and fixed income investments in emerging markets. He also contributed as a board member of OTPPB's commercial real estate subsidiary, The Cadillac Fairview Corporation Limited. Previously with investment dealer Burns Fry (now BMO Nesbitt Burns), Mr. Mock directed sales and trading staff in derivative products and held the firm's membership seat on the Chicago Board of Trade, in addition to other exchanges. He was also a board member of the Montreal Exchange in the early 1990s. Thereafter Mr. Mock founded Phoenix Research and Trading, and, as CEO, was responsible for all aspects of the asset management firm, including investment and trading strategies, client relationships, risk management and regulatory compliance. Beginning his career as an electrical engineer, Mr. Mock held a variety of positions with Ontario Hydro in the areas of field work, design, construction, and research before ultimately becoming responsible for nuclear safety and licensing at the Pickering and Bruce nuclear generating stations. Mr. Mock graduated from the University of Toronto with a B.A.Sc. in Electrical Engineering and later earned an MBA from York University. He is currently a member of the Corporate Advisory Board of The Learning Partnership and the Dean's Advisory Council at the Schulich School of Business at York University.



***Bjarne Graven Larsen, Executive Vice-President, Investments, and Chief Investment Officer***—Mr. Bjarne Graven Larsen leads the global investment program for OTPPB. He is responsible for all aspects of its investment activities, including the real estate portfolio managed by wholly-owned subsidiary, The Cadillac Fairview Corporation Limited, and OTPPB international offices in London and Hong Kong. Mr. Graven Larsen has more than 25 years of experience in the financial industry. He is the former Chief Investment Officer and executive board member of Denmark's ATP, Denmark's largest, and Europe's fourth largest, pension plan. He was most recently Chief Financial Officer at Novo A/S in Copenhagen. Mr. Graven Larsen was also the CEO of FIH Erhvervsbank A/S (FIH). He also held positions at Realkredit Denmark, the country's largest Mortgage Bank, now part of Danske Bank; and in Denmark's Central Bank and Ministry of Finance. He holds a Masters in Economics from the University of Aarhus. Mr. Graven Larsen joined OTPPB in 2016.

***Tracy Abel, Chief Pension Officer***—Ms. Tracy Abel and her team are responsible for overseeing the personalized service to the Plan's 387,000 working, deferred and retired members as well as for the Member Services division's Actuarial, Tax and Accounts Receivable Services; Employer Information Services and Strategic Initiatives. Ms. Abel joined Ontario Teachers' in 1987 and was promoted to Vice-President, Client Services in 2012. As the leader of Client Services, she was responsible for all aspects of service delivery to members of the plan. Ms. Abel has been a key contributor in OTPPB Member Services ranking first among its peer group, and number one internationally, for exceptional pension service for three consecutive years, according to CEM Benchmarking. She was also instrumental in developing solutions that better serve the needs of OTPPB's members at all stages of their career or retirement through a realignment of the Client Service department. Ms. Abel holds an MBA from the Rotman School of Management, University of Toronto and a BA (Hons.) in Sociology from York University.

***David McGraw, Chief Financial Officer***—Mr. David McGraw and the Finance team are responsible for valuing and reporting on pension fund assets, providing tax oversight and operational due diligence. Finance responsibilities also include financial and management reporting; risk analytics and model valuation, enterprise/operational risk management support and the CEO/CFO internal controls certification program. Mr. McGraw has more than 20 years of senior management experience in financial management, corporate finance, banking, and mergers and acquisitions. Before joining OTPPB in 2004, Mr. McGraw was Chief Financial Officer of Bell ExpressVU. Prior to that, he was Vice-President, Mergers & Acquisitions/Corporate Finance, at BCE/Bell Canada and Partner-in-Charge of the Corporate Finance Group of a major international accounting firm. He currently sits on the boards of BluEarth Renewables Inc. and Bristol Airport. Mr. McGraw is a Fellow of the Institute of Chartered Accountants of Ontario. He earned a Bachelor of Commerce from McGill University and an MBA from the University of Western Ontario. He is also a member of the Institute of Corporate Directors.

***Rosemarie McClean, Chief Operating Officer***—Ms. Rosemarie McClean is responsible for OTPPB's key operational activities: Information Technology, Enterprise Project Management and Financial Operations. She is responsible for ensuring these functions are effectively integrated and deployed across the organization. Ms. McClean was appointed to the COO role in November 2014. Prior to that, she held the position of Senior Vice-President, Member Services. Under her leadership, the client services group was organized into self-directed work teams that dramatically improved the speed, range and quality of client services offered to the Plan's 387,000 active, deferred and retired members. She introduced award-winning services, including web-based retirement planning tools that provide members with immediate access to personal pension information. Ms. McClean serves on the boards of Illinois-headquartered Heartland Dental Care, and the Alberta Pensions Services Corporation. In 2008, she was recognized by Women's Executive Network as one of Canada's 100 Most Powerful Women. Ms. McClean holds a BA in Economics from the University of Waterloo and an MBA from the Rotman School of Management at the University of Toronto. She holds the CPA, CMA designations and is a graduate of the Institute of Corporate Directors.

***Barbara Zvan, Chief Risk & Strategy Officer***—Ms. Barbara Zvan and her team provide liability and risk expertise focused on long-term Total Fund investment strategy, risk management and the governance framework. Ms. Zvan and her team are also charged with ensuring the Plan is sustainable, and that the funding risk is aligned

to the Board's Risk Appetite Statement. Ms. Zvan joined OTPPB in 1995 as an assistant portfolio manager and has risen to positions of increasing authority. As Chief Risk & Strategy Officer, she leads the Strategy & Risk team in supporting the Plan Sponsors in plan design decisions and the Board in determining the appropriate benchmarks and risk appetite. Ms. Zvan and her team provide input and risk insights to the investing teams and create an effective risk management framework to underpin it. In addition, Ms. Zvan drives the responsible investing and climate change risk management and strategy for the Fund and directs the Enterprise and Operational Risk Management approach for the organization. Ms. Zvan is a Fellow of the Society of Actuaries and the Canadian Institute of Actuaries, and holds an M.Math from the University of Waterloo. She is the Chair of the International Centre of Pension Management (ICPM) and serves on the boards of The Cadillac Fairview Corporation Limited, Global Risk Institute and the Canadian Coalition for Good Governance. She was honored as one of Canada's 2008 Top 40 Under 40.

**Jeffrey Davis, Chief Legal and Corporate Affairs Officer**—Mr. Jeffrey Davis oversees the legal team, as well as compliance, corporate communications, government and public affairs, and plan policy. Mr. Davis joined OTPPB in 2004 and was promoted to Vice-President and Associate General Counsel in 2010. A leading securities law expert, Mr. Davis led the legal team in countless transactions around the world and was instrumental in establishing OTPPB's Hong Kong office in 2013. Mr. Davis has nearly 20 years of legal experience, specializing in mergers and acquisitions and corporate finance. Before joining OTPPB, he worked as Senior Vice-President, Corporate and Legal Affairs, at InsLogic Corp., and as a Corporate Associate at Torys LLP. In 2009, Mr. Davis was recognized as one of Lexpert's Rising Stars—Leading Lawyers Under 40, and was a finalist in the Dealmaking category of the Canadian General Counsel Awards. Mr. Davis earned an LLB from Osgoode Hall Law School and a BA from the University of Western Ontario.

**Beth Tyndall, Chief People Officer**—Ms. Beth Tyndall is responsible for OTPPB's human resources function across its global offices in Toronto, London and Hong Kong. Ms. Tyndall joined OTPPB in 2017 after more than a decade at Deloitte, where she was most recently Associate Partner and National Talent Leader, Audit and Consulting, the firm's largest businesses. She was a member of the Consulting and Audit Executive teams, as well as the Global Talent Councils for both businesses. She also previously held the position of National Talent Leader, Tax. Ms. Tyndall has a proven track record in talent strategy design and execution, diversity and inclusion, mergers and acquisitions, leadership development, strategic change, performance management, compensation and culture change. She is recognized as a valued business advisor and launched the first global staff mobility centre of expertise. Ms. Tyndall holds a B.A. in Psychology from Western University and is a Certified Human Resources Leader. She is an active member of the community and involved in several not-for-profit initiatives.

## Issuer

### Board of Directors

The following table sets forth information regarding the directors of OTFT Trustee Limited, as trustee of the Issuer.

<u>Name, Province or State and Country of Residence</u>	<u>Position/Title</u>	<u>Independent</u>	<u>Business Address</u>
Ziad Hindo . . . . . <i>Ontario, Canada</i>	Director	No	5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada
Kevin Duggan . . . . . <i>Ontario, Canada</i>	Director	No	5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada
Jeffrey Davis . . . . . <i>Ontario, Canada</i>	Director	No	5650 Yonge Street, Toronto, Ontario M2M 4H5, Canada

### ***Key Executive Officers***

The following table sets forth information regarding the key executive officers of OTFT Trustee Limited, as trustee of the Issuer.

<u>Name, Province or State and Country of Residence</u>	<u>Position/Title</u>
Bob Nobrega . . . . . <i>Ontario, Canada</i>	Vice-President
Ziad Hindo . . . . . <i>Ontario, Canada</i>	President
Kevin Duggan . . . . . <i>Ontario, Canada</i>	Vice-President

### ***Biographical Information Regarding the Directors and Executive Officers of OTFT Trustee Limited, as trustee of the Issuer***

***Ziad Hindo, Director and President***—Mr. Ziad Hindo joined OTFT as Director and President in December 2016. In addition to his duties at OTFT, he also manages OTPPB’s Capital Markets group, which comprises centralized trading with treasury and execution capabilities to support all of OTPPB’s investment groups. This team is responsible for executing on a centralized trade strategy that allows OTPPB to focus on the needs of today’s more sophisticated trading environment, with its increasing regulatory complexity, and the risks inherent in both. In addition, the capital markets group provides reliable income through Fixed Income & Alternative Investments. Ziad joined OTPPB in 2000 and was most recently Senior Vice-President, Tactical Asset Allocation & Natural Resources. He earned a B.Sc. at the University of York and an M.Sc. from the University of Warwick, and is a CFA charterholder.

***Kevin Duggan, Director and Vice-President***—Mr. Kevin Duggan joined OTFT as vice president in November 2015 and director in December 2016. In addition to his duties at OTFT, he also is responsible for the execution capabilities for all OTPPB’s Capital Markets asset classes as well as oversight for the Treasury Division. Mr. Duggan joined OTPPB in 1997 and was most recently Vice-President, Equity Products within the Tactical Asset Allocation and Natural Resource department. He has over 20 years’ experience in investment management. Kevin holds a B.Comm. from Concordia University and is a CFA charterholder.

***Bob Nobrega, Vice-President***—Mr. Bob Nobrega joined OTFT in October 2015 as vice president.. In addition to his duties at OTFT, he also joined OTPPB in 2012 as a portfolio manager in the Fixed Income and Alternative Investments Division and was appointed Director, Fixed Income Funding in 2014. In this role, he and his team have continued to broaden and deepen the funding tools available to the fund as well as provide input into numerous initiatives including collateral management, liquidity reserving and other strategic initiatives. Mr. Nobrega joined Dominion Securities (later RBC Capital Markets) in 1986 and rose to the position of managing director and global head of fixed income finance in 1995. In subsequent roles he has served as the treasurer for a hedge fund and head of fixed income and equity finance for the Canadian subsidiary of a U.S. investment bank. He holds a BSc from Carleton University and has previously served as the chairman of the IIAC’s Securities Lending and Repurchase Committee, Board member of the IIAC and inaugural member of the North American Repurchase Council.

***Jeffrey Davis, Director***—Mr. Jeffrey Davis joined OTFT as Director in December 2016. In addition to his duties at OTFT, he also oversees the legal team, as well as compliance, corporate communications, government and public affairs, and plan policy at OTPPB. Mr. Davis joined OTPPB in 2004 and was promoted to Vice-President and Associate General Counsel in 2010. A leading securities law expert, Mr. Davis led the legal team in countless transactions around the world and was instrumental in establishing OTPPB’s Hong Kong office in 2013. Mr. Davis has nearly 20 years of legal experience, specializing in mergers and acquisitions and corporate

finance. Before joining OTPPB, he worked as Senior Vice-President, Corporate and Legal Affairs, at InsLogic Corp., and as a Corporate Associate at Torys LLP. In 2009, Mr. Davis was recognized as one of Lexpert's Rising Stars—Leading Lawyers Under 40, and was a finalist in the Dealmaking category of the Canadian General Counsel Awards. Mr. Davis earned an LLB from Osgoode Hall Law School and a BA from the University of Western Ontario.

## DESCRIPTION OF OTHER INDEBTEDNESS

In November 2015, the Issuer began issuing commercial paper, which is guaranteed by the Guarantor, in Canada and the United States through private placements (the “Commercial Paper Program”). The maximum principal amount of the notes permitted to be outstanding at any one time under the Issuer’s Commercial Paper Program is currently set at C\$10 billion. As of June 30, 2017, C\$8.8 billion of commercial paper was outstanding.

In November 2015, the Issuer entered into a credit facility in a maximum amount up to US\$1 billion with two Canadian chartered banks, and the Guarantor guaranteed the obligations of the Issuer under the credit facility. The Issuer is required to post eligible securities (such as securities issued by the government of Canada and the governments of certain provinces) as collateral to each of the lenders prior to any drawdown under the credit facility and the amount available for each draw under the credit facility is based on the value of such posted eligible securities. The credit facility is solely available to be used to repay commercial paper issued by the Issuer under its Commercial Paper Program. The credit facility contains usual and customary covenants, including a restriction on debt (other than debt incurred under the Issuer’s Commercial Paper Program and unsecured debt that is subordinated to or ranks *pari passu* with the debt under the credit facility) and a restriction on liens (other than permitted liens). A change of control of the Issuer would constitute an event of default under the credit facility. As of June 30, 2017, there were no amounts outstanding under the credit facility.

The Plan guarantees the debentures issued by Cadillac Fairview Finance Trust (“CFFT”). No payments have been made by the Plan into CFFT or related to the debentures. The debentures are comprised of \$0.75 billion 4.31% Series B Debentures maturing on January 25, 2021 and \$0.6 billion 3.64% Series C Debentures maturing on May 9, 2018. The debentures, included in the Plan’s real estate investment-related liabilities, may be redeemed by CFFT at any time prior to maturity.

## DESCRIPTION OF NOTES

*The following summary of certain terms of the Notes and related Guarantee does not purport to be complete and is subject to, and qualified in its entirety by reference to, the actual terms of the Notes, the Guarantee and the Fiscal and Paying Agency Agreement.*

The Notes were issued pursuant to a fiscal and paying agency agreement dated September 19, 2017 (the “Fiscal and Paying Agency Agreement”), among Ontario Teachers’ Finance Trust (the “Issuer”), Ontario Teachers’ Pension Plan Board, as guarantor (the “Guarantor”) and The Bank of New York Mellon, as fiscal agent, paying agent, transfer agent and registrar (the “Fiscal and Paying Agent”). The holders of the Notes will benefit from and will be deemed bound by the provisions of the Fiscal and Paying Agency Agreement. The Fiscal and Paying Agent will perform administrative duties for the Issuer such as sending interest payments and notices to the relevant persons. References in these listing particulars the “Fiscal and Paying Agent” include any successor fiscal and paying agent. The following summary describes the material terms and provisions of the Notes, the related Guarantee and the Fiscal and Paying Agency Agreement. However, it is the Notes, the related Guarantee and the Fiscal and Paying Agency Agreement, and not this summary, that govern your rights as a holder of the Notes. Because this is a summary, it may not contain all the information that is important to you. Copies of the Fiscal and Paying Agency Agreement and the form of the Notes are available as described under “Available Information.”

### General

The Notes:

- are direct, unsecured and unsubordinated obligations of the Issuer and ranks equally and ratably in right of payment with all other present and future unsecured and unsubordinated indebtedness of the Issuer;
- are unconditionally and irrevocably guaranteed by the Guarantor;
- are structurally subordinated to any existing and future indebtedness and other liabilities of the Issuer’s subsidiaries;
- are effectively junior to any future secured indebtedness of the Issuer to the extent of the value of the assets securing such indebtedness;
- are senior in right of payment to all future subordinated indebtedness of the Issuer;
- are issued in US\$1,750,000,000 initial aggregate principal amount;
- will mature on September 19, 2022;

The Guarantee by the Guarantor is:

- a direct, unsecured and unsubordinated obligation of the Guarantor and ranks equally and ratably in right of payment with the Guarantor’s other unsecured and unsubordinated indebtedness. Claims under the Guarantee are entitled to priority of payment ahead of the accrued benefit entitlements of members, former members, retired members and any other persons entitled to a benefit under the Ontario Teachers’ Pension Plan (the “Plan”) in respect of a member, former member, or retired member before any other distribution is made upon an insolvency or winding-up of the Plan;
- structurally subordinated to any existing and future indebtedness and other liabilities of the Guarantor’s subsidiaries (other than the Issuer);
- effectively junior to any future secured indebtedness of the Guarantor to the extent of the value of the assets securing such indebtedness; and
- senior in right of payment to all future subordinated indebtedness of the Guarantor.

## **Interest**

The Notes bear interest at the rate of 2.125% per annum. The first interest period shall be the period from and including the issue date of the Notes to but not including March 19, 2018. The interest period relating to subsequent Interest Payment Dates (as defined below) shall be the period from and including the preceding Interest Payment Date to but not including the relevant Interest Payment Date. Interest on the Notes will be payable semi-annually in arrears on March 19 and September 19 of each year (each, an “Interest Payment Date”), commencing March 19, 2018, to holders of record on March 4 or September 4, respectively, immediately preceding the applicable Interest Payment Date (whether or not a Business Day, as defined below). Interest on the Notes will be computed on the basis of a 360-day year consisting of twelve 30-day months.

The Notes will bear interest on overdue principal, and overdue interest, at the rate otherwise applicable to the Notes, all as described in the Fiscal and Paying Agency Agreement.

If any Interest Payment Date or the maturity date should fall on a date that is not a Business Day (as defined herein), such payment will be postponed to the next succeeding Business Day as if made on the date that payment was due, and no interest will accrue on that payment for the period from and after the relevant payment date to the date of that payment on the next succeeding Business Day. A “Business Day” means each day that is not a Saturday, Sunday or other day on which banking institutions in New York, New York, Toronto, Ontario, or the place of payment on the Notes in the United States are authorized or required by law to close.

Payment of the principal, premium, if any, and interest on the Notes will be made in U.S. dollars. The Notes will be sold in denominations of US\$250,000 and integral multiples of US\$1,000 in excess thereof.

## **The Fiscal and Paying Agent**

The Fiscal and Paying Agent acts as the Issuer’s agent with respect to the Notes through its corporate trust office in New York, New York. The Fiscal and Paying Agency Agreement provides that the Issuer may remove the Fiscal and Paying Agent upon 30 days’ written notice and either appoint a new fiscal and paying agent or undertake to perform any or all of the functions of the Fiscal and Paying Agent, and that, under such circumstances, the Fiscal and Paying Agency Agreement shall terminate.

The Fiscal and Paying Agent serves only as the Issuer’s agent and will not assume any fiduciary duties for the holders of the Notes, except that all funds deposited with the Fiscal and Paying Agent for payment of the Notes will be held in trust by it for the benefit of the holders of the Notes until disbursed to such holders subject to certain rights of the Issuer with respect to such money that remains unclaimed for one year after such principal or interest has become due and payable. The Fiscal and Paying Agent has no responsibility for taking any discretionary actions on behalf of holders of the Notes, including in connection with an event of default under the Notes.

Because the Notes are not issued pursuant to an indenture, each holder will be responsible for acting independently with respect to certain matters affecting such holder’s Note, including enforcing the agreements or covenants contained therein, responding to any requests for consents, waivers or amendments, giving written notice of default in performance of any agreements or covenants contained therein or accelerating the maturity of the Notes upon the occurrence of an event of default.

Payments of interest and principal will be made in accordance with the procedures set forth under “—Book-Entry System” below.

The Notes are not entitled to the benefits of any sinking fund.

## **Further Issuances**

The Issuer may from time to time without notice to, or the consent of, the holders of the Notes, issue additional Notes under the Fiscal and Paying Agency Agreement, which will be part of the same issue as the



Notes issued in the Offering Memorandum and will be treated as Notes of the same series, including for purposes of voting status, redemptions, offers to purchase and otherwise and will rank equally and have the same terms as the Notes offered hereby in all respects (except for the original issue price, the issue date of the additional Notes and the initial interest payment date); *provided* that such additional Notes will not be issued with the same CUSIP or ISIN, as applicable, as Notes existing at such time unless such additional Notes are fungible with such Notes.

### **Guarantee**

The Guarantor unconditionally and irrevocably guarantees on a senior, direct and unsecured basis the payment of the principal of, premium, if any, and interest on the Notes issued by the Issuer and any Additional Amounts (as defined below) payable with respect to the Notes when they become due and payable, whether at the stated maturity thereof, by declaration of acceleration or otherwise. The Guarantee by the Guarantor will be in force at all times while the Notes are outstanding.

The Government of Ontario has no obligations under the Notes or the Guarantee.

### **Book-Entry System**

The Depository Trust Company (“DTC”) will act as securities depository for the Notes. The Notes will be issued as fully-registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One or more fully-registered global Notes will be issued for the Notes, in the aggregate principal amount of such issue, and will be deposited with DTC. See “Book Entry, Delivery and Form” in these listing particulars.

### **Certificated Notes**

DTC may discontinue providing its services as depository with respect to the Notes at any time by giving reasonable notice to the Issuer and the Fiscal and Paying Agent. Under these circumstances, and in the event that a successor depository is not appointed, Notes in certificated form are required to be printed and delivered. If at any time DTC ceases to be a clearing agency registered under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) and a successor depository is not appointed by the Issuer within 90 days or if there shall have occurred and be continuing an event of default under the Fiscal and Paying Agency Agreement with respect to the Notes and the Issuer has received a request from a beneficial holder of outstanding Notes to issue Notes in certificated form to such holder, the Issuer will issue Notes in certificated form in exchange for the global notes. Also, the Issuer may decide to discontinue use of the system of book-entry transfers through DTC (or a successor depository). In that event, Notes in certificated form will be printed and delivered.

### **Listing**

An application has been made to list the Notes on the Official List of the Irish Stock Exchange and to admit the Notes for trading on the Global Exchange Market thereof.

### **Forced Transfer**

Each initial purchaser of any Note that is offered for sale within the United States or to U.S. persons as defined in Regulation S pursuant to Rule 144A (“Rule 144A”) of the Securities Act of 1933, as amended (the “Securities Act”) (“U.S. Persons”) (a “Covered Note”), and each transferee of an interest in a Covered Note that is a U.S. Person or acquiring such interest within the United States, will be deemed to represent at the time of purchase that, among other things, it is a “qualified institutional buyer” under Rule 144A and also a “qualified purchaser” under the Investment Company Act of 1940, as amended (the “Investment Company Act”) (for purposes of this “Forced Transfer” section, a “QIB/QP”).



The Covered Notes provide that if, notwithstanding the restrictions on transfer contained therein, the Issuer determines that any holder of a Covered Note is a U.S. Person and is not a QIB/QP at the time it acquires such Covered Note (any such person, for purposes of this “Forced Transfer” section, a “Non-Permitted Noteholder”), the Issuer shall, promptly after determining that such person is a Non-Permitted Noteholder, send notice to such Non-Permitted Noteholder demanding that such Non-Permitted Noteholder transfer its interest in the Covered Note to a person that is not a Non-Permitted Noteholder as soon as practicable. If such Non-Permitted Noteholder fails to effect the transfer promptly, (a) the Issuer shall cause such beneficial interest to be transferred in a commercially reasonable sale to a person or entity that certifies to the Issuer, in connection with such transfer, that such person or entity either is not a U.S. person or is a QIB/QP, and (b) pending such transfer, no further payments will be made in respect of such beneficial interest; *provided, however*, that such Non-Permitted Noteholder will be deemed to have agreed that, if any further payments in respect of such beneficial interest are in fact received by such Non-Permitted Noteholder, such payments shall be held in trust for the benefit of the Issuer and shall be turned over to the Issuer on demand. Depending on the circumstances, the Issuer also reserves the right to treat a Non-Permitted Noteholder’s interest in the Notes of as void ab initio.

### **Consolidation, Amalgamation, Merger and Sale of Assets**

Neither the Issuer nor the Guarantor may consolidate or amalgamate with or merge into or enter into any statutory arrangement with any other person, or convey, transfer or lease, directly or indirectly, all or substantially all the Issuer’s or the Guarantor’s properties and assets to any person, unless:

- the person formed by or continuing from such consolidation or amalgamation or into which the Issuer or the Guarantor are merged or with which the Issuer or the Guarantor enter into such statutory arrangement or the person which acquires or leases all or substantially all of the Issuer’s or the Guarantor’s properties and assets, as the case may be, is organized and existing under the laws of Canada or any province or territory thereof, or if such consolidation, amalgamation, merger, statutory arrangement or other transaction would not impair the rights of holders of the Notes, under the laws of any other country; *provided* that if such successor entity is organized under the laws of a jurisdiction other than the United States, any state thereof or the District of Columbia, or the laws of Canada or any province or territory thereof, the successor entity assumes the Guarantor’s obligations, as the case may be, under the Notes and the Fiscal and Paying Agency Agreement to pay Additional Amounts, with the name of such successor jurisdiction being included in addition to Canada in each place that Canada appears in “Payment of Additional Amounts” and in “Tax Redemption” below;
- any successor person to the Issuer (if not the Issuer) expressly assumes all of the Issuer’s obligations under the Notes and under the Fiscal and Paying Agency Agreement; and any successor person to the Guarantor (if not the Guarantor) expressly assumes all of the Guarantor’s obligations under the Guarantee and the Fiscal and Paying Agency Agreement and the performance and observance of every covenant in the Notes, the Guarantee and the Fiscal and Paying Agency Agreement to be performed or observed by the Guarantor, as applicable;
- immediately before and after giving effect to such transaction, no event of default, and no event which, after notice or lapse of time or both, would become an event of default, shall have happened and be continuing; and
- the Issuer or its successor person or the Guarantor or its successor person, as the case may be, delivers to the Fiscal and Paying Agent a certificate signed by one of its Authorized Signatories (as defined herein) and an opinion of counsel stating that such amalgamation, statutory arrangement, consolidation, merger, conveyance, transfer or lease complies with the Fiscal and Paying Agency Agreement and the Notes. “Authorized Signatory” means the person or persons authorized to give and receive instructions and notices on behalf of the Issuer or the Guarantor, as applicable, under the Fiscal and Paying Agency Agreement, to be evidenced by a written certificate furnished to the Fiscal and Paying Agent containing the specimen signature of such person(s) and signed on behalf of the Issuer or the Guarantor, as applicable.

This “Merger, Consolidation or Sale of Assets” covenant will not apply to any sale, assignment, transfer, conveyance, lease or other disposition of assets between or among the Issuer or the Guarantor and their subsidiaries.

### **Maturity and Redemption**

The entire principal amount of the Notes together with accrued interest thereon will mature and is payable on September 19, 2022. The Notes will not be redeemable prior to maturity at the option of the Issuer or the Guarantor (except as provided in “—Tax Redemption”). The Issuer and its affiliates may at any time and from time to time purchase Notes in the open market or otherwise.

### **Payment of Additional Amounts**

All payments made by or on behalf of the Issuer or the Guarantor under or with respect to the Notes or the Guarantee will be made free and clear of and without withholding or deduction for or on account of any present or future tax, duty, levy, impost, assessment or other governmental charge (including penalties, interest and other liabilities related thereto) imposed or levied by or on behalf of the Government of Canada or any province or territory thereof or by any authority or agency therein or thereof having power to tax (hereinafter, “Canadian Taxes”), unless the Issuer is or the Guarantor is, as the case may be, required to withhold or deduct Canadian Taxes by law or by the interpretation or administration thereof. If the Issuer is or the Guarantor is so required to withhold or deduct any amount for or on account of Canadian Taxes from any payment made under or with respect to the Notes or the Guarantee, the Issuer or the Guarantor, as the case may be, will pay to each holder of such Notes such additional amounts (“Additional Amounts”) as may be necessary so that the net amount received by each such holder (including the Additional Amounts) after such withholding or deduction will not be less than the amount such holder would have received if such Canadian Taxes had not been withheld or deducted. However, no Additional Amounts will be payable with respect to a payment made to a Note holder or the beneficial owner of a Note (each such holder, an “Excluded Holder”):

- which does not deal at arm’s length (for the purposes of the *Income Tax Act* (Canada) and the Income Tax Regulations (collectively, the “Tax Act”)) with the Issuer or the Guarantor at the time the amount is paid or payable or is, or does not deal at arm’s length with any person who is, a “specified beneficiary” of the Issuer for purposes of the thin capitalization rules in the Tax Act;
- which is subject to such Canadian Taxes by reason of the Note holder or beneficial owner thereof (or any fiduciary, settlor, beneficiary, member or shareholder of, or possessor of power over, such holder or beneficial owner, if such holder or beneficial owner is an estate, trust, partnership, limited liability company or corporation) being a resident, domicile or national of, or engaged in business or maintaining a permanent establishment or other physical presence in or otherwise having some present or former connection with Canada or any province or territory thereof otherwise than by the mere holding of the Notes or the receipt of payments thereunder; or
- which is subject to such Canadian Taxes by reason of the Note holder’s or beneficial owner’s failure to comply with any certification, identification, information, documentation or other reporting requirements if compliance is required by law, regulation, administrative practice or an applicable treaty as a precondition to exemption from, or a reduction in the rate of deduction or withholding of, such Canadian Taxes or is otherwise reasonably requested by the Issuer or Guarantor to support a claim for relief or exemption from such tax.

In addition, Additional Amounts will not be payable:

- if the holder of such Notes is not the sole beneficial owner of such payments, or is a fiduciary or partnership, to the extent that any beneficial owner, beneficiary or settlor with respect to such fiduciary or any partner or member of such partnership would not have been entitled to such Additional Amounts with respect to such payments had such beneficial owner, beneficiary, settlor, partner or member received directly its beneficial or distributive shares of such payments;

- with respect to any Canadian Taxes which are payable otherwise than by withholding from payments of, or in respect of, principal of, or interest on, the Notes;
- with respect to any estate, inheritance, gift, sales, transfer or personal property tax or any similar tax, assessment or other governmental charge;
- with respect to any Canadian Taxes that would not have been imposed but for the presentation by the holder of a Note for payment more than 30 days after the date on which such payment became due and payable or on which payment thereof was duly provided for, whichever occurs later;
- with respect to any Canadian Taxes required to be deducted or withheld by any paying agent from a payment on a Note, if such payment can be made without such deduction or withholding by any other paying agent;
- any withholding or deduction imposed pursuant to (i) Sections 1471 to 1474 of the U.S. Internal Revenue Code of 1986, as amended (“FATCA”), or any successor version thereof, or any similar legislation imposed by any other governmental authority, (ii) any treaty, law, regulation or other official guidance enacted by Canada implementing FATCA or an intergovernmental agreement with respect to FATCA or any similar legislation imposed by any other governmental authority, or (iii) any agreement between the Issuer or the Guarantor and the United States or any authority thereof implementing FATCA; or
- any combination of the items listed above.

As a result of the foregoing, there are circumstances in which taxes could be withheld or deducted but Additional Amounts would not be payable to some or all beneficial owners of Notes.

The Issuer or the Guarantor, as the case may be, will also:

- make such withholding or deduction; and
- remit the full amount deducted or withheld to the relevant authority in accordance with applicable law.

Wherever in the Notes or the Fiscal and Paying Agency Agreement there is mentioned, in any context, the payment of principal (and premium, if any), interest, if any, or any other amount payable under or with respect to a Note or the Guarantee, such mention shall be deemed to include mention of the payment of Additional Amounts to the extent that, in such context, Additional Amounts are, were or would be payable in respect thereof.

## **Tax Redemption**

The Issuer may at its sole discretion elect to redeem the Notes at any time, in whole and not in part, at a redemption price equal to the principal amount thereof together with accrued and unpaid interest (including Additional Amounts) to the date fixed for redemption, upon the giving of a notice as described below, if:

- as a result of any change in or amendment to (including any officially announced prospective change or amendment) the laws (or any rules, regulations, rulings or administrative pronouncements thereunder) of Canada or of any political subdivision or taxing authority thereof or therein affecting taxation, or any change in official position regarding the application or interpretation of such laws, rules, regulations, rulings or administrative pronouncements (including a holding by a court of competent jurisdiction), which change or amendment is announced or becomes effective (assuming, in the case of any announced prospective change, that such announced change will become effective as of the date specified in such announcement and in the form announced) on or after the later of (i) September 12, 2017 or (ii) if applicable, the date a party organized in a jurisdiction other than Canada becomes the Issuer’s successor or the Guarantor’s successor, the Issuer or such successor or the Guarantor or such successor, as the case may be, reasonably determine that the Issuer has or will or the Guarantor has or

will, as the case may be, become obligated to pay, on the next succeeding date on which interest is due, Additional Amounts with respect to any note as described under “—Payment of Additional Amounts” or the Guarantee; or

- on or after the later of (i) September 12, 2017 or (ii) if applicable, the date a party organized in a jurisdiction other than Canada becomes the Issuer’s successor or the Guarantor’s successor, any action has been taken by any taxing authority of, or any decision has been rendered by a court of competent jurisdiction in, Canada or any political subdivision or taxing authority thereof or therein, including any of those actions specified in the paragraph immediately above, whether or not such action was taken or decision was rendered with respect to the Issuer or such successor or to the Guarantor or its successor, as the case may be, or any change, amendment, application or interpretation shall be officially proposed (assuming that such announced change will become effective as of the date specified in such announcement and in the form announced), which, in any such case, in the written opinion to the Issuer or the Guarantor, as the case may be, of legal counsel of recognized standing, will likely result in the Issuer or its successor or the Guarantor or its successor, as the case may be, becoming obligated to pay, on the next succeeding date on which interest is due, Additional Amounts with respect to the Notes;

and, in any such case, the Issuer or the Guarantor, as the case may be, in the Issuer’s or the Guarantor’s business judgment (or the Issuer’s successor’s or Guarantor’s successor’s business judgment), determine that such obligation cannot be avoided by the use of reasonable measures available to the Issuer or the Guarantor. For the avoidance of doubt, reasonable measures do not include a change in the terms of the debt securities or a substitution of the debtor.

No redemption of the notes shall be made pursuant to this provision unless the Issuer shall deliver to the Fiscal and Paying Agent a certificate, signed by an Authorized Signatory, stating that the Issuer is entitled to redeem such notes pursuant to their terms.

Notice of intention to redeem the Notes will be given not earlier than 60 nor later than 30 days prior to the date on which the Issuer or the Guarantor (or the Issuer’s successor or Guarantor’s successor) would become obligated to pay such Additional Amounts were a payment in respect of the Notes then due.

### **Provision of Financial Information; Reports**

The Guarantor will furnish to the holders of the Notes, within the later of (i) 180 days after the end of each of its fiscal years and (ii) the outside date contemplated by Section 76 of Regulation 909 under the PBA, the combined financial statements of the Guarantor for such year and copies of the annual report that the Guarantor makes publicly available; it being agreed and understood that the posting of such financial statements on the Guarantor’s website will satisfy the requirement under this covenant to furnish such statements to the holders of the Notes. In addition, the Issuer and the Guarantor will agree that, for so long as any Notes remain outstanding, the Issuer and the Guarantor will make available to holders of the Notes and prospective purchasers thereof, upon request, the information required to be delivered pursuant to Rule 144A(d)(4) under the Securities Act for the Issuer and the Guarantor.

### **Holding in the Issuer**

At all times the Guarantor will hold, directly or indirectly, all of the outstanding voting securities of the Issuer.

### **Events of Default**

The following is a summary of events of default with respect to the Notes:

- default in the payment of any interest on the Notes when it becomes due and payable, and continuance of such default for a period of 30 days;

- default in the payment of the principal of (or premium, if any, on), the Notes when it becomes due and payable;
- default in the performance, or breach, of any of the Issuer's or the Guarantor's covenants or warranties in the Fiscal and Paying Agency Agreement, the Notes or the Guarantee (other than a covenant or warranty a default in the performance of which or the breach of which is specifically dealt with elsewhere in the Fiscal and Paying Agency Agreement, the Notes or the Guarantee, as applicable), and continuance of such default or breach for a period of 60 days after receipt by the Issuer or the Guarantor, of written notice to the Issuer or the Guarantor, specifying such default or breach, by the holders of at least 25% in principal amount of all outstanding Notes; *provided* that in the case of a default in the provision described under "Provision of Financial Information; Reports," such period of continuance of such default will be 90 days after receipt of such written notice;
- the obligations of the Guarantor under the Guarantee cease to constitute the legal, valid and binding obligations of the Guarantor, or the Guarantee ceases to be in full force and effect, or the Guarantor will have contested the validity of the Guarantee;
- the entry of a decree or order by a court having jurisdiction in the premises adjudging the Issuer or the Guarantor bankrupt or insolvent, or approving as properly filed a petition seeking reorganization, arrangement, adjustment or composition of in respect of the Issuer or the Guarantor under the *Bankruptcy and Insolvency Act* (Canada), the *Companies' Creditors Arrangement Act* (Canada) or any other applicable insolvency law, or appointing a receiver, liquidator, assignee, trustee, sequestrator (or similar official) of the Issuer or of any substantial part of the Issuer's property, or of the Guarantor or of any substantial part of its property, or ordering the winding up or liquidation of the Issuer's or the Guarantor's affairs, and any such decree or order remains undismissed or unstayed for a period of 60 consecutive days;
- the institution by the Issuer or the Guarantor of proceedings to be adjudicated bankrupt or insolvent, or the consent by the Issuer or the Guarantor, as the case may be, to the institution of bankruptcy or insolvency proceedings against the Issuer or the Guarantor, as the case may be, or the filing by the Issuer or the Guarantor of a petition or answer or consent seeking reorganization or relief under the *Bankruptcy and Insolvency Act* (Canada), the *Companies' Creditors Arrangement Act* (Canada) or any other applicable insolvency law, or the consent by the Issuer or the Guarantor, as the case may be, to the filing of any such petition or to the appointment of a receiver, liquidator, assignee, trustee, sequestrator (or other similar official) of the Issuer or of any substantial part of the Issuer's property, or the Guarantor or of any substantial part of its property, as the case may be, or the making by the Issuer or the Guarantor of an assignment for the benefit of creditors, or the admission by the Issuer or the Guarantor in writing of an inability to pay the Issuer's or the Guarantor's debts, as the case may be, generally as they become due;
- the entry of a winding up order of the Plan under the PBA or any other applicable legislation and any such order remains undismissed or unstayed for a period of 60 consecutive days; or
- the institution of winding up proceedings under the PBA or any other applicable legislation.

The Issuer will promptly notify, and provide copies of such notice to, the Fiscal and Paying Agent of the occurrence of any event of default. The Fiscal and Paying Agent will promptly deliver such copies of the notice to the holders of the Notes unless the event of default shall have been cured or waived before the giving of such notice.

If an event of default under the Fiscal and Paying Agency Agreement with respect to the Notes occurs and is continuing (except an event of default specified in the last four bullet points above relating to bankruptcy, insolvency and similar events with respect to the Issuer and the Guarantor and the winding up of the Plan), then holders of at least 25% in aggregate principal amount of the outstanding Notes may declare the entire principal amount of all Notes and all accrued and unpaid interest thereon to be immediately due and payable. However, at

any time after a declaration of acceleration with respect to the Notes has been made, but before a judgment or decree for payment of the money due has been obtained, the holders of a majority in principal amount of the outstanding Notes, by written notice to the Issuer and the Fiscal and Paying Agent under certain circumstances, may rescind and annul such acceleration. Upon the occurrence of an event of default specified in the last four bullet points above relating to bankruptcy, insolvency and similar events with respect to the Issuer and the Guarantor and the winding up of the Plan, the principal, premium, if any, and all unpaid interest on the Notes will automatically become payable.

The Fiscal and Paying Agent will not act as a fiduciary for the holders of the Notes and will have no responsibility for the enforcement of remedies following an event of default. The Fiscal and Paying Agent will not have any special duties arise after the occurrence of an event of default.

### **Defeasance and Covenant Defeasance**

The Fiscal and Paying Agency Agreement and the Notes provide that, at the Issuer's or the Guarantor's option, each of the Issuer and the Guarantor will be discharged from any and all of its obligations in respect of the outstanding Notes upon irrevocable deposit with the Fiscal and Paying Agent, by the Issuer or the Guarantor, in trust, of money and/or U.S. government securities which will provide money in an amount sufficient in the opinion of a nationally recognized firm of independent chartered professional accountants, to pay the principal of (and premium, if any, and each installment of interest, if any, on) the outstanding Notes (hereinafter referred to as a "defeasance") (except with respect to the authentication, transfer, exchange or replacement of the Notes or the maintenance of a place of payment and certain other obligations set forth in the Fiscal and Paying Agency Agreement or the Notes). Such trust may only be established if among other things:

- the Issuer or the Guarantor has delivered to the Fiscal and Paying Agent an opinion of counsel in the United States stating that (i) the Issuer or the Guarantor, as the case may be, has received from, or there has been published by, the Internal Revenue Service a ruling, or (ii) since the date of execution of the Fiscal and Paying Agency Agreement, there has been a change in the applicable U.S. federal income tax law, in either case to the effect that the holders of the outstanding Notes will not recognize income, gain or loss for U.S. federal income tax purposes as a result of such defeasance and will be subject to U.S. federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such defeasance had not occurred;
- the Issuer or the Guarantor has delivered to the Fiscal and Paying Agent an opinion of counsel in Canada or a ruling from the Canada Revenue Agency (or successor agency) to the effect that the holders of the outstanding Notes should not recognize income, gain or loss for Canadian federal or provincial income purposes as a result of such defeasance and should be subject to Canadian federal or provincial income on the same amounts, in the same manner and at the same times as would have been the case had such defeasance not occurred (and for the purposes of such opinion, such Canadian counsel shall assume that holders of the outstanding Notes include holders who are not resident in Canada);
- no event of default or event that, with the passing of time or the giving of notice, or both, shall constitute an event of default shall have occurred and be continuing on the date of such deposit; and
- neither the Issuer nor the Guarantor is an "insolvent person" within the meaning of the Bankruptcy and Insolvency Act (Canada) on the date of such deposit or at any time during the period ending on the 91st day following such deposit.

The defeasance option may be exercised notwithstanding the prior exercise of the covenant defeasance option described in the following paragraph if the conditions described in the preceding sentence at the time the defeasance option is exercised are met.

The Fiscal and Paying Agency Agreement and the Notes will provide that, at the Issuer or the Guarantor's option, unless and until the defeasance option described in the preceding paragraph has been exercised, the Issuer



and the Guarantor may omit to comply with the “Consolidation, Amalgamation, Merger and Sale of Assets” covenant and certain other covenants and such omission shall not be deemed to be an event of default under the Fiscal and Paying Agency Agreement and the outstanding Notes upon irrevocable deposit with the Fiscal and Paying Agent, in trust, of money and/or U.S. government securities which will provide funds in an amount sufficient in the opinion of a nationally recognized firm of independent chartered professional accountants to pay the principal of (and premium, if any, and each installment of interest, if any, on) the outstanding Notes (hereinafter referred to as “covenant defeasance”). If the Issuer or the Guarantor exercise the covenant defeasance option, the obligations under the Notes and the Fiscal and Paying Agency Agreement other than with respect to such defeased covenants and the events of default other than with respect to such defeased covenants shall remain in full force and effect. Such trust may only be established if, among other things:

- the Issuer or the Guarantor has delivered to the Fiscal and Paying Agent an opinion of counsel in the United States to the effect that the holders of the outstanding Notes will not recognize income, gain or loss for U.S. federal income tax purposes as a result of such covenant defeasance and will be subject to U.S. federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such covenant defeasance had not occurred;
- the Issuer or the Guarantor has delivered to the Fiscal and Paying Agent an opinion of counsel in Canada or a ruling from the Canada Revenue Agency (or successor agency) to the effect that the holders of the outstanding Notes will not recognize income, gain or loss for Canadian federal or provincial income or other tax purposes as a result of such covenant defeasance and will be subject to Canadian federal or provincial income and other tax on the same amounts, in the same manner and at the same times as would have been the case had such covenant defeasance not occurred (and for the purposes of such opinion, such Canadian counsel shall assume that holders of the outstanding Notes include holders who are not resident in Canada);
- no event of default or event that, with the passing of time or the giving of notice, or both, shall constitute an event of default shall have occurred and be continuing on the date of such deposit; and
- neither the Issuer nor the Guarantor is an “insolvent person” within the meaning of the *Bankruptcy and Insolvency Act* (Canada) on the date of such deposit or at any time during the period ending on the 91st day following such deposit.

### **Modification and Waiver**

Modifications and amendments of the Fiscal and Paying Agency Agreement, the Notes and the Guarantee may be made by us, the Guarantor and the Fiscal and Paying Agent with the consent of the holders of more than 50% of the principal amount of the outstanding Notes; *provided, however*, that no such modification or amendment may, without the consent of the holders of not less than 75% of the principal amount of the outstanding Notes:

- change the stated maturity of the principal of, or any installment of interest, if any, on any Note;
- reduce the principal amount of (or premium, if any, or interest, if any, on) any Note;
- reduce the amount of principal of a Note payable upon acceleration of the maturity thereof;
- change any obligation to pay Additional Amounts, except as contemplated by the Fiscal and Paying Agency Agreement and the Notes;
- change the place of payment;
- change the currency of payment of principal of (or premium, if any, or interest, if any, on) any Note;
- impair the right to institute suit for the enforcement of any payment on or with respect to any Note;
- reduce the percentage of principal amount of outstanding Notes required for modification or amendment of the Fiscal and Paying Agency Agreement or the Notes or for waiver of compliance with

certain provisions of the Fiscal and Paying Agency Agreement or the Notes or for waiver of certain defaults; or

- modify any provisions of the Fiscal and Paying Agency Agreement or the Notes relating to the modification and amendment of the Fiscal and Paying Agency Agreement or the Notes or the waiver of past defaults or covenants except as otherwise specified in the Fiscal and Paying Agency Agreement or the Notes.

The holders of more than 50% of the principal amount of the outstanding Notes may on behalf of the holders of all Notes waive compliance by the Issuer and the Guarantor with certain restrictive provisions of the Fiscal and Paying Agency Agreement or the Notes. The holders of more than 50% of the principal amount of the outstanding Notes may waive any past default under the Fiscal and Paying Agency Agreement or the Notes, except a default in the payment of the principal of (or premium, if any) and interest, if any, on a Note or in respect of a provision which under the Fiscal and Paying Agency Agreement or the Notes cannot be modified or amended without the consent of not less than 75% the holders of the principal amount of outstanding Notes.

The Fiscal and Paying Agency Agreement or the Notes may be amended or supplemented, without the consent of any holder of Notes, in order to, among other things, cure any ambiguity or inconsistency or to make any change, in any case, that does not have a materially adverse effect on the rights of any holder of the Notes.

### **Governing Law**

The Fiscal and Paying Agency Agreement, the Notes and the Guarantee are governed by and construed in accordance with the laws of the State of New York.

### **Enforceability of Judgments**

The Issuer is a trust established under the laws of Ontario. The Guarantor is a contributory defined benefit pension plan co-sponsored by the Province of Ontario and plan members represented by the Ontario Teachers' Federation, governed by the TPA. The directors and executive officers of the Issuer and the Guarantor reside in Canada. As a result, it may not be possible for investors to effect service of process within the United States or in any other jurisdiction outside Canada upon the Issuer, the Guarantor or such persons or to enforce against them in courts of any jurisdiction outside Canada judgments predicated upon the civil liability provisions of the federal or state securities laws of the United States. In addition, it may be difficult for investors to enforce, in Canadian courts or in original actions or actions for enforcement of judgments obtained in courts of jurisdictions outside of Canada, among other things, civil liabilities predicated upon the federal and state securities laws of the United States.

The Issuer and the Guarantor have been advised by their Canadian counsel that a judgment of a United States court predicated solely upon civil liability under such laws would probably be enforceable in Canada if the United States court in which the judgment was obtained has a basis for jurisdiction in the matter that was recognized by a Canadian court for such purposes. The Issuer and the Guarantor have also been advised by such counsel, however, that there is substantial doubt whether an original action could be brought successfully in Canada predicated solely upon such civil liabilities. The TPA also prohibits suits against the Guarantor's directors with respect to official acts performed in good faith in the execution or intended execution of a power or duty under the TPA, the Guarantor or an agreement between the Minister of Education and the executive of The Ontario Teachers' Federation in respect of the Guarantor. Therefore, it may not be possible to enforce those actions against the Issuer, its directors and officers, the Guarantor, its directors and officers or certain of the experts named in these listing particulars.



## BOOK-ENTRY, DELIVERY AND FORM

### The Global Notes

The Notes were issued in the form of several registered Notes in global form, without interest coupons, in minimum denominations of US\$250,000 and in integral multiples of US\$1,000 in excess thereof, as follows:

- Notes sold to “Qualified Institutional Buyers” under Rule 144A who are also “qualified purchasers” under the Investment Company Act (“Restricted Notes”) initially will be represented by one or more global notes (the “Restricted Global Notes”); and
- Notes sold in offshore transactions to non-U.S. Persons in reliance on Regulation S (“Regulation S Notes”) initially will be represented by one or more global notes (the “Regulation S Global Notes” and, together with the Restricted Global Notes, the “Global Notes”).

Upon issuance, the Global Notes were deposited with the Fiscal and Paying Agent as custodian for DTC and registered in the name of Cede & Co., as nominee of DTC.

Ownership of beneficial interests in the Global Notes will be limited to persons who have accounts with DTC (“DTC participants”) or persons who hold interests through DTC participants. The Issuer expects that under procedures established by DTC:

- upon deposit of the Global Notes with DTC’s custodian, DTC will credit portions of the principal amount of the Global Notes to accounts of the DTC participants designated by the initial purchasers; and
- ownership of beneficial interests in the Global Notes will be shown on, and transfer of ownership of those interests will be effected only through, records maintained by DTC (with respect to interests of DTC participants) and the records of DTC participants or persons who hold interests through DTC participants (with respect to other owners of beneficial interests in the Global Notes).

Such accounts initially will be designated by or on behalf of the initial purchasers. Beneficial interests in the Regulation S Global Notes will initially be credited within DTC to DTC participants who act as depositaries for Euroclear Bank S.A. /N.V., as operator of the Euroclear System (“Euroclear”) and Clearstream Banking, *société anonyme* (“Clearstream”), respectively, on behalf of the owners of such interests.

Investors may hold their interests in the Regulation S Global Notes directly through Euroclear or Clearstream, if they are participants in those systems, or indirectly through organizations that are participants in those systems. Investors may also hold their interests in the Regulation S Global Notes through organizations other than Euroclear or Clearstream that are DTC participants. Each of Euroclear and Clearstream will appoint a DTC participant to act as its depositary for the interests in the Regulation S Global Notes that are held within DTC for the account of each settlement system on behalf of its participants.

Beneficial interests in the Global Notes may not be exchanged for Notes in physical, certificated form except in the limited circumstances described below.

The Global Notes and beneficial interests in the Global Notes will be subject to restrictions on transfer and will bear restrictive legends as described under “Transfer Restrictions.”

### Exchanges Among the Global Notes

During the 40-day period following the later of the commencement of the offering and the date the Notes are issued (the “Distribution Compliance Period”), beneficial interests in the Regulation S Global Notes may be transferred only to non-U.S. persons under Regulation S or Qualified Institutional Buyers under Rule 144A who are also qualified purchasers under the Investment Company Act. After the expiration of the Distribution Compliance Period, transfers of beneficial interests in Regulation S Global Notes will not be subject to such restrictions and Regulation S Global Notes will be referred to as “Unrestricted Global Notes”.

Beneficial interests in one Global Note may generally be exchanged for interests in another Global Note. Depending on which Notes are being exchanged, the Fiscal and Paying Agency Agreement or the Notes may require that the seller provide certain written certifications in the form provided in the Fiscal and Paying Agency Agreement.

A beneficial interest in a Global Note that is transferred to a person who takes delivery through another Global Note will, upon transfer, become subject to any transfer restrictions and other procedures applicable to beneficial interests in the other Global Note.

### **Book-Entry Procedures for the Global Notes**

All interests in the Global Notes will be subject to the operations and procedures of DTC, Euroclear and Clearstream. The Issuer provides the following summaries of those operations and procedures solely for the convenience of investors. The operations and procedures of each settlement system are controlled by that settlement system and may be changed at any time. None of the Issuer, the initial purchasers or the Fiscal and Paying Agent is responsible for those operations or procedures.

DTC has advised the Issuer that it is:

- a limited purpose trust company organized under the laws of the State of New York;
- a “banking organization” within the meaning of the New York Banking Law;
- a member of the Federal Reserve System;
- a “clearing corporation” within the meaning of the New York Uniform Commercial Code; and
- a “clearing agency” registered under Section 17A of the Exchange Act.

DTC was created to hold securities for its participants and to facilitate the clearance and settlement of securities transactions between its participants through electronic book-entry changes to the accounts of its participants. DTC’s participants include securities brokers and dealers, including the initial purchasers; banks and trust companies; clearing corporations and other organizations. Indirect access to DTC’s system is also available to others such as banks, brokers, dealers and trust companies; these indirect participants clear through or maintain a custodial relationship with a DTC participant, either directly or indirectly. Investors who are not DTC participants may beneficially own securities held by or on behalf of DTC only through DTC participants or indirect participants in DTC.

So long as DTC’s nominee is the registered owner of a Global Note, that nominee will be considered the sole owner or holder of the Notes represented by that Global Note for all purposes under the Fiscal and Paying Agency Agreement and the Notes. Except as provided below, owners of beneficial interests in a Global Note:

- will not be entitled to have Notes represented by the Global Note registered in their names;
- will not receive or be entitled to receive physical, certificated Notes; and
- will not be considered the owners or holders of the Notes under the Fiscal and Paying Agency Agreement or the Notes for any purpose, including with respect to the giving of any direction, instruction or approval to the Fiscal and Paying Agent under the Fiscal and Paying Agency Agreement or the Notes.

As a result, each investor who owns a beneficial interest in a Global Note must rely on the procedures of DTC to exercise any rights of a holder of Notes under the Fiscal and Paying Agency Agreement or the Notes (and, if the investor is not a participant or an indirect participant in DTC, on the procedures of the DTC participant through which the investor owns its interest).

Payments of principal, premium (if any) and interest with respect to the Notes represented by a global note will be made on behalf of the Issuer by the Fiscal and Paying Agent or other paying agent to DTC's nominee as the registered holder of the Global Note. Neither the Issuer nor the Fiscal and Paying Agent will have any responsibility or liability for the payment of amounts to owners of beneficial interests in a Global Note, for any aspect of the records relating to, or payments made on account of, those interests by DTC, or for maintaining, supervising or reviewing any records of DTC relating to those interests.

Payments by participants and indirect participants in DTC to the owners of beneficial interests in a Global Note will be governed by standing instructions and customary industry practice and will be the responsibility of those participants or indirect participants and DTC.

Transfers between participants in DTC will be effected under DTC's procedures and will be settled in same-day funds. If the laws of a jurisdiction require that certain persons take physical delivery of securities in definitive form, the ability to transfer beneficial interests in a Global Note to such persons may be limited. Because DTC can only act on behalf of participants, who in turn act on behalf of indirect participants and certain banks, the ability of a person holding a beneficial interest in a global note to pledge its interest to a person or entity that does not participate in the DTC system, or otherwise take actions in respect of its interest, may be affected by the lack of a physical security. Transfers between participants in Euroclear or Clearstream will be effected in the ordinary way under the rules and operating procedures of those systems.

Cross-market transfers within a single Global Note between DTC participants, on the one hand, and Euroclear or Clearstream participants, on the other hand, will be effected within DTC through the DTC participants that are acting as depositaries for Euroclear and Clearstream. To deliver or receive an interest in a Global Note held in a Euroclear or Clearstream account, an investor must send transfer instructions to Euroclear or Clearstream, as the case may be, under the rules and procedures of that system and within the established deadlines of that system. If the transaction meets its settlement requirements, Euroclear or Clearstream, as the case may be, will send instructions to its DTC depositary to take action to effect final settlement by delivering or receiving interests in the relevant Global Notes in DTC, and making or receiving payment under normal procedures for same-day funds settlement applicable to DTC. Euroclear and Clearstream participants may not deliver instructions directly to the DTC depositaries that are acting for Euroclear or Clearstream.

Because of time zone differences, the securities account of a Euroclear or Clearstream participant that purchases an interest within a single Global Note from a DTC participant will be credited on the business day for Euroclear or Clearstream immediately following the DTC settlement date. Cash received in Euroclear or Clearstream from the sale of an interest in a Global Note to a DTC participant will be received with value on the DTC settlement date but will be available in the relevant Euroclear or Clearstream cash account as of the business day for Euroclear or Clearstream following the DTC settlement date.

DTC, Euroclear and Clearstream have agreed to the above procedures to facilitate transfers of interests in the Global Notes among participants in those settlement systems. However, the settlement systems are not obligated to perform these procedures and may discontinue or change these procedures at any time. Neither the Issuer nor the Fiscal and Paying Agent will have any responsibility for the performance by DTC, Euroclear or Clearstream or their participants or indirect participants of their obligations under the rules and procedures governing their operations.

### **Certificated Notes**

Notes in physical, certificated form will be issued and delivered to each person that DTC identifies as a beneficial owner of the related Notes only if:

- DTC notifies the Issuer at any time that it is unwilling or unable to continue as depositary for the Global Notes and a successor depositary is not appointed within 90 days;

- DTC ceases to be registered as a clearing agency under the Exchange Act and a successor depositary is not appointed within 90 days;
- The Issuer, at its option, notifies the Fiscal and Paying Agent that it elects to cause the issuance of certificated notes; or
- events of default under the Fiscal and Paying Agency Agreement or the Notes should occur and be continuing.

## TRANSFER RESTRICTIONS

The Notes and the related Guarantee have not been registered for offer or sale under the Securities Act or the securities laws of any other jurisdiction and, unless so registered, may not be offered or sold except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act and any other applicable securities laws. Accordingly, the Notes and the related Guarantee were offered and sold only (A) to persons reasonably believed to be qualified institutional buyers in accordance with Rule 144A who are also qualified purchasers as defined in Section 2(a)(51) under the Investment Company Act and (B) in transactions outside the United States to non-U.S. persons in reliance on Regulation S under the Securities Act (“Regulation S”).

Each purchaser of Notes and the related Guarantee in a transaction relying upon the exemption provided by Rule 144A will be deemed to have acknowledged, represented to and agreed with the Issuer, the Guarantor and the initial purchasers as follows:

(a) It is (i) a “qualified institutional buyer” within the meaning of Rule 144A (a “QIB”), (ii) acquiring the Notes for its own account or for the account of a QIB and (iii) aware, and each beneficial owner of the Notes has been advised, that the sale of the Notes and the related Guarantee to it is being made in reliance on Rule 144A.

(b) It (i) is also a “qualified purchaser” within the meaning of Section 2(a)(51) under the Investment Company Act (a “QP”) that is not (A) a broker-dealer that owns and invests on a discretionary basis less than US\$25 million in securities of unaffiliated issuers or (B) a participant-directed employee plan, such as a 401(k) plan, (ii) is acquiring the Notes for its own account or for the account of a QIB that is also a QP, (iii) is not formed for the purpose of investing in the Issuer, (iv) will, and each account for which it is purchasing will, hold and transfer at least the minimum denomination of Notes and (v) understands that the Issuer may receive a list of participants holding positions in its securities from one or more book-entry depositories.

(c) It understands and acknowledges that the Notes and the related Guarantee have not been registered under the Securities Act or any other applicable securities laws, are being offered for sale in transactions not requiring registration under the Securities Act or any other securities laws, including sales pursuant to Rule 144A, and may not be offered, sold or otherwise transferred except in compliance with registration requirements of the Securities Act and any other applicable securities laws, pursuant to an exemption therefrom or in any transaction not subject thereto and, in each case, in compliance with the conditions for transfer set forth in the paragraphs below.

(d) It is not an “affiliate” (as defined in Rule 144) of the Issuer or the Guarantor or a person acting on behalf of the Issuer, the Guarantor or any such affiliate. It is a QIB who is also a QP and is aware that any sale of Notes to it will be made in reliance on Rule 144A, and the purchase of the Notes will be for its own account or the account of another QIB who is also a QP.

(e) It understands that the Notes and the related Guarantee may not be reoffered, resold, pledged or otherwise transferred except (A) (i) to a person who it reasonably believes is a QIB who is also a QP in a transaction meeting the requirements of Rule 144A, (ii) in an offshore transaction in compliance with Rule 903 or Rule 904 of Regulation S, (iii) pursuant to any other exemption from registration under the Securities Act so long as only to a person who it reasonably believes is a QIB who is also a QP or (iv) pursuant to an effective registration statement under the Securities Act, and (B) in accordance with all applicable securities laws (including, but not limited to, the Investment Company Act).

(f) It understands and acknowledges that the Notes (or any interest therein) may be purchased, sold, pledged or otherwise transferred only in minimum principal amounts of US\$250,000 and integral multiples of US\$1,000 in excess thereof.

(g) It acknowledges that the Notes sold in reliance upon Rule 144A will bear a legend substantially to the following effect for the life of such Notes:

“THE NOTES EVIDENCED HEREBY, AND THE RELATED GUARANTEE, MAY BE PURCHASED AND TRANSFERRED ONLY IN MINIMUM PRINCIPAL AMOUNTS OF US\$250,000 AND INTEGRAL MULTIPLES OF US\$1,000 IN EXCESS THEREOF.

NEITHER THE NOTES EVIDENCED HEREBY NOR THE RELATED GUARANTEE HAVE BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE “**SECURITIES ACT**”). THE NOTES EVIDENCED HEREBY, AND THE RELATED GUARANTEE, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT (A) TO A PERSON WHO THE SELLER REASONABLY BELIEVES (I) IS A QUALIFIED INSTITUTIONAL BUYER WITHIN THE MEANING OF RULE 144A UNDER THE SECURITIES ACT (A “**QUALIFIED INSTITUTIONAL BUYER**”) WHO IS ALSO A QUALIFIED PURCHASER AS DEFINED IN SECTION 2(A)(51) UNDER THE U.S. INVESTMENT COMPANY ACT OF 1940, AS AMENDED (THE “**INVESTMENT COMPANY ACT**”) (A “**QUALIFIED PURCHASER**”) ACQUIRING THIS NOTE FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF ONE OR MORE OTHER QUALIFIED INSTITUTIONAL BUYERS WHO ARE ALSO QUALIFIED PURCHASERS IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 144A, (II) IS NOT A BROKER-DEALER THAT OWNS AND INVESTS ON A DISCRETIONARY BASIS LESS THAN US\$25 MILLION IN SECURITIES OF UNAFFILIATED ISSUERS, (III) IS NOT A PARTICIPANT-DIRECTED EMPLOYEE PLAN, SUCH AS A 401(K) PLAN, (IV) IS NOT FORMED FOR THE PURPOSE OF INVESTING IN THE ISSUER, AND (V) UNDERSTANDS THAT THE ISSUER MAY RECEIVE A LIST OF PARTICIPANTS HOLDING POSITIONS IN ITS SECURITIES FROM ONE OR MORE BOOK-ENTRY DEPOSITARIES, (B) IN AN OFFSHORE TRANSACTION TO A NON-U.S. PERSON COMPLYING WITH RULE 903 OR 904 OF REGULATION S UNDER THE SECURITIES ACT, (C) PURSUANT TO ANY OTHER EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT SO LONG AS ONLY TO A PERSON WHO IT REASONABLY BELIEVES IS A QUALIFIED INSTITUTIONAL BUYER WHO IS ALSO A QUALIFIED PURCHASER OR (D) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT AND, IN EACH CASE, IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS (INCLUDING, BUT NOT LIMITED TO, THE INVESTMENT COMPANY ACT) OF ALL APPLICABLE JURISDICTIONS. THE HOLDER HEREOF, BY ACQUIRING THIS NOTE AND THE RELATED GUARANTEE, REPRESENTS AND AGREES FOR THE BENEFIT OF THE ISSUER AND THE GUARANTOR THAT IT WILL NOTIFY ANY TRANSFEREE OF THIS NOTE FROM IT OF THE RESALE RESTRICTIONS REFERRED TO ABOVE.

NOTWITHSTANDING ANY INSTRUCTIONS TO THE CONTRARY TO THE ISSUER, THE FISCAL AND PAYING AGENT OR ANY INTERMEDIARY, THE ISSUER HAS THE RIGHT UNDER THE FISCAL AND PAYING AGENCY AGREEMENT TO COMPEL ANY BENEFICIAL OWNER THAT IS A U.S. PERSON AND IS NOT A QUALIFIED INSTITUTIONAL BUYER AND A QUALIFIED PURCHASER OR THAT HAS NOT ACQUIRED ITS INTEREST IN THE NOTES IN ACCORDANCE WITH THE TERMS OF THE FISCAL AND PAYING AGENCY AGREEMENT TO SELL ITS INTEREST IN THE NOTES, OR MAY SELL SUCH INTEREST ON BEHALF OF SUCH OWNER. THE ISSUER HAS THE RIGHT TO REFUSE TO HONOR A TRANSFER OF AN INTEREST IN THE NOTES TO A U.S. PERSON WHO IS NOT A QUALIFIED INSTITUTIONAL BUYER AND A QUALIFIED PURCHASER.

NEITHER THE ISSUER NOR THE GUARANTOR HAS BEEN OR WILL BE REGISTERED UNDER THE INVESTMENT COMPANY ACT.”

(h) If it is a Section 3(c)(1) or Section 3(c)(7) investment company and was formed on or before April 30, 1996, it has received the necessary consent from its beneficial owners as required by the Investment Company Act.



(i) It agrees that it will give to each person to whom it transfers the Notes notice of any restrictions on transfer of such Notes and the related Guarantee.

(j) It acknowledges that the fiscal and paying agent will not be required to accept for registration of transfer any Notes except upon presentation of evidence satisfactory to the Issuer that the restrictions set forth therein have been complied with.

(k) It understands that the Issuer has the right under the Fiscal and Paying Agency Agreement to compel any beneficial owner who is a U.S. person that is not both a QIB and a QP and that has not acquired its interest in the Notes in accordance with the terms of the Fiscal and Paying Agency Agreement to sell its interest in the Notes, or may sell such interest on behalf of such owner. The Issuer has the right to refuse to honor a transfer of an interest in the Notes to a U.S. person who is not a QIB and a QP.

(l) It acknowledges that either (i) it is not acquiring or holding any Note with the assets of (A) an “employee benefit plan” (as defined in Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended (“ERISA”)) that is subject to ERISA, (B) a “plan” which is subject to Section 4975 of the Internal Revenue Code of 1986, as amended, (C) any entity deemed under ERISA to hold “plan assets” of any of the foregoing by reason of an employee benefit plan’s or plan’s investment in such entity or (D) a governmental plan, non-U.S. plan or certain church plans subject to applicable law that is similar to the fiduciary responsibility or prohibited transaction provisions of ERISA or Section 4975 of the Internal Revenue Code (“Similar Law”), or (ii) the acquisition and holding of such Note by it, throughout the period that it holds such Note, does not constitute a non-exempt prohibited transaction under ERISA and Section 4975 of the Internal Revenue Code and does not constitute a similar violation under any provisions of Similar Law, as applicable.

(m) It acknowledges that the Issuer, the Guarantor, the initial purchasers and others will rely upon the truth and accuracy of the foregoing acknowledgments, representations, warranties and agreements and agrees that if any of the acknowledgments, representations, warranties and agreements deemed to have been made by its purchase of the Notes are no longer accurate, it shall promptly notify the initial purchasers. If it is acquiring any Notes as a fiduciary or agent for one or more investor accounts, it represents that it has sole investment discretion with respect to each such investor account and that it has full power to make the foregoing acknowledgments, representations and agreements on behalf of each such investor account.

Each purchaser of Notes and the related Guarantee in a transaction made in reliance on Regulation S will be deemed to have acknowledged, represented to and agreed with the Issuer, the Guarantor and the initial purchasers as follows:

(a) It understands and acknowledges that the sale of the Notes and the related Guarantee to it is being made pursuant to and in accordance with Rule 903 or Rule 904 of Regulation S under the Securities Act and it is, or at the time such Notes are purchased, will be, the beneficial owner of such Notes and (A) it is not a U.S. person and is located outside the United States (within the meaning of Regulation S), and (B) it is not an affiliate of the Issuer, the Guarantor or a person acting on behalf of the Issuer, the Guarantor or any such affiliate.

(b) It understands and acknowledges that the Notes and the related Guarantee have not been and will not be registered under the Securities Act and, during the distribution compliance period (defined as (i) any time during the distribution and (ii) otherwise until 40 days after the later of September 12, 2017, and the issuance of the Notes), may not be offered, sold, pledged or otherwise transferred except (A) (i) in an offshore transaction in compliance with Rule 903 or Rule 904 of Regulation S, (ii) to a person who it reasonably believes is a QIB who is also a QP in a transaction meeting the requirements of Rule 144A, (iii) pursuant to any other exemption from registration under the Securities Act or (iv) pursuant to an effective registration statement under the Securities Act, and (B) in accordance with all applicable securities laws (including, but not limited to, the Investment Company Act).

(c) It understands and acknowledges that the Notes (or any interest therein) may be purchased, sold, pledged or otherwise transferred only in minimum principal amounts of US\$250,000 and integral multiples of US\$1,000 in excess thereof.

(d) Each purchaser acknowledges that the Notes sold in reliance upon Regulation S will bear a legend substantially to the following effect:

“THE NOTES EVIDENCED HEREBY, AND THE RELATED GUARANTEE, MAY BE PURCHASED AND TRANSFERRED ONLY IN MINIMUM PRINCIPAL AMOUNTS OF US\$250,000 AND INTEGRAL MULTIPLES OF US\$1,000 IN EXCESS THEREOF.

NEITHER THE NOTES EVIDENCED HEREBY NOR THE RELATED GUARANTEE HAVE BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE “**SECURITIES ACT**”). AT ANY TIME DURING THE DISTRIBUTION AND PRIOR TO THE EXPIRATION OF FORTY DAYS FROM THE LATER OF (1) THE DATE ON WHICH THESE NOTES WERE FIRST OFFERED AND (2) THE DATE OF ISSUANCE OF THESE NOTES, THE NOTES EVIDENCED HEREBY, WITH THE RELATED GUARANTEE, MAY NOT BE OFFERED, SOLD OR DELIVERED WITHIN THE UNITED STATES OR TO A U.S. PERSON (AS DEFINED IN REGULATION S UNDER THE SECURITIES ACT) EXCEPT (A) TO A PERSON WHO THE SELLER REASONABLY BELIEVES (I) IS A QUALIFIED INSTITUTIONAL BUYER WITHIN THE MEANING OF RULE 144A UNDER THE SECURITIES ACT (A “**QUALIFIED INSTITUTIONAL BUYER**”) WHO IS ALSO A QUALIFIED PURCHASER AS DEFINED IN SECTION 2(A)(51) UNDER THE U.S. INVESTMENT COMPANY ACT OF 1940, AS AMENDED (THE “**INVESTMENT COMPANY ACT**”) (A “**QUALIFIED PURCHASER**”) ACQUIRING THIS NOTE FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF ONE OR MORE OTHER QUALIFIED INSTITUTIONAL BUYERS WHO ARE ALSO QUALIFIED PURCHASERS IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 144A, (II) IS NOT A BROKER-DEALER THAT OWNS AND INVESTS ON A DISCRETIONARY BASIS LESS THAN US\$25 MILLION IN SECURITIES OF UNAFFILIATED ISSUERS, (III) IS NOT A PARTICIPANT-DIRECTED EMPLOYEE PLAN, SUCH AS A 401(K) PLAN, (IV) IS NOT FORMED FOR THE PURPOSE OF INVESTING IN THE ISSUER, AND (V) UNDERSTANDS THAT THE ISSUER MAY RECEIVE A LIST OF PARTICIPANTS HOLDING POSITIONS IN ITS SECURITIES FROM ONE OR MORE BOOK-ENTRY DEPOSITARIES, (B) PURSUANT TO ANY OTHER EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OR (C) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT AND, IN EACH CASE, IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS (INCLUDING, BUT NOT LIMITED TO, THE INVESTMENT COMPANY ACT) OF ALL APPLICABLE JURISDICTIONS. THE HOLDER HEREOF, BY ACQUIRING THIS NOTE AND THE RELATED GUARANTEE, REPRESENTS AND AGREES FOR THE BENEFIT OF THE ISSUER AND THE GUARANTOR THAT IT WILL NOTIFY ANY TRANSFEREE OF THIS NOTE FROM IT OF THE RESALE RESTRICTIONS REFERRED TO ABOVE.

NEITHER THE ISSUER NOR THE GUARANTOR HAS BEEN OR WILL BE REGISTERED UNDER THE INVESTMENT COMPANY ACT.”

(e) It agrees that it will give to each person to whom it transfers the Notes and the related Guarantee notice of any restrictions on transfer of such Notes and the related Guarantee.

(f) It acknowledges that the fiscal and paying agent will not be required to accept for registration of transfer any Notes except upon presentation of evidence satisfactory to the Issuer and the fiscal and paying agent that the restrictions set forth therein have been complied with.



(g) It acknowledges that the Issuer, the Guarantor, the initial purchasers and others will rely upon the truth and accuracy of the foregoing acknowledgements, representations, warranties and agreements and agrees that if any of the acknowledgements, representations, warranties and agreements deemed to have been made by its purchase of the Notes and the related Guarantee are no longer accurate, it shall promptly notify the initial purchasers. If it is acquiring any Notes as a fiduciary or agent for one or more investor accounts, it represents that it has sole investment discretion with respect to each such investor account and that it has full power to make the foregoing acknowledgments, representations and agreements on behalf of each such investor account.

## **CANADIAN FEDERAL INCOME TAXATION**

### **Certain Canadian Federal Income Tax Considerations**

The following summary describes the principal Canadian federal income tax considerations generally applicable under the Tax Act to a holder who acquires Notes as beneficial owner pursuant to these listing particulars and who, for purposes of the Tax Act and at all relevant times, deals at arm's length and is not affiliated with the Issuer and the Guarantor, and holds the Notes as capital property (a "Holder"). Generally, the Notes will be capital property to a Holder provided that the Holder does not acquire or hold the Notes in the course of carrying on a business or as part of an adventure or concern in the nature of trade. Certain Holders who might not otherwise be considered to hold their Notes as capital property may, in certain circumstances, be entitled to treat their Notes and any other "Canadian security" (as defined in the Tax Act) owned by them in the taxation year of the election and all subsequent taxation years as capital property by making the irrevocable election permitted by subsection 39(4) of the Tax Act. Holders are advised to consult their own tax advisors to determine whether such an election is available and desirable in their particular circumstances.

This summary is not applicable to a Holder: (i) that is a "financial institution" (as defined in the Tax Act for purposes of the "mark-to-market property" and "specified debt obligation" rules); (ii) an interest in which is a "tax shelter investment" (as defined in the Tax Act); (iii) that reports its "Canadian tax results" (as defined in the Tax Act) in a currency other than Canadian dollars; or (iv) that has entered into or will enter into a "derivative forward agreement" as defined in the Tax Act in respect of the Notes. Any such holders should consult their own tax advisors with respect to an investment in the Notes. In addition, this summary does not address the deductibility of interest by a holder who has borrowed money to acquire the Notes.

This summary is based upon the facts set out in these listing particulars, the current provisions of the Tax Act and the regulations thereunder (the "Regulations"), all specific proposals to amend the Tax Act and the Regulations publicly announced by or on behalf of the Minister of Finance (Canada) prior to September 12, 2017 (the "Tax Proposals"), and counsel's understanding of the current published administrative policies and practices of the Canada Revenue Agency (the "CRA"). There can be no assurance that any Tax Proposals will be implemented in their current form or at all. This summary does not otherwise take into account or anticipate any changes in law or administrative policies and practices, whether by legislative, administrative or judicial action nor does it take into account provincial, territorial or foreign tax legislation or considerations, which may differ significantly from those discussed herein.

This summary is not exhaustive of all possible Canadian federal income tax considerations applicable to an investment in the Notes. Moreover, the income and other tax consequences of acquiring, holding or disposing of the Notes will vary depending on the Holder's particular circumstances, including the province or territory, or provinces or territories, in which the Holder resides or carries on business. Accordingly, this summary is of a general nature only and is not intended to be legal or tax advice to any particular Holder, and no representations with respect to the income tax consequences to any Holder are made. Investors should consult their own tax advisors for advice with respect to the tax consequences of an investment in the Notes based on their particular circumstances. This summary does not address any tax considerations applicable to persons other than Holders and such persons should consult their own tax advisors regarding the consequences of acquiring, holding and disposing of Notes under the Tax Act and in any jurisdiction in which they may be subject to tax.

### **Taxation of Holders Resident in Canada**

#### ***Foreign Exchange***

For purposes of the Tax Act, all amounts relating to the acquisition, holding or disposition of Notes must be expressed in Canadian dollars, including any interest, adjusted cost base and proceeds of disposition. For

purposes of the Tax Act, amounts denominated in a currency other than the Canadian dollar generally must be converted into Canadian dollars in accordance with the Tax Act on the date such amounts first arose. A Resident Holder may realize a capital gain or a capital loss on the disposition or deemed disposition of a Note by virtue of fluctuations in the value of the U.S. dollar relative to the Canadian dollar. The amount of interest or other amounts required to be included in computing the Resident Holder's income for a taxation year will also be affected by fluctuations in the U.S. dollar relative to the Canadian dollar.

The following portion of this summary is applicable to a Holder who, for the purposes of the Tax Act and at all relevant times, is resident, or is deemed to be resident, in Canada (a "Resident Holder").

### ***Interest on Notes***

A Resident Holder that is a corporation, partnership, unit trust or any trust of which a corporation or partnership is a beneficiary will be required to include in computing its income for a taxation year all interest on the Notes that accrues or is deemed to accrue to such Resident Holder to the end of the particular taxation year or that becomes receivable or is received by the Resident Holder before the end of that taxation year, including on a redemption or repayment on maturity, except to the extent that such interest was included in computing the Resident Holder's income for a preceding taxation year.

Any other Resident Holder, including an individual, will be required to include in computing its income for a taxation year all interest on the Notes that is received or receivable by the Resident Holder in that taxation year (depending upon the method regularly followed by the Resident Holder in computing income), including on a redemption or repayment on maturity, except to the extent that the interest was included in the Resident Holder's income for a preceding taxation year.

A Resident Holder that is a "Canadian-controlled private corporation" (as defined in the Tax Act) may be liable to pay an additional refundable tax on certain investment income, including amounts in respect of interest. Tax Proposals released on July 18, 2017 (the "July 18 Proposals") could make the refundable tax imposed on such investment income a non-refundable tax if the investments on which the income was earned or realized were acquired using income from an active business carried on by the "Canadian-controlled private corporation." The scope of the July 18 Proposals is unclear, and Resident Holders that are "Canadian-controlled private corporations" should consult their own tax advisors regarding the potential application of the July 18 Proposals to them having regard to their own circumstances.

### ***Disposition of Notes***

On a disposition or deemed disposition of a Note (including a redemption or repayment at maturity), a Resident Holder will generally be required to include in income any premium deemed to be interest and the amount of interest accrued, or deemed to have accrued, on the Note from the date of the last interest payment to the date of disposition to the extent that such amount has not otherwise been included in the Resident Holder's income for the taxation year or a previous taxation year.

A disposition or deemed disposition by a Resident Holder of a Note will generally result in the Resident Holder realizing a capital gain (or capital loss) equal to the amount by which the proceeds of disposition, net of any accrued interest or any amount deemed to be interest, exceed (or are exceeded by) the aggregate of the Resident Holder's adjusted cost base thereof and any reasonable costs of disposition.

One-half of any capital gain (a "taxable capital gain") generally must be included in the Resident Holder's income for the taxation year of the disposition, and one-half of any capital loss (an "allowable capital loss") realized in a taxation year must be deducted from taxable capital gains realized in that year. Allowable capital losses in excess of taxable capital gains realized in a taxation year may be deducted from net taxable capital gains realized in the three preceding taxation years or any subsequent taxation year, subject to detailed rules contained in the Tax Act in this regard. A capital gain realized by an individual (other than certain specified trusts) may give rise to a liability for alternative minimum tax.

A Resident Holder that is a “Canadian-controlled private corporation” may be liable to pay an additional refundable tax on certain investment income, including amounts in respect of taxable capital gains. The July 18 Proposals could make the refundable tax imposed on such investment income a non-refundable tax if the investments on which the income was earned or realized were acquired using income from an active business carried on by the “Canadian-controlled private corporation.” The scope of the July 18 Proposals is unclear, and Resident Holders that are “Canadian-controlled private corporations” should consult their own tax advisors regarding the potential application of the July 18 Proposals to them having regard to their own circumstances.

### ***Eligibility for Investment***

The Notes would, if acquired on September 12, 2017, and if they (i) are issued as part of a single issue of debt of at least C\$25 million and (ii) have an investment grade rating with certain rating agencies prescribed under the Tax Act, be qualified investments under the Tax Act for a trust governed by a registered retirement savings plan (“RRSP”), registered retirement income fund (“RRIF”), registered education savings plan (“RESP”), registered disability savings plan (“RDSP”), tax-free savings account (“TFSA”) and deferred profit sharing plan (“DPSP”) (except for a trust governed by a DPSP to which the Issuer has made a contribution).

Even if the Notes may be qualified investments for a trust governed by an RRSP, RRIF or TFSA, if the Notes are “prohibited investments” (as defined in section 207.01 of the Tax Act) for an RRSP, RRIF or TFSA, then a holder of the TFSA or an annuitant of the RRSP or RRIF, as the case may be, will be subject to a penalty tax as set out in the Tax Act. The Notes would not be prohibited investments on the date of the Offering Memorandum, provided the holder of the TFSA or the annuitant of the RRSP or RRIF, as the case may be, (i) deals at arm’s length with the Issuer within the meaning of the Tax Act, and (ii) does not have a “significant interest” within the meaning of subsection 207.01(4) of the Tax Act in the Issuer. The March 22, 2017 Federal Budget included proposals (the “March 22 Proposals”) to extend the prohibited investment rules under the Tax Act to impose the penalty tax on the holder of an RDSP, or the subscriber under an RESP, that acquires prohibited investments after that date. Assuming the Proposals are enacted as proposed, notwithstanding that the Notes may be qualified investments for a trust governed by an RDSP or an RESP, the holder of an RDSP or the subscriber under the RESP will be subject to the penalty tax if the Notes are a prohibited investment for the RDSP or RESP. There can be no assurance that the March 22 Proposals will be enacted or that they will be enacted as proposed. Investors intending to hold the Notes in a TFSA, RRSP, RRIF, RESP or RDSP should consult their own advisors as to whether the Notes would be a prohibited investment in their particular circumstances.

### **Taxation of Holders Not Resident in Canada**

The following portion of this summary is generally applicable to a Holder who, for purposes of the Tax Act and any applicable tax treaty and at all relevant times (i) is not, and is not deemed to be, resident in Canada, (ii) deals at arm’s length with any transferee resident (or deemed to be resident) in Canada to whom the Holder disposes of Notes and (iii) does not use or hold, and is not deemed to use or hold, the Notes in a business carried on in Canada (a “Non-Resident Holder”). Special rules, that are not discussed in this summary, may apply to a Non-Resident Holder that holds Notes in connection with carrying on an insurance business in Canada and elsewhere. This summary assumes that no interest paid on the Notes will be in respect of a debt or other obligation to pay an amount to a person with whom the Issuer does not deal at arm’s length for purposes of the Tax Act and that the Issuer will not make any designation under subsection 18(5.4) of the Tax Act in respect of any interest paid or credited by the Issuer on the Notes.

Amounts paid or credited, or deemed to be paid or credited, as, on account or in lieu of payment of, or in satisfaction of, the principal of the Notes or premium, discount or interest on the Notes by the Issuer to a Non-Resident Holder, including in respect of a redemption of the Notes, will not be subject to Canadian withholding tax.

No other taxes on income (including taxable capital gains) will be payable under the Tax Act by a Non-Resident Holder in respect of the ownership or disposition of the Notes.

## U.S. FEDERAL INCOME TAXATION

The following is a summary of certain U.S. federal income tax considerations that may be relevant to a holder of a Note. This summary is based on the Internal Revenue Code of 1986, as amended (the “Code”), the Treasury regulations promulgated thereunder and rulings and decisions now in effect, all of which are subject to change possibly with retroactive effect. This summary deals only with holders that purchase the Notes upon original issuance and will hold Notes as capital assets within the meaning of the Code. This summary does not address tax considerations applicable to investors that may be subject to special tax rules, such as banks, tax-exempt entities, insurance companies, dealers in securities or currencies, traders in securities electing to mark to market, persons that will hold Notes as a position in a “straddle” or conversion transaction, or as part of a “synthetic security” or other integrated financial transaction, persons subject to the alternative minimum tax, U.S. expatriates, persons that have a “functional currency” other than the U.S. dollar or entities classified as partnerships and partners therein.

This summary addresses only U.S. federal income tax consequences, and does not address consequences arising under state, local, foreign tax laws or the Medicare tax on net investment income. Investors should consult their own tax advisors in determining the tax consequences to them of holding Notes under such tax laws, as well as the application to their particular situation of the U.S. federal income tax considerations discussed below.

As used herein, a “U.S. holder” is a beneficial owner of a Note that is a citizen or resident of the United States or a U.S. domestic corporation or that otherwise will be subject to U.S. federal income taxation on a net income basis in respect of the Note.

### U.S. Holders

***Payments of Interest and Additional Amounts.*** The gross amount of stated interest and additional amounts, if any (*i.e.*, without reduction for applicable withholding tax at the appropriate withholding tax rate applicable to the U.S. holder) will be taxable to a U.S. holder as ordinary interest income at the time it accrues or is actually or constructively received, in accordance with the holder’s method of accounting for U.S. federal income tax purposes. The Notes were not issued with more than a *de minimis* amount of original issue discount (“OID”). In general, however, if the Notes are issued with more than *de minimis* OID, a U.S. holder will be required to include OID in gross income, as ordinary income, under a “constant-yield method” before the receipt of cash attributable to such income, regardless of the U.S. holder’s regular method of accounting for U.S. federal income tax purposes.

***Purchase, Sale and Retirement of Notes.*** Upon the sale, exchange or retirement of a Note, a U.S. holder generally will recognize gain or loss equal to the difference between the amount realized on the sale, exchange or retirement (less any accrued interest, which will be taxable as such) and the U.S. holder’s tax basis in such Note. A U.S. holder’s tax basis in a note will generally equal the cost of the Note to such holder. Gain or loss recognized by a U.S. holder generally will be long-term capital gain or loss if the U.S. holder has held the Note for more than one year at the time of disposition. Long-term capital gains recognized by an individual holder generally are subject to tax at a lower rate than short-term capital gains or ordinary income. The deduction of capital losses is subject to limitations.

***Specified Foreign Financial Assets.*** Individual U.S. holders that own “specified foreign financial assets” with an aggregate value in excess of US\$50,000 are generally required to file an information statement along with their tax returns, currently on Form 8938, with respect to such assets. “Specified foreign financial assets” include any financial accounts held at a non-U.S. financial institution, as well as securities issued by a non-U.S. issuer (which may include Notes issued in certificated form) that are not held in accounts maintained by financial institutions. Higher reporting thresholds apply to certain individuals living abroad and to certain married individuals. Regulations extend this reporting requirement to certain entities that are treated as formed or availed of to hold

direct or indirect interests in specified foreign financial assets based on certain objective criteria. U.S. holders who fail to report the required information could be subject to substantial penalties. Prospective investors should consult their own tax advisors concerning the application of these rules to their investment in the Notes, including the application of the rules to their particular circumstances.

### **Information Reporting and Backup Withholding**

Information returns will be filed with the U.S. Internal Revenue Service in connection with payments on the Notes made to, and the proceeds of dispositions of Notes effected by, certain U.S. holders. In addition, certain U.S. holders may be subject to backup withholding in respect of such amounts if they do not provide their taxpayer identification numbers to the person from whom they receive payments. The amount of any backup withholding from a payment to a U.S. holder will be allowed as a credit against the holder's U.S. federal income tax liability and may entitle the holder to a refund, provided that the required information is timely furnished to the U.S. Internal Revenue Service.

## PLAN OF DISTRIBUTION

Under the terms and subject to the conditions contained in a purchase agreement dated September 12, 2017, the initial purchasers named below, for whom Goldman Sachs International, J.P. Morgan Securities plc and RBC Capital Markets, LLC are acting as representatives, have severally agreed to purchase, and the Issuer has agreed to sell to them the following principal amount of Notes:

<u>Initial Purchasers</u>	<u>Principal Amount of Notes</u>
Goldman Sachs International .....	US\$ 495,834,000
J.P. Morgan Securities plc .....	495,833,000
RBC Capital Markets, LLC .....	495,833,000
Barclays Bank PLC .....	87,500,000
BMO Capital Markets Corp. ....	87,500,000
CIBC World Markets Corp. ....	87,500,000
<b>Total</b> .....	<u><u>US\$1,750,000,000</u></u>

The purchase agreement provides that the obligations of the initial purchasers to purchase the Notes included in the offering are subject to approval of legal matters by counsel and to other conditions. The initial purchasers are obligated to purchase all the Notes if they purchase any of the Notes. The purchase agreement also provides that if an initial purchaser defaults, the purchase commitments of the non-defaulting initial purchasers may also be increased or the offering may be terminated. The offering of the Notes by the initial purchasers is subject to receipt and acceptance and subject to the initial purchasers' right to reject any order in whole or in part.

The Issuer has agreed to indemnify the several initial purchasers against certain liabilities, including liabilities under the Securities Act.

The Issuer has been advised that the initial purchasers propose to resell the Notes at the offering price set forth on the cover page of these listing particulars to "qualified institutional buyers" (as defined in Rule 144A) in reliance on Rule 144A who are also "qualified purchasers" (as defined in Section 2(a)(51) under the Investment Company Act) and outside the United States to non-U.S. persons in reliance on Regulation S. See "Transfer Restrictions." After the initial offering, the price at which the Notes are offered may be changed at any time without notice.

### No Registration

Neither the Issuer nor the Guarantor will be registered as investment companies under the Investment Company Act and the Notes and the related Guarantee have not been and will not be registered under the Securities Act or any U.S. federal or state securities laws. Accordingly, the Notes may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons (as defined in Regulation S) except in transactions exempt from, or not subject to, the registration requirements of the Securities Act. See "Transfer Restrictions."

Accordingly, in connection with sales outside the United States, each initial purchaser has agreed that, except as permitted by the purchase agreement and set forth under "Transfer Restrictions," it will not offer, sell or deliver the Notes and the related Guarantee within the United States or to, or for the account or benefit of, U.S. persons (i) as part of its distribution at any time, and (ii) otherwise until 40 days after the later of September 12, 2017, and the issuance of the Notes, pursuant to the terms of these listing particulars, and it will have sent to each dealer to which it sells Notes and the related Guarantee during the 40-day distribution compliance period a confirmation or other notice setting forth the restrictions on offers and sales of the Notes within the United States or to, or for the account or benefit of, U.S. persons.



In addition, pursuant to the terms of these listing particulars, until 40 days after September 12, 2017, and the issuance of the Notes, an offer or sale of Notes and the related Guarantee within the United States by a dealer (whether or not it participated in the offering) may violate the registration requirements of the Securities Act if that offer or sale is made otherwise than to a QIB who is also a QP and in accordance with Rule 144A.

### **New Issue of Notes**

The Notes constitute a new class of securities with no established trading market. The Issuer and the initial purchasers cannot assure you that the prices at which the Notes will sell in the market after the offering will not be lower than the initial offering price or that an active trading market for the Notes will develop and continue after the offering. Certain of the initial purchasers have advised us that they currently intend to make a market in the Notes. However, they are not obligated to do so and they may discontinue any market-making activities with respect to the Notes at any time without notice. In addition, market-making activity will be subject to the limits imposed by the Securities Act and the Exchange Act. Accordingly, the Issuer and the initial purchasers cannot assure you as to the liquidity of or the trading market for the Notes.

### **No Sales of Similar Notes**

The Issuer and the Guarantor have agreed in the purchase agreement that, without the prior written consent of Goldman Sachs International, J.P. Morgan Securities plc and RBC Capital Markets, LLC, they will not during the period beginning on September 12, 2017, and continuing to and including September 19, 2017, offer, sell, pledge, contract to sell or otherwise dispose of or transfer, or announce the offering of, or file any registration statement under the Securities Act in respect of, any debt securities of the Issuer or the Guarantor or warrants to purchase debt securities of the Issuer and the Guarantor (other than the sale of the Notes in the offering and the sale of commercial paper issued by Issuer and guaranteed by the Guarantor under its U.S. and Canadian commercial paper programs).

### **Stabilization**

In connection with the offering of the Notes, Goldman Sachs International (the “Stabilizing Manager”) (or persons acting on its behalf), may over-allot Notes or effect transactions with a view to supporting the market price of the Notes during the stabilization period at a level higher than that which might otherwise prevail. However, stabilization action may not necessarily occur. Any stabilizing action may begin on or after the date on which adequate public disclosure of the terms of the offer of the relevant notes is made and, if begun, may be ended at any time, but it must end no later than 30 days after the date on which the Issuer received the proceeds of the Notes, or no later than 60 days after the date of allotment of the relevant Notes, whichever is the earlier. Any stabilization action or over allotment must be conducted by the Stabilizing Manager (or persons acting on its behalf) in accordance with all applicable laws and rules and will be undertaken at the offices of the Stabilizing Manager (or persons acting on its behalf) and on the GEM.

The initial purchasers also may impose a penalty bid. This occurs when a particular initial purchaser repays to the initial purchasers a portion of the underwriting discount received by it because Goldman Sachs International, J.P. Morgan Securities plc, RBC Capital Markets, LLC, or their affiliates have repurchased Notes sold by or for the account of such initial purchaser in stabilizing or short covering transactions.

Any of these activities, as well as other purchases by the initial purchasers for their own accounts, may have the effect of preventing or delaying a decline in the market price of the Notes. They may also cause the price of the Notes to be higher than the price that otherwise would exist in the open market in the absence of these transactions. The initial purchasers may conduct these transactions in the over-the-counter market or otherwise. If the initial purchasers commence any of these transactions, they may discontinue them at any time.



## **Settlement**

The Issuer expects that delivery of the Notes will be made to investors on or about September 19, 2017, which will be the fifth business day following September 12, 2017 (such settlement being referred to as “T+5”). Under Rule 15c6-1 of the Exchange Act, trades in the secondary market are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade Notes on the day or pricing or within the next two business days after pricing will be required, by virtue of the fact that the Notes initially settle in T+5, to specify an alternate settlement arrangement at the time of any such trade to prevent a failed settlement. Purchasers of the Notes who wish to trade the Notes on the day or pricing or within the next two business days after pricing should consult their advisors.

## **Other Relationships**

The initial purchasers and certain of their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial and ratings advisory, investment management, investment research, principal investment, hedging, lending, financing and brokerage activities. The initial purchasers and certain of their affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial and ratings advisory services for the Guarantor and its affiliates, for which they received or may in the future receive customary fees, commissions and expenses.

In addition, in the ordinary course of their business activities, the initial purchasers and certain of their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of the Issuer or its affiliates. Certain of the initial purchasers or their affiliates that have a lending relationship with the Issuer routinely hedge their credit exposure to the Issuer consistent with their customary risk management policies. Typically, such initial purchasers and their affiliates would hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in the Issuer’s securities, including potentially the Notes offered hereby. Any such credit default swaps or short positions could adversely affect future trading prices of the Notes offered hereby. The initial purchasers and certain of their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

## **Selling Restrictions**

### ***Notice to Prospective Investors in the European Economic Area***

These listing particulars have been prepared on the basis that any offer of Notes in any Member State of the European Economic Area will be made pursuant to an exemption under the Prospectus Directive from the requirement to publish a prospectus for offers of Notes. The expression “Prospectus Directive” means Directive 2003/71/EC (as amended), and includes any relevant implementing measure in the Member State concerned.

### ***Notice to Prospective Investors in the United Kingdom***

These listing particulars are for distribution only to persons who (i) are outside the United Kingdom, (ii) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the “Order”), or (iii) are persons falling within Article 49(2)(a) to (d) (“high net worth companies, unincorporated associations etc.”) of the Order or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000 (the “FSMA”)) in connection with the issue or sale of any securities may otherwise lawfully be communicated or caused to be communicated

(all such persons together being referred to as “relevant persons”). This document is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is available only to relevant persons and will be engaged in only with relevant persons.

Each initial purchaser has represented and agreed that:

- a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA received by it in connection with the issue or sale of the Notes in circumstances in which section 21(1) of the FSMA does not apply to the Issuer; and
- b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the Notes in, from or otherwise involving the United Kingdom.

In connection with the offering, the initial purchasers are not acting for anyone other than the Issuer and will not be responsible to anyone other than the Issuer for providing the protections afforded to their clients nor for providing advice in relation to the offering.

#### ***Notice to Prospective Investors in Switzerland***

These listing particulars do not constitute an issue prospectus pursuant to Article 652a or Article 1156 of the Swiss Code of Obligations and the Notes will not be listed on the SIX Swiss Exchange. Therefore, these listing particulars may not comply with the disclosure standards of the listing rules (including any additional listing rules or prospectus schemes) of the SIX Swiss Exchange. Accordingly, the Notes may not be offered to the public in or from Switzerland, but only to a selected and limited circle of investors who do not subscribe to the Notes with a view to distribution. Any such investors will be individually approached by the initial purchasers from time to time.

#### ***Notice to Prospective Investors in Hong Kong***

The Notes may not be offered or sold by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong) or an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong), or (ii) to “professional investors” within the meaning of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a “prospectus” within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), and no advertisement, invitation or document relating to the Notes may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to Notes which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” in Hong Kong within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

#### ***Notice to Prospective Investors in Japan***

The Notes have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (the “Financial Instruments and Exchange Law”) and each initial purchaser has agreed that it will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to, or for the benefit of, a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Law and any other applicable laws, regulations and ministerial guidelines of Japan.

### ***Notice to Prospective Investors in Korea***

The Notes may not be offered, sold and delivered directly or indirectly, or offered or sold to any person for re-offering or resale, directly or indirectly, in Korea or to any resident of Korea except pursuant to the applicable laws and regulations of Korea, including the Financial Investment Services and Capital Markets Act and the Foreign Exchange Transaction Law and the decrees and regulations thereunder. The Notes have not been registered with the Financial Services Commission of Korea for public offering in Korea. Furthermore, the Notes may not be re-sold to Korean residents unless the purchaser of the Notes complies with all applicable regulatory requirements (including but not limited to government approval requirements under the Foreign Exchange Transaction Law and its subordinate decrees and regulations) in connection with their purchase.

### ***Notice to Prospective Investors in the People's Republic of China***

The information in this document does not constitute a public offer of the Notes, whether by way of sale or subscription, in the People's Republic of China (excluding for purposes of this paragraph, Hong Kong Special Administrative Region, Macau Special Administrative Region and Taiwan). The Notes may not be offered or sold directly or indirectly in the People's Republic of China to legal or natural persons other than directly to "qualified domestic institutional investors."

### ***Notice to Prospective Investors in Singapore***

These listing particulars have not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, these listing particulars and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Notes may not be circulated or distributed, nor may the Notes be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"), (ii) to a relevant person, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions, specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

Where the Notes are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- (a) a corporation (which is not an accredited investor) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an accredited investor, shares, debentures and units of shares and debentures of that corporation or the beneficiaries' rights and interest in that trust shall not be transferable for six months after that corporation or that trust has acquired the Notes under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person, or to any person where such transfer arises from an offer pursuant to Section 275(1A) or Section 276(4)(i)(B) of the SFA; (2) where no consideration is or will be given for the transfer; (3) where the transfer is by operation of law; (4) as specified in Section 276(7) of the SFA; or (5) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

### ***Notice to Prospective Investors in Australia***

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission ("ASIC"), in relation to the offering. These listing particulars do not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the "Corporations Act"), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the Notes may only be made to persons (the "Exempt Investors") who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional

investors” (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the Notes without disclosure to investors under Chapter 6D of the Corporations Act.

The Notes applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring Notes must observe such Australian on-sale restrictions.

These listing particulars contain general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in these listing particulars is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

***Notice to Prospective Investors in the United Arab Emirates***

The offering of the Notes has not been approved or licensed by the UAE Central Bank, the UAE Securities and Commodities Authority (“SCA”), the Dubai Financial Services Authority (“DFSA”) or any other relevant licensing authorities in the UAE, and the Notes may not be offered to the public in the UAE (including the DIFC). These listing particulars are being issued to a limited number of institutional and individual investors:

(a) who meet the criteria of a “Qualified Investor” as defined in the SCA Board of Directors Decision No. 3 R.M. of 2017 (but excluding subparagraph 1(d) in the “Qualified Investor” definition relating to natural persons);

(b) upon their request and confirmation that they understand that the Bonds have not been approved or licensed by or registered with the UAE Central Bank, the SCA, DFSA or any other relevant licensing authorities or governmental agencies in the UAE; and

(c) upon their confirmation that they understand that these listing particulars must not be provided to any person other than the original recipient, and may not be reproduced or used for any other purpose.

## **LEGAL MATTERS**

The Issuer and the Guarantor are represented by Cleary Gottlieb Steen & Hamilton LLP, special U.S. counsel, and Torys LLP, special Canadian counsel. The initial purchasers are represented by Shearman & Sterling LLP with respect to U.S. legal matters.

## **INDEPENDENT AUDITORS**

The Audited Consolidated Financial Statements of the Guarantor as of December 31, 2016 and 2015, and for the years ended December 31, 2016 and 2015 included in these listing particulars have been audited by Deloitte LLP, independent auditors, as stated in their reports appearing herein.

## **ACTUARIES' OPINION**

Mercer (Canada) Limited was retained by OTPPB to perform actuarial valuations of the going concern liabilities of the Plan as of December 31, 2016 and 2015 for inclusion in the Audited Consolidated Financial Statements, as stated in their actuaries' opinions appearing herein.

## LISTING AND GENERAL INFORMATION

### Listing

The Issuer and the Guarantor accept responsibility for the information contained in these listing particulars. To the best of the Issuer's and the Guarantor's knowledge (each having taken all reasonable care to ensure that such is the case) the information contained herein is in accordance with the facts and does not omit anything likely to affect the import of such information.

### *Guarantor's Incorporation*

OTPPB is a corporation without share capital that was incorporated on December 31, 1989 pursuant to the Teachers' Pension Act. OTPPB was incorporated in Canada, its place of registration is Ontario, Canada, and its registration number is 950645.

### *Significant change*

Except as disclosed in these listing particulars, there has been no material adverse change in the financial or trading position or prospects of the Issuer or the Guarantor since December 31, 2016, the date of OTPPB last Audited Consolidated Financial Statements. There has been no significant change in the financial or trading position of the Guarantor which has occurred since the end of June 30, 2017.

### *Documents on display*

For as long as the Notes are listed on the ISE and are admitted to trading on the GEM of the Irish Stock Exchange, copies of the following documents will be available for inspection during customary business hours on any working day at the registered office of the Issuer:

- these listing particulars and any amendments and supplements thereto;
- the Offering Memorandum and any amendments and supplements thereto;
- the constitutional documents of the Issuer and the Guarantor;
- the Trust Agreement of the Issuer;
- the Fiscal and Paying Agency Agreement, the form of Global Notes, the Notes in definitive form and the Guarantee; and
- any audited and unaudited consolidated financial statements of OTPPB once they have been published.

### *Prescription*

Except as otherwise required by applicable law, claims by holders of Notes in respect of principal and interest must be made to the fiscal and paying agent if made within two years of such principal or interest becoming due and payable. Any funds deposited with the fiscal and paying agent in trust for the payment of principal or interest remaining unclaimed for two years after such principal or interest has become due and payable shall be paid to the Issuer pursuant to the Fiscal and Paying Agency Agreement; and the holder of a Note shall thereafter, as an unsecured general creditor, look only to the Issuer for payment of such amounts and all liability of the paying agent with respect to such trust funds shall thereupon cease.

### Clearing Information

The relevant trading information is set forth in the following table:

	<u>Rule 144A Global Note(s)</u>	<u>Regulation S Global Note(s)</u>
CUSIP .....	68329A AA6	C69798 AA1
ISIN .....	US68329AAA60	USC69798AA18



**Consents and Authorizations**

The Issuer and the Guarantor have obtained all necessary consents, approvals and authorizations in connection with the issue and performance of the Notes and the issue and performance of the related Guarantee.

**Estimate of Total Expenses**

The Issuer estimates that the total expenses related to the Notes being admitted to trading on the GEM of the Irish Stock Exchange will be €6,540.

**Financial Statements of the Issuer**

The Issuer's financial statements are prepared in Canadian dollars and the Issuer's fiscal year ends on December 31 of each year.

**Auditor**

The Audited Consolidated Financial Statements of the Guarantor as of December 31, 2016 and 2015, and for the years ended December 31, 2016 and 2015 included in these listing particulars have been audited by Deloitte LLP, independent auditors, as stated in their reports appearing herein.

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# CONDENSED INTERIM CONSOLIDATED STATEMENT OF FINANCIAL POSITION (unaudited)

(Canadian \$ millions)	As at June 30, 2017	As at December 31, 2016
<b>Net assets available for benefits</b>		
<b>ASSETS</b>		
Cash	\$ 449	\$ 241
Receivable from the Province of Ontario	2,482	3,273
Receivable from brokers	799	907
Investments (note 2)	259,974	255,716
Premises and equipment	52	57
	<b>263,756</b>	<b>260,194</b>
<b>LIABILITIES</b>		
Accounts payable and accrued liabilities	303	382
Due to brokers	926	608
Investment-related liabilities (note 2)	81,987	83,634
	<b>83,216</b>	<b>84,624</b>
<b>Net assets available for benefits</b>	<b>\$ 180,540</b>	<b>\$ 175,570</b>
<b>Accrued pension benefits and deficit</b>		
Accrued pension benefits (note 3)	\$ 193,443	\$ 189,397
Deficit	(12,903)	(13,827)
<b>Accrued pension benefits and deficit</b>	<b>\$ 180,540</b>	<b>\$ 175,570</b>

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

For the six-month period ended June 30 (Canadian \$ millions)

	2017
<b>Net assets available for benefits, as at January 1</b>	<b>\$ 175,570</b>
<b>Investment operations</b>	
Net investment income (note 4)	6,417
Administrative expenses	(217)
Net investment operations	6,200
<b>Member service operations</b>	
Contributions (note 6)	1,719
Benefits paid (note 7)	(2,923)
Administrative expenses	(26)
Net member service operations	(1,230)
<b>Increase in net assets available for benefits</b>	<b>4,970</b>
<b>Net assets available for benefits, as at June 30</b>	<b>\$ 180,540</b>

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

For the six-month period ended June 30 (Canadian \$ millions)	2017
<b>Accrued pension benefits, as at January 1</b>	<b>\$ 189,397</b>
<b>Increase in accrued pension benefits</b>	
Interest on accrued pension benefits	3,078
Benefits accrued	3,202
Changes in level of conditional indexing (note 3b)	1,207
	<b>7,487</b>
<b>Decrease in accrued pension benefits</b>	
Benefits paid (note 7)	2,923
Changes in actuarial assumptions and methods (note 3a)	518
	<b>3,441</b>
<b>Net increase in accrued pension benefits</b>	<b>4,046</b>
<b>Accrued pension benefits, as at June 30</b>	<b>\$ 193,443</b>

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

For the six-month period ended June 30 (Canadian \$ millions)	2017
<b>Deficit, as at January 1</b>	<b>\$ (13,827)</b>
Increase in net assets available for benefits	4,970
Net increase in accrued pension benefits	(4,046)
<b>Deficit, as at June 30</b>	<b>\$ (12,903)</b>

# NOTES TO CONDENSED INTERIM CONSOLIDATED FINANCIAL STATEMENTS (unaudited)

For the six-month period ended June 30, 2017

## DESCRIPTION OF PLAN

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

### (a) General

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

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

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

### (b) Funding

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

### (c) Retirement pensions

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

### (d) Disability pensions

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

### (e) Death benefits

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

### (f) Escalation of benefits

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

## **NOTE 1.**

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

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

These condensed interim consolidated financial statements (Interim Financial Statements) have been prepared 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 2016 Annual Report. The Interim Financial Statements follow the same accounting policies and methods used in preparation of the audited 2016 annual consolidated financial statements.

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 CFCL, Ontario Teachers' Finance Trust (OTFT), a special purpose entity created to support the Plan's financing activities, and wholly owned investment holding companies that are 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 six-month period ended June 30, 2017 represents the first period for which the Plan presents Interim Financial Statements. As a result, comparative figures as at and for the six-month period ended June 30, 2016 are not available. Comparative figures as at December 31, 2016 are provided.

The Interim Financial Statements were authorized for issue through a resolution of the Board on August 31, 2017.

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

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

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

Management does not expect any significant impact on either the Plan's financial position or its investment income when adopting 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.

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, 2016. A valuation update of the rental property portfolio as at June 30, 2017 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.

### **(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 benefits for credited service 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. As a result, the December 31, 2016 accrued pension benefits reflect the CIP levels as stated in the January 1, 2016 funding valuation report.

As the co-sponsors provided direction to file the January 1, 2017 funding valuation with an increase in CIP from 90% to 100% (effective January 1, 2018), this change has been reflected in the June 30, 2017 accrued pension benefits.

### **(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 \$745 million (December 31, 2016 - \$527 million), before allocating the effect of derivative contracts:

	As at June 30, 2017		As at December 31, 2016	
(Canadian \$ millions)	Fair Value	Cost	Fair Value	Cost
<b>Equity</b>				
Publicly traded				
Canadian	\$ 2,097	\$ 2,081	\$ 2,075	\$ 2,053
Non-Canadian	26,204	20,016	27,423	22,081
Non-publicly traded				
Canadian	3,166	2,498	2,786	2,480
Non-Canadian	26,576	20,691	25,110	19,704
	<b>58,043</b>	<b>45,286</b>	<b>57,394</b>	<b>46,318</b>
<b>Fixed income</b>				
Bonds	57,525	55,609	52,355	51,050
Short-term investments	12,098	12,099	9,521	9,504
Alternative investments <sup>1</sup>	11,704	8,943	11,727	8,862
Canadian real-rate products	19,771	14,865	20,381	14,993
Non-Canadian real-rate products	18,378	15,745	16,011	12,866
	<b>119,476</b>	<b>107,261</b>	<b>109,995</b>	<b>97,275</b>
<b>Inflation sensitive</b>				
Timberland	2,367	1,343	2,442	1,356
Natural resources <sup>2</sup>	3,396	3,921	3,831	3,802
	<b>5,763</b>	<b>5,264</b>	<b>6,273</b>	<b>5,158</b>
<b>Real assets</b>				
Real estate	28,863	18,467	30,923	19,064
Infrastructure	18,940	14,012	17,826	13,832
	<b>47,803</b>	<b>32,479</b>	<b>48,749</b>	<b>32,896</b>
	<b>231,085</b>	<b>190,290</b>	<b>222,411</b>	<b>181,647</b>
<b>Investment-related receivables</b>				
Securities purchased under agreements to resell	24,367	24,864	27,910	27,621
Cash collateral deposited under securities borrowing arrangements	1,730	1,730	1,967	1,967
Cash collateral paid under credit support annexes	26	26	121	121
Derivative-related, net	2,766	1,855	3,307	1,761
	<b>28,889</b>	<b>28,475</b>	<b>33,305</b>	<b>31,470</b>
<b>Investments</b>	<b>\$ 259,974</b>	<b>\$ 218,765</b>	<b>\$ 255,716</b>	<b>\$ 213,117</b>

<sup>1</sup> Comprised primarily of hedge funds and managed futures accounts.

<sup>2</sup> Natural resources includes oil, gas, and agricultural assets.

(Canadian \$ millions)	As at June 30, 2017		As at December 31, 2016	
	Fair Value	Cost	Fair Value	Cost
<b>Investment-related liabilities</b>				
Securities sold under agreements to repurchase	\$ (49,853)	\$ (50,813)	\$ (47,422)	\$ (47,131)
Securities sold but not yet purchased				
Equities	(1,796)	(1,717)	(1,947)	(1,752)
Fixed income	(13,656)	(12,375)	(19,108)	(17,656)
Real estate	(4,488)	(4,157)	(3,196)	(2,876)
Commercial Paper	(8,839)	(8,985)	(9,120)	(8,935)
Cash collateral received under credit support annexes	(87)	(87)	(163)	(163)
Derivative-related, net	(3,268)	(812)	(2,678)	(845)
	(81,987)	(78,946)	(83,634)	(79,358)
<b>Net investments</b>	<b>\$ 177,987</b>	<b>\$ 139,819</b>	<b>\$ 172,082</b>	<b>\$ 133,759</b>

## (b) Fair value hierarchy

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

(Canadian \$ millions)	As at June 30, 2017			
	Level 1	Level 2	Level 3	Total
Equity	\$ 26,736	\$ 124	\$ 31,183	\$ 58,043
Fixed income	93,842	12,064	13,570	119,476
Inflation sensitive	—	—	5,763	5,763
Real assets	2,863	340	44,600	47,803
Investment-related receivables	1,806	26,981	102	28,889
Investment-related liabilities	(15,726)	(64,386)	(1,875)	(81,987)
<b>Net investments</b>	<b>\$ 109,521</b>	<b>\$ (24,877)</b>	<b>\$ 93,343</b>	<b>\$ 177,987</b>

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

The schedule below presents a reconciliation of investments and net investment-related receivables/(liabilities) measured at fair value using significant unobservable inputs (Level 3) 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, 2017							
(Canadian \$ millions)	Equity	Fixed Income	Inflation Sensitive	Real Assets	Investment -Related Receivables	Investment -Related Liabilities	Total
Balance as at January 1	\$ 29,361	\$ 14,238	\$ 6,273	\$ 45,183	\$ 237	\$ (2,007)	\$ 93,285
Purchases	2,492	1,875	154	3,904	33	27	8,485
Sales	(2,152)	(2,732)	(102)	(5,569)	(30)	—	(10,585)
Transfers in <sup>3</sup>	—	—	—	—	(3)	1	(2)
Transfers out <sup>3</sup>	—	—	—	—	(96)	84	(12)
Gains/(losses) included in investment income							
Realized	522	416	1	1,237	(77)	44	2,143
Unrealized	960	(227)	(563)	(155)	38	(24)	29
<b>Balance as at June 30</b>	<b>\$ 31,183</b>	<b>\$ 13,570</b>	<b>\$ 5,763</b>	<b>\$ 44,600</b>	<b>\$ 102</b>	<b>\$ (1,875)</b>	<b>\$ 93,343</b>

<sup>3</sup> Transfers in and transfers out of Level 3 are due to the change in the availability of observable inputs used for fair value measurement of investment assets or related liabilities. There were no transfers between Level 2 and Level 1 during the six-month period ended June 30, 2017.

### (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:

(Canadian \$ millions)		As at June 30, 2017		As at December 31, 2016	
		Notional	Fair Value	Notional	Fair Value
<b>Equity and commodity derivatives</b>					
Swaps		\$ 28,292	\$ (413)	\$ 21,454	\$ 402
Futures		10,596	3	5,572	14
Options: Listed	– purchased	1,074	30	350	21
	– written	1,076	(27)	669	(28)
OTC	– purchased	14,424	221	14,114	730
	– written	4,016	(119)	3,125	(195)
		59,478	(305)	45,284	944
<b>Interest rate derivatives</b>					
Swaps		119,356	104	90,105	29
Futures		403,291	14	103,444	(10)
Options: Listed	– purchased	20,080	16	11,318	5
	– written	16,632	(14)	10,673	(6)
OTC	– purchased	43,332	104	30,398	115
	– written	78,539	(81)	42,699	(110)
		681,230	143	288,637	23
<b>Currency derivatives</b>					
Swaps		13,510	(18)	11,215	(70)
Forwards <sup>4</sup>		65,009	(256)	70,956	(119)
Options: OTC	– purchased	7,607	150	8,299	121
	– written	6,441	(69)	7,839	(111)
		92,567	(193)	98,309	(179)
<b>Credit derivatives</b>					
Credit default	– purchased	17,558	(349)	16,099	(286)
	– written	17,153	262	19,793	140
		34,711	(87)	35,892	(146)
<b>Other derivatives</b>					
Statistic swaps		6,677	(21)	5,061	(19)
Dividend swaps		511	(22)	254	(21)
		7,188	(43)	5,315	(40)
		875,174	(485)	473,437	602
Net cash collateral (received)/paid under derivative contracts		—	(17)	—	27
<b>Notional and net fair value of derivative contracts</b>		<b>\$ 875,174</b>	<b>\$ (502)</b>	<b>\$ 473,437</b>	<b>\$ 629</b>

<sup>4</sup> Excludes currency forwards related to Real Estate assets.

The net fair value of derivative contracts in the previous table is represented by:

(Canadian \$ millions)	As at June 30, 2017	As at December 31, 2016
Derivative-related receivables	\$ 1,985	\$ 2,678
Cash collateral paid under derivative contracts	14	31
Derivative-related liabilities	(2,470)	(2,076)
Cash collateral received under derivative contracts	(31)	(4)
	\$ (502)	\$ 629

#### (d) Investment asset mix

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

	As at June 30, 2017		As at December 31, 2016	
	Effective Net Investments at Fair Value (\$ millions)	Asset Mix %	Effective Net Investments at Fair Value (\$ millions)	Asset Mix %
<b>Equity<sup>5</sup></b>				
Publicly traded	\$ 36,266	20%	\$ 38,973	22%
Non-publicly traded	28,848	16	26,981	16
	<b>65,114</b>	<b>36</b>	<b>65,954</b>	<b>38</b>
<b>Fixed income</b>				
Bonds	41,965	24	43,529	25
Real-rate products	20,245	11	31,725	19
	<b>62,210</b>	<b>35</b>	<b>75,254</b>	<b>44</b>
<b>Inflation sensitive<sup>6</sup></b>				
Commodities	5,455	3	4,184	3
Natural resources	5,763	3	6,273	3
Inflation hedge	11,550	6	—	—
	<b>22,768</b>	<b>12</b>	<b>10,457</b>	<b>6</b>
<b>Real assets</b>				
Real estate	24,389	14	26,470	16
Infrastructure	18,940	11	17,826	10
Real-rate products	1,553	1	—	—
	<b>44,882</b>	<b>26</b>	<b>44,296</b>	<b>26</b>
<b>Credit<sup>7</sup></b>	<b>11,602</b>	<b>7</b>	<b>—</b>	<b>—</b>
<b>Absolute return strategies</b>	<b>10,504</b>	<b>6</b>	<b>13,278</b>	<b>8</b>
<b>Overlay<sup>8</sup></b>	<b>(428)</b>	<b>—</b>	<b>9</b>	<b>—</b>
<b>Money Market<sup>8</sup></b>	<b>(38,665)</b>	<b>(22)</b>	<b>(37,166)</b>	<b>(22)</b>
<b>Net investments</b>	<b>\$ 177,987</b>	<b>100%</b>	<b>\$ 172,082</b>	<b>100%</b>

<sup>5</sup> The Equities asset class is comprised of public and private equities. December 31, 2016 comparative figures have been reclassified to reflect these categories.

<sup>6</sup> Beginning January 1, 2017, Natural resources and other securities that provide exposure to inflation form the Inflation Sensitive asset class, which also includes Inflation hedge.

<sup>7</sup> Beginning January 1, 2017, corporate and emerging market debt moved into the new Credit asset class.

<sup>8</sup> Overlay includes strategies to overweight or underweight certain foreign currency positions. Beginning January 1, 2017, certain index positions formerly presented in the Overlay asset class have moved to Money market. December 31, 2016 comparative figures have been reclassified to reflect the changes.

## (e) Risk management

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

The Plan also manages its liquidity risk so that there is sufficient liquidity to enable the Plan to meet all of its future obligations as they become payable, which includes meeting short-term marked-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, market and liquidity 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 January 1, 2017. 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 long-term asset-mix policy:

Exposure	Minimum	Midpoint	Maximum
Equities	32%	37%	42%
Fixed income	20%	33%	45%
Inflation sensitive	8%	13%	18%
Real assets	21%	26%	31%
Credit	2%	7%	12%
Absolute return strategies	1%	6%	11%
Money Market <sup>9</sup>	(59)%	(22)%	0%
<b>100%</b>			

<sup>9</sup> The money market asset class provides funding for investments in other asset classes.

- Board Investment Policy - This policy applies to the total-fund and aggregate asset classes. The policy addresses the risks that are relevant and material at the total-fund level. The policy now sets ranges for allocations to both asset classes and currencies. Management determines exposure within these approved ranges. 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, 2017					
Credit rating (Canadian \$ millions)	Bonds and Short-Term Investments	Real-Rate Products	Securities Purchased under Agreements to Resell	Loans and Private Debt	OTC Derivatives
AAA/R-1 (high)	\$ 43,027	\$ 34,921	\$ —	\$ —	\$ —
AA/R-1 (mid)	4,544	—	2,436	—	36
A/R-1 (low)	12,993	3,025	18,582	—	178
BBB/R-2	5,594	—	827	—	7
Below BBB/R-2	1,866	—	—	—	—
Unrated <sup>10</sup>	1,599	203	2,522	12,063	—
	\$ 69,623	\$ 38,149	\$ 24,367	\$ 12,063	\$ 221

As at December 31, 2016					
Credit rating (Canadian \$ millions)	Bonds and Short-Term Investments	Real-Rate Products	Securities Purchased under Agreements to Resell	Loans and Private Debt	OTC Derivatives
AAA/R-1 (high)	\$ 41,168	\$ 32,697	\$ —	\$ —	\$ —
AA/R-1 (mid)	2,502	—	5,990	—	83
A/R-1 (low)	9,376	3,482	21,006	—	891
BBB/R-2	5,259	—	—	—	—
Below BBB/R-2	2,123	—	—	—	—
Unrated <sup>10</sup>	1,448	213	914	12,243	—
	\$ 61,876	\$ 36,392	\$ 27,910	\$ 12,243	\$ 974

<sup>10</sup> Unrated comprises securities that are either privately held, managed externally, or not rated by the rating agencies.

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

(Canadian \$ millions)	As at June 30, 2017	As at December 31, 2016
Guarantees	\$ 368	\$ 314
Loan commitments	181	133
Notional amount of written credit derivatives	17,153	19,793
<b>Total off balance sheet credit risk exposure</b>	<b>\$ 17,702</b>	<b>\$ 20,240</b>

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

## Credit risk concentrations

As at June 30, 2017, the Plan has a significant concentration of credit risk with the Government of Canada, the Province of Ontario and the U.S Treasury. This concentration relates primarily to holding Government of Canada issued securities of \$48.8 billion (December 31, 2016 – \$51.0 billion), U.S. Treasury issued securities of \$15.2 billion (December 31, 2016 – \$0.2 billion), Province of Ontario bonds of \$6.4 billion (December 31, 2016 – \$5.0 billion), receivable from the Province of Ontario of \$2.5 billion (December 31, 2016 – \$3.3 billion) and future provincial funding requirements of the Plan.

## (g) Market risk

Market risk is the risk of loss that results from fluctuations in equity and commodity prices, interest and foreign exchange rates, and credit spreads. The Plan is exposed to market risk from its investing activities. The level of market risk to which the Plan is exposed varies depending on 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.

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) <sup>11</sup>	As at June 30, 2017	As at December 31, 2016
<b>Equity<sup>12</sup></b>		
Publicly traded	\$ 10.5	\$ 12.0
Non-publicly traded	13.0	12.5
<b>Fixed income</b>		
Bonds	7.0	4.5
Real-rate products	4.5	6.5
<b>Inflation sensitive<sup>13</sup></b>		
Commodities	1.5	2.0
Natural resources	1.5	1.5
Inflation hedge	3.5	—
<b>Real assets</b>		
Real estate	4.0	4.0
Infrastructure	3.5	3.0
Real-rate products	0.5	—
<b>Credit<sup>14</sup></b>	2.0	—
<b>Absolute return strategies</b>	2.5	2.5
<b>Overlay<sup>15</sup></b>	2.5	1.5
<b>Money Market<sup>15</sup></b>	10.5	6.5
<b>Total Asset Risk ETL Exposure<sup>16</sup></b>	<b>\$ 37.5</b>	<b>\$ 37.5</b>

<sup>11</sup> Rounded to the nearest \$0.5 billion.

<sup>12</sup> The Equities asset class is comprised of public and private equities. December 31, 2016 comparative figures have been reclassified to reflect these categories.

<sup>13</sup> Beginning January 1, 2017, Natural resources and other securities that provide exposure to inflation form the Inflation Sensitive asset class, which also includes Inflation hedge.

<sup>14</sup> Beginning January 1, 2017, corporate and emerging market debt moved into the new Credit asset class.

<sup>15</sup> Overlay includes strategies to overweight or underweight certain foreign currency positions. Beginning January 1, 2017, certain index positions formerly presented in the Overlay asset class have moved to Money Market. December 31, 2016 comparative figures have been reclassified to reflect the change.

<sup>16</sup> Total Asset Risk ETL Exposure does not equal the sum of ETL exposure for each asset class because diversification reduces total risk exposure.

## Interest rate risk

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

The Plan manages the interest rate risk by using interest rate derivatives as detailed in note 2c to the Interim Financial Statements. After giving effect to the derivative contracts and investment-related receivables and liabilities discussed in note 2c, a 1% increase in nominal interest rates would result in a decline in the value of the Plan's investments in fixed-income securities of \$4.5 billion (December 31, 2016 – \$3.4 billion). Similarly, a 1% increase in real interest rates would result in a decline in the value of the Plan's investments in real-rate products of \$5.2 billion (December 31, 2016 – \$5.1 billion).

As at June 30, 2017, holding the inflation and salary escalation assumptions constant, a 1% decrease in the assumed long-term real rates of return would result in an increase in the pension liabilities of approximately 23% or \$43.8 billion (December 31, 2016 – 22% or \$40.8 billion).

## Foreign currency risk

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

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

(Canadian \$ millions)	As at June 30, 2017	As at December 31, 2016
Currency	Net Exposure	Net Exposure
United States Dollar	\$ 40,917	\$ 49,553
British Pound Sterling	4,953	4,505
Euro	3,330	7,774
Chilean Peso	3,154	3,108
Japanese Yen	2,872	3,275
Brazilian Real	2,726	2,673
Mexican Peso	1,830	838
Chinese Renminbi	(1,719)	1,307
Australian Dollar	1,630	1,944
Danish Krone	1,249	1,175
Other	10,645	7,955
	\$ 71,587	\$ 84,107

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, 2017	As at December 31, 2016
Currency	Change in Net Investment Value	Change in Net Investment Value
United States Dollar	\$ 2,046	\$ 2,478
British Pound Sterling	247	225
Euro	166	389
Chilean Peso	158	155
Other	962	959
	\$ 3,579	\$ 4,206

## (h) Liquidity risk

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

### Liquidity risk management

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

### Liquid assets

The Plan maintains a portfolio of highly marketable assets including Canadian and U.S. government bonds that can be sold or funded on a secured basis as protection against any unforeseen interruption to cash flow. The fair value of the Canadian and U.S. government bonds is \$63,991 million as at June 30, 2017 (December 31, 2016 – \$51,208 million). The Plan also has a position of publicly traded equities of \$26,505 million net of shorts (December 31, 2016 – \$27,551 million) which are listed on major recognized stock exchanges. These securities are readily realizable and convertible to cash.

### Contractual maturity

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

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

(Canadian \$ millions)	As at June 30, 2017			
	Within One Year	One to Five Years	Over Five Years	Total
Securities sold under agreements to repurchase	\$ (42,779)	\$ (7,074)	\$ —	\$ (49,853)
Securities sold but not yet purchased				
Equities	(1,796)	—	—	(1,796)
Fixed income	(13,656)	—	—	(13,656)
Real estate	(1,643)	(1,882)	(963)	(4,488)
Commercial paper	(8,839)	—	—	(8,839)
Cash collateral received under credit support annexes	(87)	—	—	(87)
Derivative-related, net	(3,268)	—	—	(3,268)
	\$ (72,068)	\$ (8,956)	\$ (963)	\$ (81,987)

(Canadian \$ millions)	As at December 31, 2016			
	Within One Year	One to Five Years	Over Five Years	Total
Securities sold under agreements to repurchase	\$ (39,736)	\$ (7,686)	\$ —	\$ (47,422)
Securities sold but not yet purchased				
Equities	(1,947)	—	—	(1,947)
Fixed income	(19,108)	—	—	(19,108)
Real estate	(920)	(1,929)	(347)	(3,196)
Commercial paper	(9,120)	—	—	(9,120)
Cash collateral received under credit support annexes	(163)	—	—	(163)
Derivative-related, net	(2,678)	—	—	(2,678)
	\$ (73,672)	\$ (9,615)	\$ (347)	\$ (83,634)

## (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, 2017 is \$nil (December 31, 2016 - \$20 million).

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

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

(Canadian \$ millions)	As at June 30, 2017	As at December 31, 2016
<b>Securities purchased under agreements to resell and sold under agreements to repurchase</b>		
Securities purchased under agreements to resell	\$ 24,367	\$ 27,910
Collateral held	24,466	27,749
Securities sold under agreements to repurchase	49,853	47,422
Collateral pledged	49,993	47,438
<b>Securities borrowing</b>		
Securities borrowed	3,847	4,979
Collateral pledged <sup>17</sup>	4,105	5,382
<b>Derivative-related</b>		
Collateral received <sup>18</sup>	231	1,003
Collateral pledged <sup>19</sup>	1,950	1,175

<sup>17</sup> Includes cash collateral of \$1,730 (December 31, 2016 - \$1,967)

<sup>18</sup> Includes cash collateral of \$87 (December 31, 2016 - \$163)

<sup>19</sup> Includes cash collateral of \$26 (December 31, 2016 - \$121)

## (j) Offsetting financial assets and financial liabilities

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

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

(Canadian \$ millions)	As at June 30, 2017			
	Gross amount presented in note 2a	Amounts subject to netting agreements	Securities and cash collateral <sup>20</sup>	Net Exposure
<b>Financial assets</b>				
Securities purchased under agreements to resell	\$ 24,367	\$ (24,276)	\$ (90)	\$ 1
Derivative-related receivables	2,766	(1,740)	(165)	861
	\$ 27,133	\$ (26,016)	\$ (255)	\$ 862
<b>Financial liabilities</b>				
Securities sold under agreements to repurchase	\$ (49,853)	\$ 24,276	\$ 25,534	\$ (43)
Derivative-related liabilities	(3,268)	1,740	1,484	(44)
	\$ (53,121)	\$ 26,016	\$ 27,018	\$ (87)

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

<sup>20</sup> 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 \$193,443 million (December 31, 2016 – \$189,397 million) reflect management's best estimate of future economic events and involve both economic and non-economic assumptions. The non-economic assumptions include considerations such as mortality as well as withdrawal and retirement rates. The primary economic assumptions include the discount rate, the salary escalation rate and the inflation rate. The discount rate is based on market rates, as at the valuation date, of bonds issued by the Province of Ontario, which have characteristics similar to the Plan's liabilities. The discount rate was determined by applying a weighted average discount rate that reflects the estimated timing and amount of benefit payments. The inflation rate is the geometric difference between the yield on Government of Canada long-term nominal bonds and Government of Canada real-return bonds. The salary escalation rate incorporates the inflation rate assumption and long-term expectation of growth in real wages.

A summary of the primary economic assumptions is as follows:

	As at June 30, 2017	As at December 31, 2016
Discount rate	3.00%	3.25%
Salary escalation rate	2.55%	2.80%
Inflation rate	1.55%	1.80%
Real rate <sup>1</sup>	1.45%	1.40%

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

The primary economic assumptions were changed as a result of changes in capital markets between January 1, 2017 and June 30, 2017 and the new salary agreements reached in 2017 noted below. These changes in economic assumptions resulted in a net decrease in the value of accrued pension benefits of \$518 million.

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

There were no changes to the non-economic assumptions at June 30, 2017. The changes in economic and non-economic assumptions resulted in a net decrease in the value of accrued pension benefits of \$518 million.

#### (b) Plan provisions

Credited service earned after December 31, 2009 is subject to CIP as described in paragraph (f) of the Description of Plan note. The inflation protection benefits vary between 50% and 100% of the change in the Consumer Price Index (CPI) for credited service earned between January 1, 2010, and December 31, 2013, and vary between 0% and 100% of the change in the CPI for credited service earned after 2013. CIP can only be invoked or updated 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, 2016 accrued pension benefits reflect the CIP levels as stated in the January 1, 2016 funding valuation report.

In June 2017, the co-sponsors announced that the level of CIP will be increased to 100% of CPI for all periods of credited service effective January 1, 2018. Also, effective January 1, 2018, pensioners who retired after 2009 will receive a one-time increase to their pensions to prospectively restore benefits to the level they would have been had 100% inflation protection been provided on January 1, 2017. These changes are being reflected in the January 1, 2017 funding valuation to be filed with the pension regulators by no later than September 30, 2017. This level will remain in effect until the next actuarial valuation is filed with the regulatory authorities at which time the level may be reduced depending on the funded status of the Plan. The change in the level of conditional indexing has been reflected in the June 30th, 2017 financial statement valuation, resulting in an increase in accrued pension benefits of \$1,207 million.

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

	Valuation as at June 30, 2017 <sup>2</sup>	Valuation as at December 31, 2016 <sup>3</sup>
Credited service	Inflation protection level	Inflation protection level
Earned before 2010	100% of CPI	100% of CPI
Earned during 2010 – 2013	100% of CPI	90% of CPI
Earned after 2013	100% of CPI	90% of CPI

<sup>2</sup> Inflation protection level per the January 1, 2017 funding valuation (to be filed no later than September 30, 2017).

<sup>3</sup> Inflation protection level per the filed January 1, 2016 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				For the six-month period ended June 30, 2017			
(Canadian \$ millions)	Income <sup>1</sup>	Realized <sup>2</sup>	Unrealized <sup>2 3</sup>	Investment Income	Management Fees	Transaction Costs	Net Investment Income
<b>Equity</b>							
Publicly traded							
Canadian	\$ 6	\$ (14)	\$ (22)	\$ (30)	\$ —	\$ (1)	\$ (31)
Non-Canadian	283	2,727	249	3,259	(30)	(28)	3,201
Non-publicly traded							
Canadian	47	(6)	361	402	(3)	(10)	389
Non-Canadian	435	429	483	1,347	(96)	(26)	1,225
	771	3,136	1,071	4,978	(129)	(65)	4,784
<b>Fixed income</b>							
Bonds	602	(609)	972	965	(4)	(14)	947
Short-term investments	(10)	(71)	313	232	—	—	232
Alternative investments <sup>4</sup>	30	157	223	410	(12)	—	398
Canadian real-rate products	230	304	(482)	52	—	(2)	50
Non-Canadian real-rate products	97	109	(515)	(309)	—	—	(309)
	949	(110)	511	1,350	(16)	(16)	1,318
<b>Inflation sensitive</b>							
Commodities	(30)	(8)	(582)	(620)	—	(3)	(623)
Timberland	19	1	(61)	(41)	—	—	(41)
Natural resources	84	—	(554)	(470)	(1)	(1)	(472)
	73	(7)	(1,197)	(1,131)	(1)	(4)	(1,136)
<b>Real assets</b>							
Real estate	515	1,212	(1,474)	253	—	(19)	234
Infrastructure	307	—	934	1,241	(9)	(15)	1,217
	822	1,212	(540)	1,494	(9)	(34)	1,451
	\$ 2,615	\$ 4,231	\$ (155)	\$ 6,691	\$ (155)	\$ (119)	\$ 6,417

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

<sup>2</sup> Includes net foreign currency losses of \$508 million.

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

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

## NOTE 5. STATUTORY ACTUARIAL VALUATIONS

Statutory actuarial valuations are prepared periodically to determine the funding requirements of the Plan. In June 2017, the co-sponsors provided direction to file a new valuation as at January 1, 2017. This direction included an announcement that the level of CIP will be increased to 100% of CPI for all periods of credited service effective January 1, 2018 and that the current special contributions of 1.1% of pay will be eliminated after 2017. The summary below reflects these changes.

Active members are required to contribute 11.50% of the portion of their salaries covered by the CPP and 13.10% of salaries above this level, reducing effective January 1, 2018 to 10.40% of the portion of salaries covered by the CPP and 12.0% of salaries above this level. Member contributions are matched by the Province and designated employers. In addition, the Funding Management Policy established by the co-sponsors provides guidance for the co-sponsors in determining contributions and benefits.

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

(percent)	Contribution Rate	
	Covered by CPP	Not covered by CPP
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 statutory actuarial valuations are different than those used to prepare a financial statement actuarial valuation and the amounts disclosed in these Interim Financial Statements. The statutory actuarial valuations use a valuation method which takes into account future benefits to be earned and future contributions to be made by members of the Plan as at the valuation date.

The most recent statutory actuarial valuation that has been filed with regulatory authorities was prepared as at January 1, 2016, by Mercer (Canada) Limited and disclosed a funding surplus of \$4,522 million, after adopting CIP of 90% for credited service earned between 2010 and 2013 and after 2013, as well as recognizing the special contributions included in the 2016 contribution rate described above, of 1.1% of salary payable until December 31, 2026.

Based on the direction received from the co-sponsors in June 2017, a new statutory actuarial valuation reflecting an increase in CIP to 100% as well as the elimination of the special contributions after 2017 will be filed with the pension regulators by no later than September 30, 2017.

## NOTE 6. CONTRIBUTIONS

For the six-month period ended June 30 (Canadian \$ millions)	2017
<b>Members</b>	
Current service <sup>1</sup>	\$ 832
Optional credit	19
	<b>851</b>
<b>Province of Ontario</b>	
Current service	815
Interest	12
Optional credit	18
	<b>845</b>
Other employers	18
Transfers from other pension plans	5
	<b>23</b>
	<b>\$ 1,719</b>

<sup>1</sup> Contributions past due are less than \$1 million in the six-month period ended June 30, 2017.

## NOTE 7. BENEFITS PAID

For the six-month period ended June 30 (Canadian \$ millions)	2017
Retirement pensions	\$ 2,670
Death benefits	183
Disability pensions	13
Commuted value transfers	41
Family law transfers	14
Transfers to other plans	2
	<b>\$ 2,923</b>

## NOTE 8. CAPITAL

Funding valuation surpluses or deficits<sup>1</sup> as determined by an independent actuary are considered the Plan's capital in the Interim Financial Statements.

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 major adverse events, such as the 2008 financial crisis.

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

<sup>1</sup> The surplus / (deficit) is determined by comparing 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 with the sum of the funding liabilities (present value of future pension benefits) and the present value of the reduction in cost due to providing indexation levels below 100%.

<sup>2</sup> The Partners' Agreement is the document which establishes the partnership for the purpose of designing and administering the Plan and managing the pension fund including outlining the roles of the board and co-sponsors.

## 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, 2017, these commitments totalled \$10,826 million (December 31, 2016 – \$10,597 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, 2017 and the twelve-month period ended December 31, 2016 under these guarantees.

The Plan guarantees portfolio company loan and credit agreements which will expire by 2020. The Plan's maximum exposure is \$52 million as at June 30, 2017 (December 31, 2016 - \$nil). The companies have drawn \$5 million under the agreement (December 31, 2016 - \$nil).

The Plan guarantees lease agreements for a Plan portfolio company with expiry dates ranging from 2017 to 2059. The Plan's maximum exposure is \$95 million as at June 30, 2017 (December 31, 2016 - \$96 million). There were no default lease payments in either 2017 or 2016.

The Plan also guarantees the ability of certain investee companies to settle certain financial obligations. The Plan's maximum exposure is \$67 million as at June 30, 2017 (December 31, 2016 - \$67 million).

The Cadillac Fairview Corporation Limited manages the real estate investments and has provided guarantees relating to the completion of the construction of certain residential developments. The term of these guarantees spans the lives of the development projects, which range from one to three years. The maximum exposure cannot be determined because the projects are not yet complete. These guarantees amounted to \$154 million as at June 30, 2017 (December 31, 2016 - \$151 million) and have not been recognized in the real estate liabilities.

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

The Plan also guarantees commercial paper issued by Ontario Teachers' Finance Trust which the Plan consolidates. No payments have been made by the Plan into the trust or related to the commercial paper, which is issued through private placements in U.S. and Canada. The maximum aggregate principal amounts outstanding at any one time do not exceed \$10 billion. As at June 30, 2017, commercial paper issued by the trust amounted to \$8,860 million (December 31, 2016 - \$9,127 million). The commercial paper, included in the Plan's investment-related liabilities, is not redeemable prior to maturity or subject to voluntary prepayment. The maturity terms are up to 270 days from the date of issue in U.S. and up to 364 days in Canada.

#### **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.

# MANAGEMENT'S DISCUSSION & ANALYSIS

Management's Discussion and Analysis (MD&A) presents a view of the pension plan through the eyes of management by interpreting the material trends and uncertainties affecting the results and financial condition of the plan. The MD&A includes historical information and forward-looking statements about management's objectives, outlook and expectations. Such statements involve risks, assumptions and uncertainties, and the plan's actual results will likely differ from those anticipated. The plan's consolidated financial statements should be read in conjunction with the MD&A.

**MISSION** Outstanding service and retirement security for our members – today and tomorrow

Striving to be the world's leading pension plan

**VISION**

**VALUES**

- HUMILITY:** We temper our accomplishments
- INTEGRITY:** We do the right thing
- PERFORMANCE:** We are driven to succeed
- PARTNERSHIP:** We are stronger together
- INNOVATION:** We have the courage to forge new paths

## EXECUTIVE TEAM



(l-r) **Ron Mock**, B.A.Sc., MBA, President and Chief Executive Officer; **Bjarne Graven Larsen**, M.Econ., Executive Vice-President, Investments, and Chief Investment Officer; **Tracy Abel**, BA, MBA, Chief Pension Officer; **David McGraw**, B.Comm., MBA, FCPA, FCA, ICD.D, Chief Financial Officer; **Rosemarie McClean**, BA, MBA, CPA, CMA, ICD.D, Chief Operating Officer; **Barbara Zvan**, M.Math, FSA, FCIA, CERA, Chief Risk & Strategy Officer; **Jeff Davis**, BA, LLB, Chief Legal & Corporate Affairs Officer

## PLAN OVERVIEW

The Ontario Teachers' Pension Plan (Ontario Teachers') manages investments and administers pension benefits on behalf of its members: Ontario's 182,000 school teachers and 136,000 pensioners.

Ontario Teachers' has approximately 1,100 employees in Toronto, London and Hong Kong. Approximately 1,500 people work at our real estate subsidiary, The Cadillac Fairview Corporation Limited.

The pension plan is governed by the *Teachers' Pension Act* and must comply with Ontario's *Pension Benefits Act*, the federal *Income Tax Act*, and laws in the various jurisdictions in which it invests.

Ontario Teachers' Federation (OTF) and the Ontario government are the plan's joint sponsors. Together, OTF and the government ensure the plan remains appropriately funded to pay pension benefits. The sponsors jointly decide the contribution rate paid by working teachers (and matched by the government and designated employers); the benefits that members will receive, including inflation protection; and how to address any funding shortfall or apply any surplus.

## Management's role

Management of the pension plan has three main responsibilities:

- invest plan assets to help pay pensions;
- administer the plan and pay pension benefits to members and their survivors;
- report and advise on the plan's funding status and regulatory requirements.

Management sets long-term investment and service strategies that take member demographics, and economic, investment and market risks into account.

## Board's role

An 11-member board, appointed by OTF and the government, oversees the management of the pension plan. Board members are required to act independently of both the plan sponsors and management, and to make decisions in the best interests of all plan beneficiaries.

## PREPARING FOR THE FUTURE

Ontario Teachers' mission is clear: Outstanding service and retirement security for our members – today and tomorrow.

To fulfill our mission, we need to look ahead and abroad. We operate in a rapidly changing, competitive business environment that includes the following elements:

- Capital is no longer a differentiator. We face increasingly strong competition from other institutional investors around the world.
- The market is global, highly regulated, technology-driven and increasingly complex.
- International markets, laws and regulations are all changing swiftly. Global growth is shifting to emerging markets, bringing new legal challenges. We are experiencing increased regulatory pressures that have heightened operational complexity.
- Top talent is in high demand and low supply. Our talent is our most valuable asset and it is increasingly important as we strengthen our presence in select global regions and build new internal competencies.
- Our members' needs are changing. We face expanded service expectations in the wake of instantaneous online services and speed-of-light technological advances. The demand for enhanced digital capabilities and communications is pushing us to adapt and evolve our service delivery model.

This increasingly complex and fast-changing environment prompted a reconsideration of Ontario Teachers' risk governance framework and a reallocation of accountability for managing plan funding risk in 2016.

Historically, plan management worked with the board to establish a long-term asset-mix policy that took future liabilities into account, and there were strong incentives for management to outperform asset-class benchmarks (known as value-added returns). Reflecting today's environment, the board agreed that plan management was better positioned to manage both the policy and asset mix together under an expanded total-fund framework that aligns investment decision making with the plan's mission to provide retirement security.

Known as the OneTeachers' strategy, this unified approach emphasizes that earning total-fund returns and achieving risk reduction are as important as value-added returns for plan sustainability. As noted in the Report from the CEO, the plan's organizational structure and compensation program have been changed to implement the OneTeachers' strategy and support the total-fund focus.

The Hong Kong and London offices invest regionally and are pivotal to the cultivation of strategic investment relationships. The plan's centralized trade and treasury capabilities will support new, innovative trading strategies, improve effectiveness and reduce execution costs.

On the Member Services side, our Clarity strategy addresses operational complexity and members' changing needs and expectations. This strategy has made progress in simplifying and personalizing information for members and streamlining processes.

Ontario Teachers' established a new rolling three-year enterprise planning process in 2016 that integrates strategies, enterprise priorities, goals and associated costs. The organization selected a three-year planning horizon to balance a long-term perspective with short-term agility.

The executive team is charged with overseeing and implementing the three-year enterprise plan, which is also designed to mitigate a number of risks. Additional details on enterprise and operational risk management as well as board oversight can be found in the Plan Governance section of this report.



# STATE OF THE PLAN

The Ontario Teachers' Pension Plan is designed to deliver pension benefits to its members for life. Jointly sponsored by Ontario Teachers' Federation and the Ontario government, it is the largest single-profession plan in Canada.

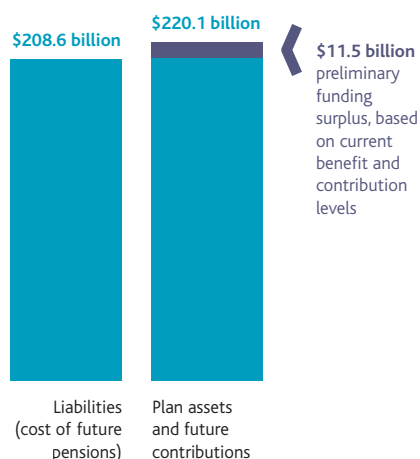
At January 1, 2017, for the fourth consecutive year, the plan had a preliminary surplus, largely due to gains from prior years in the asset smoothing adjustment methodology described on page 8. This surplus assumes current levels of contributions and benefits continue in the future. The sponsors will determine how to apply this surplus should they decide to file the funding valuation with the regulatory authorities.

## FUNDING STATUS

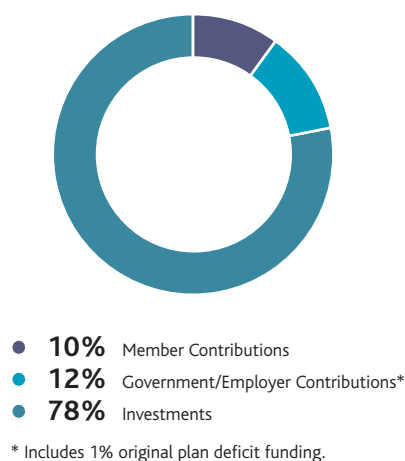
A funding valuation is an assessment of the financial health of a pension plan on a defined date. It determines whether the plan's projected assets are reasonably sufficient to pay all promised pensions in the future.

### PRELIMINARY FUNDING VALUATION

As at January 1, 2017



### PENSION FUNDING SOURCES SINCE 1990



### WHAT DO THE SPONSORS DO?

- Appoint independent board members
- Set benefits and contribution rates
- Ensure the plan is appropriately funded with enough money to meet its obligation to members



### WHAT DOES ONTARIO TEACHERS' DO?

- Earns investment returns to help pay pensions
- Administers the plan and pays benefits
- Reports and advises on the plan's funding status and regulatory requirements

Ontario Teachers' funding valuation:

- looks ahead to the remaining expected lifetime of each plan member (a period of more than 70 years);
- is prepared by an independent actuary;
- projects members' future contributions, benefits and their cost;
- is filed with regulatory authorities at least every three years;
- cannot be in a deficit position when filed.

A preliminary valuation is one that is not finalized or filed with the regulators. The plan sponsors, OTF and the Ontario government, jointly determine how to balance the plan should they decide to file the valuation with the regulators.

## 2017 preliminary valuation

The plan's preliminary funding valuation showed a surplus of \$11.5 billion at January 1, 2017. The surplus reflects asset smoothing (explained in detail below) and prudence on the part of plan sponsors. At this surplus level, the plan had 105% of the assets required to meet future pension liabilities, based on current contribution rates and current (reduced) levels of inflation protection.

Inflation protection is set at 90% of the Consumer Price Index (CPI) increase for pension credit earned after 2009 and 100% for pension credit earned before 2010. The current contribution rates are: 10.4% of earnings below the Canada Pension Plan (CPP) limit, 12% of earnings above the CPP limit, plus a 1.1% special contribution that is scheduled to end in December 2026. The 2016 CPP limit was \$54,900.

Details are provided in the Funding Valuation Summary table on page 9.

## Smoothing adjustment

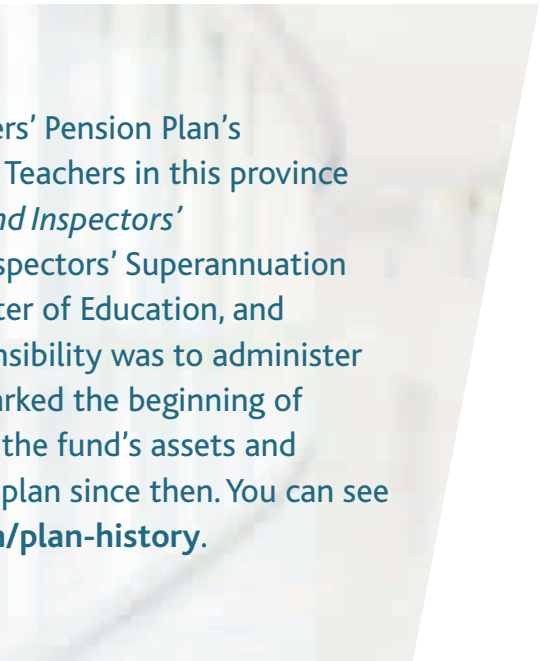
Smoothing is a common practice in funding valuations that is used to reduce short-term volatility. Ontario Teachers' funding valuations smooth asset gains and losses over a three-year period. By deferring recognition of gains and losses, the plan's funding ratio, contribution rates and benefit levels are less volatile. Without the use of smoothing, the sponsors might have to change contributions and benefits more frequently to achieve funding stability.

As noted in the Funding Valuation Summary table, the plan's asset smoothing adjustment has been substantially reduced due to the release of prior asset gains that were being "held back." There was \$2.9 billion in unrecognized gains in the 2017 preliminary valuation, down from \$10.8 billion in the 2016 valuation. Unrecognized gains that are held back act as a margin in the valuation results. With fewer gains left to be recognized, much of the margin in the plan's asset value for funding purposes has been released.

## 2016 filed valuation

In 2016, OTF and the Ontario government filed a funding valuation with the regulators that is detailed in the Funding Valuation Summary table. They used some of the \$13.2 billion preliminary funding surplus to increase inflation protection levels for pension credit earned after 2009 to 90% (from 70%) of the annual increase in the cost of living. The sponsors also left some surplus funds. Surplus funds are beneficial as they can help facilitate stability in contribution and benefit levels in case a future funding valuation shows a decline in assets or an increase in pension costs. All members will benefit from the additional stability provided by surplus funds.

Inflation protection on the portion of pension credit that plan members earned after 2009 is conditional on the funded status of the plan. This lever is used to help keep the plan sustainable in the long term. Inflation protection payments may be bigger if there is a projected funding surplus, or smaller if there is a projected funding shortfall. Pension credit that members earned before 2010 remains fully indexed to inflation.



2017 marks the 100th anniversary of the Ontario Teachers' Pension Plan's predecessor, the Ontario Teachers' Superannuation Fund. Teachers in this province have had a pension since the mid-1850s. *The Teachers' and Inspectors' Superannuation Act* of 1917 created the Teachers' and Inspectors' Superannuation Commission, comprising people designated by the Minister of Education, and elected representatives of the fund's members. Its responsibility was to administer the fund and examine applications for a pension. This marked the beginning of regular funding valuations that examined the balance of the fund's assets and liabilities. There have been many funding changes to the plan since then. You can see the chronology of the key funding decisions at [otpp.com/plan-history](http://otpp.com/plan-history).

## FUNDING VALUATION SUMMARY

As at January 1 (Canadian \$ billions)

	2017 Preliminary	2016 Filed	2016 Preliminary
Net assets available for benefits	\$ 175.6	\$ 171.4	\$ 171.4
Smoothing adjustment	(2.9)	(10.8)	(10.8)
<b>Value of assets</b>	<b>\$ 172.7</b>	<b>\$ 160.6</b>	<b>\$ 160.6</b>
Future basic contributions	41.9	41.5	41.5
Future special contributions <sup>1</sup>	3.0	3.1	3.2
Future matching of conditional inflation protection benefit reduction	2.5	2.3	6.6
<b>Total assets</b>	<b>\$ 220.1</b>	<b>\$ 207.5</b>	<b>\$ 211.9</b>
Liabilities (cost of future pensions)	(211.1)	(205.3)	(205.3)
Reduction in cost due to less than 100% indexing	2.5	2.3	6.6
<b>Surplus</b>	<b>\$ 11.5</b>	<b>\$ 4.5</b>	<b>\$ 13.2</b>
<b>Assumptions (percent)</b>			
Inflation rate	2.00	2.00	2.00
Real discount rate <sup>2</sup>	2.75	2.75	2.75
Discount rate	4.80	4.80	4.80

<sup>1</sup> Special contributions were introduced in 2011 and are scheduled to end in December 2026.

<sup>2</sup> Real rate shown as the geometric difference between the discount rate and the inflation rate.

### Assumptions

A funding valuation uses a number of assumptions to project the value of future pension plan liabilities and contributions. Assumptions are made about future inflation, salary increases, retirement ages, life expectancy and other variables. One of the most important assumptions for the board to consider is the discount rate, 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. Plan liabilities are sensitive to changes in the discount rate, with a decreased rate resulting in increased liabilities. 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 major adverse events, such as the 2008 financial crisis.

The assumption setting process is extremely robust and includes an annual in-depth analysis of plan experience as well as input from the sponsors. If assumptions show a pattern of deviating from actual experience, they are reviewed and may be adjusted annually. The independent actuary must confirm that the assumptions are appropriate and works closely with board members in the assumption setting exercise. The Canadian Institute of Actuaries (CIA) Standards of Practice require that each assumption is independently reasonable and that assumptions are appropriate in aggregate.

The inflation and discount rate assumptions in the most recent valuations are shown in the Funding Valuation Summary table above.

## PLAN FUNDING CONSIDERATIONS

When making decisions on behalf of all beneficiaries, the plan's management and the sponsors consider ever-changing demographic and economic factors and risks.

The Funding Variables table on page 10 shows how some important variables have changed over time. It is followed by brief discussions of some key funding considerations. The plan has identified four main funding risks – longevity, interest rates, inflation and asset volatility – and seeks to manage intergenerational equity given these risks.

## FUNDING VARIABLES – PAST AND PRESENT

	2016	1990
Average retirement age	59	58
Average starting pension	\$45,000	\$29,000
Average contributory years at retirement	26	29
Expected years on pension	31	25
Number of pensioners aged 100 or more	142	13
Ratio of active teachers to pensioners	1.3 to 1	4 to 1
Average contribution rate	12.3%	8.0%

### Longevity

Teachers in Ontario live longer than the general Canadian population and their life expectancy continues to increase. It costs more to pay lifetime pensions when members live longer. Members are contributing to the plan for fewer years than in the 1990s, and their retirement periods are longer. Over time, increased longevity can have a significant impact on liabilities: if the 1990 mortality assumptions had been used in recent funding valuations, pensions would be approximately 20% less expensive, all other factors being equal. The plan regularly updates its mortality assumptions and has adopted more innovative modelling to predict improvements in longevity, consistent with ongoing efforts by the actuarial profession in Canada, the United States and the United Kingdom.

### Interest rates

Subdued economic growth and low inflation have kept interest rates at historically low levels. In Canada, long-term real-return bond yields have declined from 2.07% over the last 20 years, on average, to 0.51% at the end of 2016. Interest rates affect asset prices, and an increase in rates could reduce the value of plan assets. Long-term interest rates are also an important input to the discount rate decision. The discount rate reflects what the plan's assets can reasonably be expected to earn over the long term, minus a provision for risk that the plan is exposed to. Plan liabilities are sensitive to changes in the discount rate. Assuming a higher rate would reduce plan liabilities.

### Inflation

The plan seeks to provide retired members with annual pension increases to offset the impact of inflation. Inflation that is higher than assumed in the valuation increases the plan's liabilities, given the plan's inflation protection feature, while inflation that is lower than assumed reduces the plan's liabilities. The annual increase received by members who retire after 2009 is conditional on the plan's funded status. Inflation in Canada has been stable since 1991, generally remaining within one percentage point of the Bank of Canada's 2% target. The annual percentage change in the monthly Consumer Price Index ranged from 1.1% to 2.0% in 2016.

### Asset volatility

Strong stock market performance in recent years has helped produce positive investment returns for the plan. In an environment of modest global growth, increasing macroeconomic and geopolitical risks and tighter U.S. monetary policy, higher valuations will result in higher market volatility. A number of major currencies moved sharply after unexpected results in the U.K. referendum on E.U. membership and the U.S. election. Further currency volatility can be expected as the implications of these geopolitical developments become clear, and as some central banks begin to raise interest rates, while others maintain low policy rates. Volatile markets can present opportunities for long-term investors but they can also lead to investment losses.

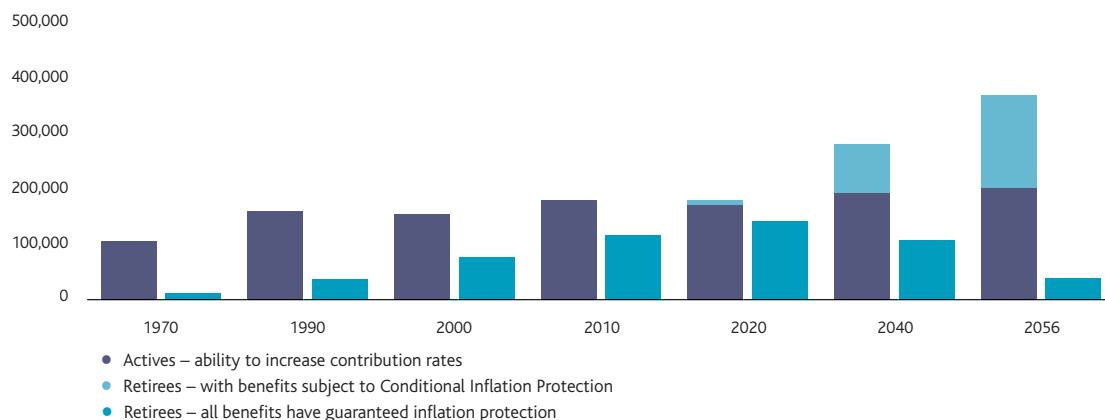
## Intergenerational equity aids sustainability

The plan's sustainability is defined as its ability to meet the needs of the present without compromising the ability of future generations to meet their own needs. Intergenerational equity is the principle that members of each generation contribute the right amount to pay for the benefits they receive. It is an important aspect of sustainability.

In the event of significant investment losses or a funding shortfall, the sponsors have two primary funding levers to bring the plan back into balance: increase contribution rates and reduce inflation protection. However, Ontario Teachers' is a mature pension plan, with relatively fewer active, contributing members available to fund any major investment losses. It would be unlikely that increases in contribution rates alone would be sufficient to fund major investment losses and, in addition, these increases would be borne solely by active plan members. This was the basis for the sponsors' proactive adoption of Conditional Inflation Protection (CIP) into plan design.

As noted, CIP provides flexibility in the amount of inflation increase provided to pensioners for benefits earned after 2009. CIP is an effective lever for mitigating funding risks while also promoting intergenerational equity because, over time, the risk of significant investment losses or a funding shortfall is distributed more broadly among the membership – risk is shared by more retired members. CIP will become more powerful over time: the amount of service that members have earned after 2009 continues to grow, while the proportion of service earned before 2010 (which is fully indexed to inflation) is in decline. These trends mean that, eventually, all pension benefits will be subject to CIP and active and retired plan members will more equitably share the risk of a loss.

### SHARING RISK OF LOSS<sup>1</sup>



<sup>1</sup> Based on estimates that are subject to change.

As CIP applies to more pension beneficiaries, it will be able to absorb greater losses, making it a more effective risk management tool.

	1990	2016	2026
Increase in contributions required for 10% loss in assets	1.9%	4.8%	5.3%
Decrease in level of CIP required for 10% loss in assets	n/a	36%	24%
Asset loss capable of being absorbed by fully invoked CIP (Canadian \$ billions)	n/a	\$31	\$67

The figures above are relative to a fully funded plan, with 100% inflation protection provided for all benefits and average contributions of 11%. As an example, a 10% asset loss in 2026 could be absorbed by lowering inflation protection increases for benefits earned after 2009 from 100% to 76%. In the most extreme case, if CIP levels were lowered to 50% on benefits earned during 2010–2013 and 0% on benefits earned after 2013, this funding lever would be powerful enough to absorb a 2026 asset loss of \$67 billion.

The maturity of the pension plan, the desire for intergenerational equity and the effectiveness of CIP as a funding lever are key considerations for funding sustainability.

# INVESTMENTS

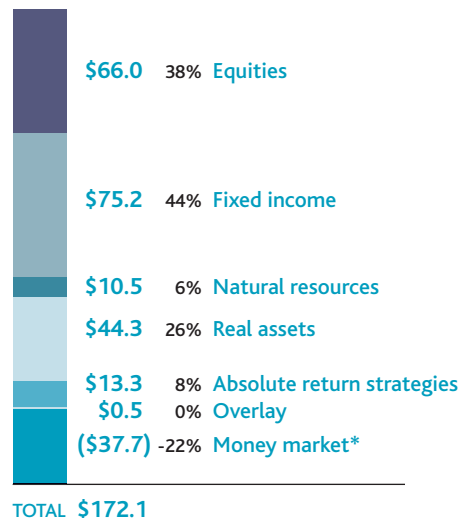
Ontario Teachers' is a globally active investor with holdings in more than 50 countries across diversified sectors and asset classes. The investment program is designed to help the plan meet its obligations to pay pensions and minimize funding volatility. Since Ontario Teachers' inception in 1990, more than three-quarters of the plan's income has come from investment returns, with the remainder from member and government contributions.

In 2016, the plan's net assets increased to a record \$175.6 billion, and the plan outperformed its composite benchmark to earn \$1.3 billion in value added. Our total-fund rate of return was 4.2%. Asset returns in local currency remained strong at 7.2%, which is in line with our four-year asset returns.

In Canadian dollars, however, currency had a -2.8% impact, for a loss of \$4.5 billion. As a result, the total-fund return was 4.2%. This illustrates the swings that currency can create year over year. In 2015, for example, currency impact added 8.3% to our total-fund return. The 2016 Performance section provides more detail on investment results.

## NET INVESTMENTS BY ASSET CLASS

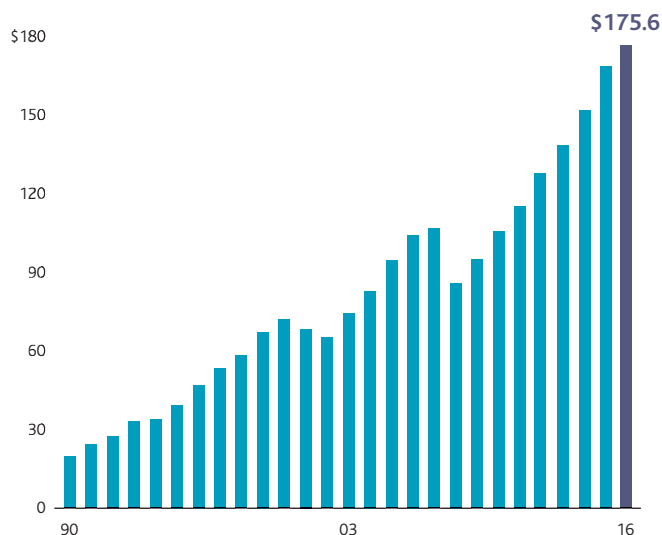
As at December 31, 2016 (Canadian \$ billions)



\* Money market asset class provides funding for investments in other asset classes.

## NET ASSETS

As at December 31 (Canadian \$ billions)



Net assets include investment assets less investment liabilities (net investments), plus the receivable from the Province of Ontario, and other assets less other liabilities.

## INVESTMENT PROGRAM OVERVIEW



(l-r) **Michael Wissell**, MBA, CFA, ICD.D, Senior Managing Director, Portfolio Construction; **Jane Rowe**, MBA, ICD.D, Senior Managing Director, Private Capital; **Nicole Musicco**, HBA, MBA, Senior Managing Director, Public Equities; **John Sullivan**, MBA, President and CEO, Cadillac Fairview; **Andrew Claerhout**, HBA, ICD.D, Senior Managing Director, Infrastructure & Natural Resources; **Ziad Hindo**, M.Sc., CFA, Senior Managing Director, Capital Markets; **Jo Taylor**, MBA, Senior Managing Director, International; **Jonathan Hausman**, M.Sc., MPA, Managing Director, Global Strategic Relationships

Ontario Teachers' seeks to maximize investment returns at a level of risk that takes into account the cost and nature of future benefits (pension liabilities). The aim is to create a total portfolio with risk and return characteristics that support stable pension benefits and contribution rates.

Our view is that passive investing through market indices cannot, alone, generate the risk-adjusted returns needed to meet the plan's obligations. To add value, the investment team employs active management strategies with a global perspective to identify and acquire undervalued investments and optimize returns.

### Investment strategy

#### Asset-mix selection

Recognizing that asset-mix selection is an important driver of long-term performance, the plan devotes considerable attention to choosing the types of assets owned and the relative emphasis placed on each asset class and geography.

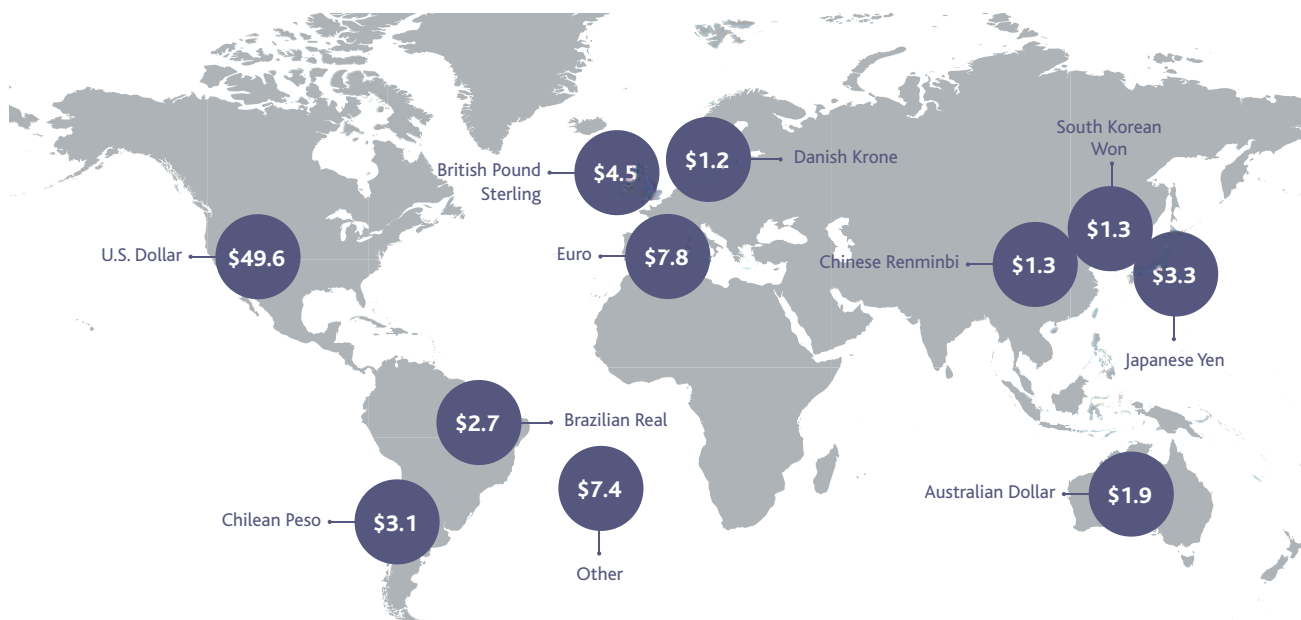
With board oversight, the plan's management now manages both the policy and asset mix together under our expanded OneTeachers' total-fund strategy. It integrates total returns, portfolio risk management and value-added returns, positioning Ontario Teachers' for the future in a complex and fast-paced environment. Management determines exposure to each asset class within ranges approved by the board.

#### Diversification and balance

Total-fund diversification, through effective portfolio construction, is fundamental to the plan's success. Diversification allows us to spread risk across key factors such as time periods, geography and economic outcomes, which reduces the adverse impact of any one investment loss on the fund overall. Exposure to the economies of different countries reduces overall volatility and offers the potential for better returns.

## NET CURRENCY EXPOSURES

As at December 31, 2016 (Canadian \$ billions)



### Proactive risk management

Ontario Teachers' actively manages funding and investment risk together. This work is guided by the Strategy & Risk group, which reports directly to the CEO. Each year, the plan determines the level of total risk that is appropriate to meet its objectives. Risk budgeting is then used to spread active risk across asset classes.

The Investment Committee of the board reviews and approves the risk budget annually, monitors overall investment risk exposure and reviews and approves risk management policies that affect the total portfolio, as well as new investment programs.

Management oversees investment and risk decisions through a two-part Investment Committee composed of senior investment professionals. The Investment Committee – Total Fund is responsible for considerations around the overall investment program, including the ability of the total-fund portfolio to achieve the real-return and volatility targets. The Investment Committee – Global Private and Illiquids is responsible for oversight of major private market or illiquid transactions and the overall private portfolio composition.

Ontario Teachers' has continually advanced its risk culture with sophisticated tools and processes to support risk measurement and management on a coordinated basis across the entire fund, all asset classes, all departments as well as within each portfolio.

In 2016, a new and more robust risk management system called OneRisk was launched after more than four years of development and testing. The OneRisk system is the cornerstone of our risk management efforts: with deeper insights and consistency in risk numbers, it provides improved oversight of the fund's risk-taking activities. On a daily basis, OneRisk calculates over a billion numbers and generates more than 30 reports to enable informed portfolio decision making. It replaced two legacy risk systems.

### Liquidity management

Not only must the plan have sufficient cash on hand to meet current liabilities; it must also seek to take advantage of investment opportunities. The liquidity position is therefore managed carefully. Ontario Teachers' has an established liquidity governance framework, limits and reporting requirements. The plan tests its liquidity position regularly through simulations of major market events. The board's Investment Committee receives regular updates on the plan's liquidity position.

The liquidity positioning of the plan remained strong in 2016.

Changing rules and regulations affecting banks are indirectly impacting Ontario Teachers', so plan management continues to adapt and enhance the way that it manages, oversees, measures and reports on liquidity. The 2016 reorganization in the Investment Division included the creation of a centralized treasury group within the Capital Markets team.



Having cash and liquid assets on hand is vital for several reasons. It allows us to:

- avoid selling high-quality long-term assets to meet short-term funding needs at inopportune times;
- adjust our asset mix in response to market movements;
- invest in assets such as real estate, infrastructure, timberland and private equity that cannot be quickly monetized;
- meet short-term, mark-to-market payments embedded in our derivative exposure.

Note 2(h) to the financial statements provides additional details on liquidity risk management, liquid assets and investment-related liabilities.

### Investment funding strategy

Ontario Teachers' is pursuing an investment funding strategy designed to diversify its sources of investment funding, reduce costs and manage portfolio risk. The plan has used bond repurchase agreements for cash management since the early 1990s because it is cost effective and allows Ontario Teachers' to retain economic exposure to government bonds.

In 2016, the strategy was reviewed in the context of changing regulations. New funding sources are being considered to manage the maturity profile of the plan's investment assets and financial liabilities, reduce the overall cost of funding and manage currency exposure.

In 2015, a new cost-effective funding vehicle, the Ontario Teachers' Finance Trust (OTFT), began issuing commercial paper. \$9.1 billion of commercial paper was outstanding at December 31, 2016.

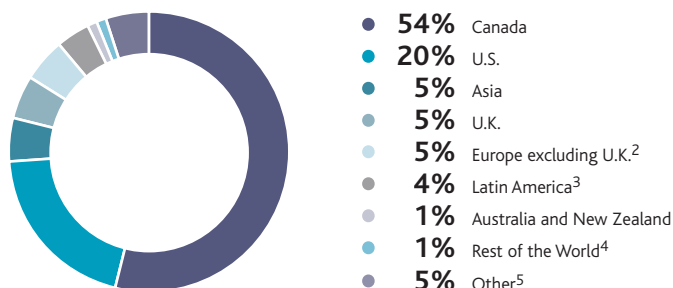
## Investment strengths

### Global presence

The plan's investment professionals are based in Toronto, London and Hong Kong, sourcing and managing investments in the Americas, Europe, and the Asia-Pacific region.

### GEOGRAPHIC EXPOSURE<sup>1</sup>

As at December 31, 2016



<sup>1</sup> Based on country of primary listing, location of head office, or location of the property.

<sup>2</sup> Developed countries only.

<sup>3</sup> South and Central Americas and Mexico.

<sup>4</sup> Countries not otherwise specified above.

<sup>5</sup> Predominantly alternative investment strategies to which a country exposure has not been assigned.

The Toronto office was established at the plan's inception in 1990 and is the North American hub for investment staff.

Ontario Teachers' established its London office in 2007 and expanded it in 2015. From this base, investment professionals look for opportunities throughout Europe, the Middle East and Africa. The teams in London collaborate with colleagues in Toronto and Hong Kong, as well as local partners, to cultivate strategic relationships and identify and execute on a wide range of investment opportunities.

Ontario Teachers' has been investing in the Asia-Pacific region since 1991 and opened a Hong Kong office in 2013 to gain greater access to opportunities in the region. It enables the plan's investment professionals to build even stronger relationships with key players in business and finance throughout the region, with its unique and dynamic mix of developed, developing and emerging economies.

## In-house talent

Approximately 80% of the investment portfolio is managed in-house by highly skilled, specialized teams. As one of Canada's largest pension funds, Ontario Teachers' provides employees with the resources, training and career opportunities needed to achieve the highest professional standards. Talent development is critically important to building and retaining the intellectual capital and in-house expertise required to employ sophisticated and innovative strategies.

## Funds and partnerships

Externally managed investments consist of alternative investments (hedge funds), private equity funds and public equity funds. External hedge fund managers provide access to unique investment approaches that both add to performance and diversify risk. We have strategic investments with many of the world's leading private equity firms, which open up private capital opportunities in markets we cannot easily access directly. We also partner with carefully chosen global and regional managers of public equity funds, who deliver value-added returns and provide local expertise in key global markets.

## Global strategic relationships

Relationships with key external partners are a significant component of our success. The pension plan created a new Global Strategic Relationships department in 2016 to develop and cultivate mutually beneficial investment relationships around the world. Members of this department will work across asset classes and in all global regions to strengthen existing relationships and build new ones.

## Responsible investing

Ontario Teachers' first responsible investing report, released along with the annual report, summarizes our thoughtful approach to responsible investing as environmental, social and governance (ESG) factors become increasingly important to the management of the plan's risk exposure and sustainability.

## 2016 PERFORMANCE

### NET INVESTMENTS AND RATES OF RETURN BY ASSET CLASS

As at December 31

(Canadian \$ billions)

	2016	2015	1-Year		(percent) 4-Year		5-Year	
			Actual	Benchmark	Actual	Benchmark	Actual	Benchmark
<b>Equities</b>			4.8	4.9	15.6	14.6	15.3	14.4
Canadian equity	4.3	3.5	19.1	16.9	7.4	8.5	6.9	8.4
Non-Canadian equity	61.7	74.0	4.1	4.3	17.1	16.0	17.0	15.7
<b>Fixed income</b>			0.8	1.0	2.4	2.4	3.0	2.8
Bonds	43.5	38.0	(1.2)	(1.1)	2.3	2.3	3.0	2.7
Real-rate products	31.7	31.1	3.3	3.3	2.7	2.7	3.1	3.1
<b>Natural resources</b>	10.5	10.2	8.3	6.7	(2.7)	(4.3)	(2.2)	(3.4)
<b>Real assets</b>			5.3	3.4	11.6	7.7	12.4	8.2
Real estate	26.5	24.9	7.7	7.4	11.2	8.7	12.8	10.0
Infrastructure	17.8	15.7	1.4	(2.3)	12.1	7.0	11.4	7.2
<b>Absolute return strategies<sup>1</sup></b>	13.3	17.7						
<b>Overlay<sup>2</sup></b>	0.5	–						
<b>Money market<sup>1</sup></b>	(37.7)	(46.9)						
<b>Total plan<sup>1</sup></b>	172.1	168.2	4.2	3.5	9.9	8.2	10.5	8.7

<sup>1</sup> Returns generated by absolute return strategies and money market are included in the total plan return and not attributed to an asset class. Net investments are defined as investments of \$255.7 billion minus investment-related liabilities of \$83.6 billion. See the consolidated statements of financial position (page 45).

<sup>2</sup> Overlay includes strategies to overweight or underweight certain index and foreign currency positions and is included in the calculation of the overall plan return.

The total-fund rate of return is net of trading costs, investment management expenses and external management fees, and is reported in Canadian dollars for five periods: one, four, five and 10 years, and since the current investment program began in 1990.

The plan produced a one-year total-fund return of 4.2% before Ontario Teachers' investment administrative costs, or a net rate of return of 4.0% after investment administrative costs. The first figure is net of trading costs, investment management expenses and external management fees but excludes internal administration costs, while the second figure is net of all investment costs. Strong performance within our Real Assets and Natural Resources assets was partially offset by currency losses due to the appreciation of the Canadian dollar.

The plan compares its performance to a Canadian dollar-denominated composite benchmark, which is calculated by aggregating results from each of the asset-class benchmarks using the same weightings as the plan's asset-mix policy weightings.

## INVESTMENT PERFORMANCE<sup>1</sup>

(percent)

	2016	2015	4-Year	5-Year	10-Year	Since Inception
Total return	4.2	13.0	9.9	10.5	7.3	10.1
Benchmark	3.5	10.1	8.2	8.7	6.3	7.9
Dollars earned above benchmark (Canadian \$ billions)	\$1.3	\$4.2	\$10.1	\$12.3	\$14.2	\$36.9

<sup>1</sup> Returns exclude Ontario Teachers' investment administrative costs.

## Benchmarks

Benchmarking is important because it allows board members, plan members and investment professionals to evaluate the effectiveness of the plan's strategies and activities relative to the risks taken. Appropriate benchmarks are established by a committee, chaired by the CEO. Any material or non-technical changes to total plan benchmarks must be approved by Ontario Teachers' board members.

On a total-fund basis and for each investment class, the plan seeks to outperform benchmark rates of return, and this outperformance is described as "value added." A complete list of benchmarks is available at [otpp.com](http://otpp.com).

## Investment cost management

The plan is committed to cost effectiveness and believes costs should be managed and linked to the investment value creation process. The board and management employ various tools to ensure that costs are well thought out and controlled. Costs are evaluated relative to target value added, and against peer plans through participation in global benchmarking comparisons.

The amount of invested capital, asset-class weightings and investing style are factors that affect asset management costs. Generally, the absolute costs of management increase as more capital is invested, which can be partly offset by economies of scale.

Extensive reliance on in-house management is a cost-effective means to implement Ontario Teachers' strategies. However, the plan's substantial investments in private assets and commitment to active management result in higher costs than if assets were deployed in lower-cost public securities and passive mandates. Further, the plan incurs costs to maintain international offices as part of its commitment to identify and participate in global investment opportunities.

The strategic planning process aligns costs with strategy. Annual budgets are reviewed by the Audit & Actuarial Committee of the board. Expense policies are in place to ensure costs incurred are appropriate, and opportunities to improve asset management efficiency are regularly sought out.

In 2016, investment costs, including administrative expenses, management fees and transaction costs, were 66 cents per \$100 of average net assets, compared with 74 cents per \$100 in 2015. Each of these categories is described in detail below.

### Administrative expenses

Investment administrative expenses include staff salaries, incentives and benefits, premises and equipment, professional and consulting services, information services, communication and travel, and custodial, audit and board fees. Ontario Teachers' believes that certain investment programs can be most efficiently delivered using in-house talent. The costs related to employing in-house investment teams and related supporting functions such as legal, operations and finance represent the majority of administrative expenses.

Administrative expenses were \$451 million or 27 cents per \$100 of average net assets in 2016, compared to \$429 million or 27 cents per \$100 in 2015. Administrative expenses increased by 5% due to higher salaries and benefits and increases in premises and equipment and professional and consulting services.

## Management fees

Ontario Teachers' selectively allocates capital to key external managers in order to access specialized talent and investment opportunities where it is not efficient or practical to maintain the equivalent in-house. Through these relationships, the plan incurs both traditional management fees, which are typically based on the amount of capital allocated, and performance-based fees, which are based on returns above a pre-determined threshold and can vary significantly from year to year. The plan attempts to strike the right balance between these fees in order to align the interest of the external managers with the investment objectives they have been engaged to pursue.

In some cases, management and performance fees are incurred by entities in which the plan has invested, rather than directly by the plan. When directly invoiced, or when information is otherwise available from capital notices or other manager communications, management and performance fees are reported as such in the plan's financial statements. Fees related to other externally managed investments are reflected in the plan's unrealized investment income.

In 2016, management fees were \$358 million, down from \$421 million in 2015. Management fees decreased due to a reduction in external assets under management and related management and performance fees.

## Transaction costs

Transaction costs are those directly attributable to the acquisition or disposal of investments. Due diligence and advisory costs are the most significant transaction costs that support private asset transactions. In the case of public securities, these costs primarily consist of commissions.

Transaction costs decreased by \$49 million in 2016 to total \$299 million. Transaction costs will vary year by year, depending on the level of activity and nature of private asset transactions.

## ASSET-CLASS REVIEW

### Equities

The plan uses equities to deliver long-term investment growth and income and applies various strategies to deliver value-added performance. This asset class includes public equities (those trading on a stock exchange) and private equities (not stock-exchange traded), managed by the Public Equities and Private Capital groups, respectively. Any funds not in an active program are managed passively to maintain exposure to the equity markets at the weighting outlined in our asset-mix policy.

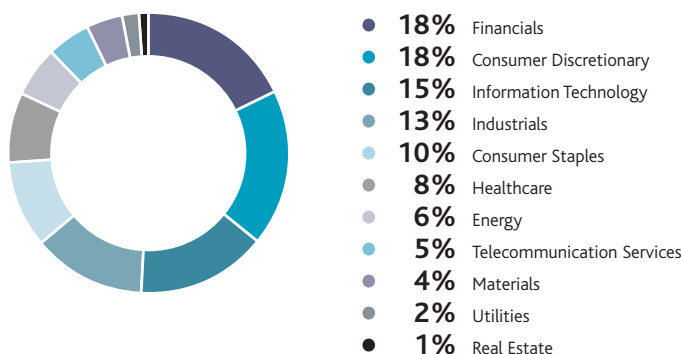
The asset class, which is reported as Canadian and non-Canadian equities, had total returns of 4.8% in 2016 compared to its benchmark of 4.9%. The total value of the plan's equities decreased to \$66.0 billion at the end of 2016 from \$77.5 billion a year earlier. The reduction from the previous year was partly due to a strategic decision to reduce total portfolio risk by lowering exposure to equities and increasing exposure to fixed income securities.

**Public equities:** The Public Equities department focuses on fundamental investing in equities primarily traded on Canadian and international exchanges. Its Global Active Equities team of sector-focused internal portfolio managers seek to outperform relevant benchmarks through bottom-up stock picking. Their efforts are complemented by the department's Global Equity Managers team, which identifies and allocates capital to top-tier external managers. The shared insights of the professionals in the department contribute to its Relationship Investing team's strategy, which looks to opportunistically purchase significant minority equity stakes in public and near-public companies, often in a transformational setting. A team of top-down focused professionals in the Portfolio Strategy group within the department work to manage aggregate portfolio risks. As public company investors, the department also houses the plan's Corporate Governance and Voting team, which represents the plan's corporate governance issues globally with responsibility for policy development, proxy voting and the public company governance engagement program.

In 2016, most of the world's major equity market indices posted gains, although results from global investments were negatively affected by the appreciation of the Canadian dollar.

## PUBLIC EQUITIES PORTFOLIO

As at December 31, 2016



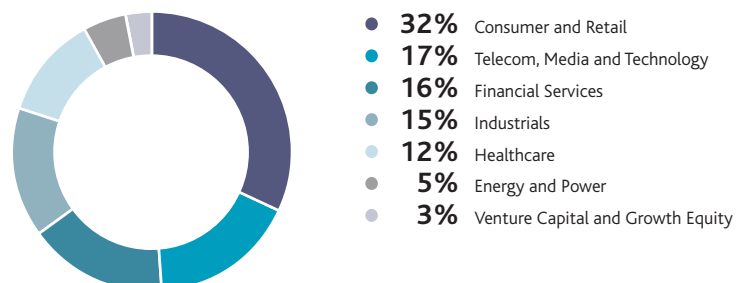
**Private capital:** The Private Capital group invests directly in private companies, either on its own or with partners, and indirectly through private equity funds. It seeks to add value to its portfolio companies by assisting in long-term strategic planning, creating high-performing management teams and boards, and ensuring good governance practices. In 2016, Private Capital marked 25 years of making direct and fund investments. Over that time, it has invested in more than 500 companies and funds, deployed approximately \$40 billion in capital on a global scale and developed expertise in specific industry sectors.

Private equity investments totalled \$26.6 billion at December 31, 2016, compared to \$28.4 billion at the end of 2015. Assets under management decreased during the year as a result of sizeable divestitures through public markets and private sales as well as negative foreign exchange movements caused by a strengthening Canadian dollar. This was partially offset by modest growth in the portfolio and the addition of six new direct investments.

In 2016, private equity investments generated a return of 4.3% and underperformed the benchmark return of 5.4%. The four-year annualized return of 20.8% exceeds the benchmark return of 17.5%.

## PRIVATE CAPITAL PORTFOLIO

As at December 31, 2016



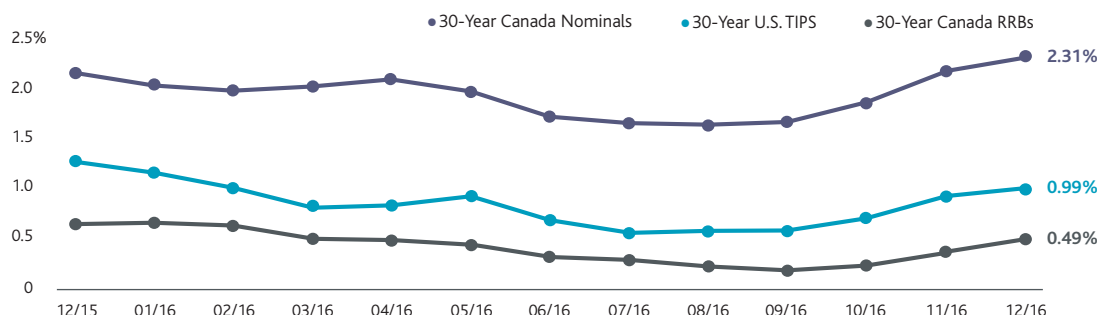
The plan assumed full ownership of Australia's leading data centre provider, Metronode. It also bought the market leader in Canada's wine industry, Constellation Brands Canada, for \$1.03 billion. Constellation owns iconic Canadian brands such as Jackson Triggs, Inniskillin and Sumac Ridge, and sells top international wine labels including Kim Crawford, Hardy's and Robert Mondavi. These transactions demonstrate Ontario Teachers' capacity and skills to finance sizeable private-company transactions around the world, and work with management teams in various sectors to capitalize on growth opportunities.

## Fixed income

Ontario Teachers' uses fixed income investments to provide security and steady income, hedge against interest rate risks inherent in the plan's liabilities and stabilize total returns. The plan owns a diversified portfolio of government bonds, provincial bonds, corporate bonds and real-return bonds. Real-return bonds provide returns that are indexed to inflation, as measured by the Consumer Price Index, and include debt issued primarily by the Canadian and U.S. federal governments.

Fixed income assets totalled \$75.2 billion at the end of 2016, compared to \$69.1 billion a year earlier. The increase in market value over the previous year was partly due to a strategic decision to reduce total portfolio risk by lowering exposure to equities and increasing exposure to fixed income securities. The portfolio of bonds and real-rate products delivered a return of 0.8%, slightly below the benchmark of 1.0%. Strong performance from real-rate products, emerging market bonds and U.S. corporate bonds was offset by negative returns from government bonds.

### GOVERNMENT BOND YIELDS



## Real assets

Real assets include real estate and infrastructure investments. Strategically, these assets provide returns that are often related to changes in inflation and therefore hedge against the cost of paying inflation-protected pensions.

At December 31, 2016, the total value of real assets was \$44.3 billion, compared to \$40.6 billion at year-end 2015. Total returns for 2016 were 5.3%, exceeding the 3.4% benchmark.

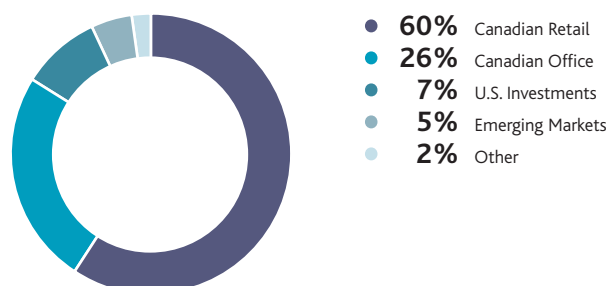
**Real estate:** The real estate portfolio is managed by the plan's wholly owned subsidiary, The Cadillac Fairview Corporation Limited, which maintains a well-balanced portfolio of retail and office properties designed to provide dependable cash flows.

The real estate portfolio returned 7.7% compared to a benchmark return of 7.4% for the year ended December 31, 2016. Net asset value of real estate holdings was \$26.5 billion at year-end 2016, compared to \$24.9 billion the previous year. The increase reflects valuation growth in North American and emerging market holdings. Canadian properties experienced growth in earnings as well as marginal capitalization rate declines in the year.

Portfolio highlights included the completion of major development projects including City Centre in Calgary, a major expansion at Rideau Centre in Ottawa, and major redevelopment at CF Toronto Eaton Centre. Further investment was made in emerging markets in Brazil and Mexico. The portfolio earned operating income of \$1.1 billion in 2016 (\$1.2 billion in 2015), primarily from Canadian retail and office properties. The decline in operating income from 2015 reflects special dividends received on our U.S. holdings in the prior year. At year-end 2016, the retail occupancy rate was 93% (92% in 2015), while the office occupancy rate was 93% (92% in 2015).

### REAL ESTATE PORTFOLIO

As at December 31, 2016 (based on total assets)

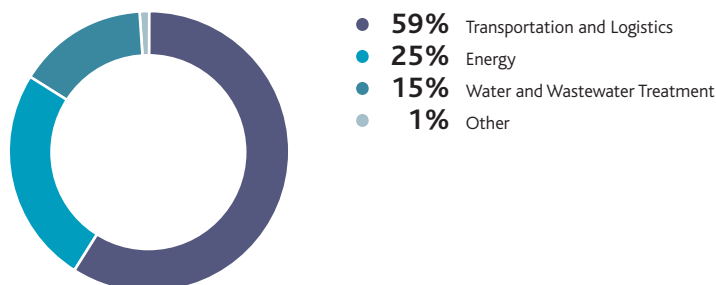


**Infrastructure:** The plan's infrastructure assets include investments in toll roads, airports, seaports and high-speed rail, conventional and renewable energy, water distribution and wastewater plants. The majority of infrastructure assets are held outside of Canada, principally in the U.K., Europe, Chile, the U.S. and Australia. Overall, Ontario Teachers' seeks to build an infrastructure portfolio that will steadily increase in value, provide predictable cash flow and correlate to inflation.

The value of the infrastructure portfolio increased to \$17.8 billion at the end of 2016, compared to \$15.7 billion a year earlier. New investments and higher valuations for existing assets were partly offset by the impact of a stronger Canadian dollar. Infrastructure assets delivered a one-year return of 1.4%, outperforming the benchmark return of -2.3%. (As country benchmarks are assigned to each asset, conversion back to Canadian dollars results in a negative benchmark.)

## INFRASTRUCTURE PORTFOLIO

As at December 31, 2016



The plan made a number of notable infrastructure investments with strong partners in 2016. It purchased a 20% stake in Mexican toll road concession Arco Norte, providing a strong foundation for continued growth of the infrastructure portfolio in Latin America. The plan increased its stake in Cubico Sustainable Investments Ltd., a global renewable energy company, and in Koole Terminals, a leading independent storage company in northwest Europe. In addition, the plan acquired interests in London City Airport, the Chicago Skyway toll road and Westerleigh, a U.K. crematoria developer and operator, through consortiums with other like-minded investors. These transactions demonstrate Ontario Teachers' commitment to making substantial, direct investments in infrastructure on a global basis.

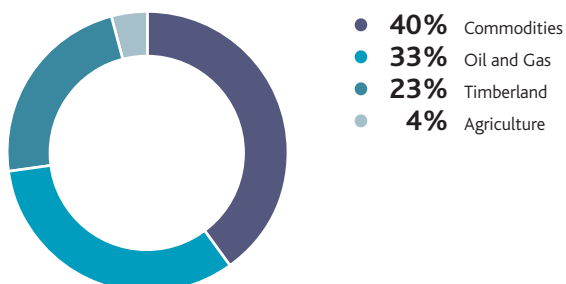
## Natural resources

The plan's natural resources holdings include investments in royalties from oil and gas, commodity indices and physical, producing assets such as timberlands and farmlands. The natural resources mandate is also focused on acquiring assets in the mining sector. These assets provide the plan with superior risk-adjusted returns, diversification and protection against unexpectedly high inflation.

Investments in natural resources were \$10.5 billion at the end of 2016, compared to \$10.2 billion in 2015. These assets returned 8.3%, compared to the benchmark return of 6.7%. Results reflect an increase in the market value of commodity indices and higher valuations for assets within the portfolio, partly offset by the impact of the strengthening Canadian dollar and asset sales in the timberland portfolio.

## NATURAL RESOURCES PORTFOLIO

As at December 31, 2016



## Absolute return and money market

Ontario Teachers' uses absolute return strategies to generate positive returns that are constructed to be uncorrelated to the returns of the plan's other assets. Internally managed absolute return strategies generally look to capitalize on market inefficiencies. The plan also uses external hedge fund managers to earn uncorrelated returns, to access unique strategies that augment returns and to diversify risk. In 2016, we concentrated our efforts on more strategic relationships. As a result, we reduced the overall number of external managers.

Assets employed in absolute return strategies totalled \$13.3 billion at 2016 year end compared to \$17.7 billion in 2015.

Money-market activity provides funding for investments in all asset classes, and is comparable to a corporation's treasury department. Derivative contracts and bond repurchase agreements have played a large part in the investment program since the early 1990s. For efficiency reasons, the plan often uses derivatives to gain passive exposure to global equity and commodity indices instead of buying the actual securities. The plan uses bond repurchase agreements to fund investments in all asset classes because it is cost effective and allows Ontario Teachers' to retain economic exposure to government bonds. These activities result in a negative net exposure in the asset mix and the amount is expected to vary from year to year based on the plan's needs.

## List of investments

The plan publishes an annual list of individual investments that exceeded \$150 million. The list as at year-end 2016 begins on page 80. News releases on notable transactions are also available on [otpp.com](http://otpp.com).

## Asset classes redefined in 2017

The board sets ranges for allocations to the asset classes. Management determines exposure within the board-approved bands, based on the underlying risk factors in each asset class, expected returns, and the risk balance and other limits in the total-fund portfolio.

Effective January 1, 2017, as part of the implementation of the OneTeachers' investment strategy, we redefined the asset classes and reorganized the plan's existing holdings.

### There are six asset classes:

Our Equities asset class continues to comprise public and private equities.

The Fixed Income asset class includes nominal bonds, real-rate products and short-term investments, while corporate and emerging market debt moved into the Credit asset class.

Natural resources and other securities that provide exposure to inflation form the Inflation Sensitive asset class.

The Real Assets asset class continues to include real estate and infrastructure.

The Absolute Return Strategies asset class encompasses the portfolio's hedge funds and innovative strategies.

2016 ASSET CLASSES	2017 ASSET CLASSES
Equities	• Equities
Fixed Income	• Fixed Income • Credit
Natural Resources	• Inflation Sensitive
Real Assets	• Real Assets
Absolute Return Strategies	• Absolute Return Strategies



# FINANCIAL REPORTING

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

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

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

## FINANCIAL STATEMENT VALUATION

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

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

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

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

The discount rate for the financial statements is based on market rates, as at the valuation date, of bonds issued by the Province of Ontario, which have characteristics similar to the Plan's liabilities. The discount rate is determined by using a cash flow-based estimation methodology which applies a weighted average discount rate that reflects the estimated timing and amount of benefit payments. The discount rate used is 3.25% (3.25% in 2015). Further details on the methods and assumptions used can be found in note 4 of the plan's consolidated financial statements.

## FINANCIAL POSITION AS AT DECEMBER 31, 2016

The plan ended 2016 with a financial statement deficit of \$13.8 billion, up from the deficit of \$1.8 billion at the end of 2015. The deficit represents the difference between net assets available for benefits of \$175.6 billion and accrued pension benefits of \$189.4 billion at year end.

### YEAR-END FINANCIAL POSITION

(as at December 31) (Canadian \$ billions)	2016	2015
Net assets available for benefits	\$ 175.6	\$ 171.4
Accrued pension benefits	189.4	173.2
Deficit	\$ (13.8)	\$ (1.8)

During 2016, net assets available for benefits increased by \$4.2 billion. Net investment income of \$7.0 billion and contributions of \$3.4 billion increased net assets available for benefits, while benefits paid of \$5.7 billion and administrative expenses of \$0.5 billion decreased the net assets available. Net investment income was due to moderate gains across all asset classes (investment returns are discussed in the Investments section of the MD&A).

### NET ASSETS AVAILABLE FOR BENEFITS

(as at December 31) (Canadian \$ billions)	2016	2015
Net assets available for benefits, beginning of year	\$ 171.4	\$ 154.5
Investment income	7.0	19.6
Contributions	3.4	3.3
Benefits paid	(5.7)	(5.5)
Administrative expenses	(0.5)	(0.5)
Increase in net assets available for benefits	4.2	16.9
Net assets available for benefits, end of year	\$ 175.6	\$ 171.4

Accrued pension benefits increased by \$16.2 billion during the year to \$189.4 billion. Changes in actuarial assumptions increased the accrued pension benefits amount by \$9.4 billion. Benefits paid during 2016 of \$5.7 billion include the addition of 4,800 retirement and disability pensions and 1,000 survivor pensions during 2016, as well as a 1.3% cost-of-living increase.

### ACCRUED PENSION BENEFITS

(as at December 31) (Canadian \$ billions)	2016	2015
Accrued pension benefits, beginning of year	\$ 173.2	\$ 172.7
Interest on accrued pension benefits	5.7	5.8
Benefits accrued	5.3	5.2
Benefits paid	(5.7)	(5.5)
Changes in actuarial assumptions	9.4	(3.6)
Changes in level of conditional indexing	1.7	0.7
Experience gains	(0.2)	(2.1)
Increase in accrued pension benefits	16.2	0.5
Accrued pension benefits, end of year	\$ 189.4	\$ 173.2

## FAIR VALUE HIERARCHY

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

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

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

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

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

## EFFECTIVE OVERSIGHT AND CONTROLS

### Disclosure and financial reporting controls

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

We have designed disclosure controls and procedures to provide reasonable assurance that material information related to the plan is gathered and reported to management in order to allow timely decisions regarding public disclosure. We evaluated our disclosure controls and procedures and concluded as at December 31, 2016, that they are effective.

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

### Protecting audit quality and integrity

A key oversight activity of audit committees is annually assessing the effectiveness of the external auditor. This helps audit committees meet their responsibility to make informed recommendations to the board on whether or not to reappoint the external auditor. Ontario Teachers' has conducted assessments annually. Ontario Teachers' Audit & Actuarial Committee recommended, and the board approved, the reappointment of the external auditor for 2016.

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

We strive to minimize our own use of consulting services involving the plan's auditor and we disclose the total amount paid for such services. In 2016, fees paid to Deloitte Touche Tohmatsu Limited (of which the Canadian firm is the plan's auditor) totalled \$11.1 million (\$11.8 million in 2015), of which \$10.4 million was for audit activities and \$715,000 was for non-audit services. Of the \$715,000 paid for non-audit services, approximately \$335,000 related to the plan, \$370,000 related to subsidiaries audited by Deloitte and the balance of \$10,000 was for subsidiaries not audited by Deloitte. Of the \$370,000 paid by the subsidiaries audited by Deloitte, \$115,000 was paid to Deloitte (Canada) and \$255,000 was paid to Deloitte firms outside of Canada, which are considered to have lower risk of impairing the independence of the plan's auditor.

# MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

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

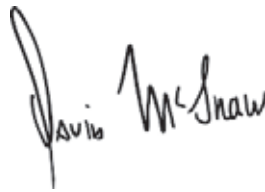
Systems of internal control and supporting procedures are maintained to provide assurance that transactions are authorized, assets safeguarded and proper records maintained. These controls include quality standards in hiring and training of employees, a code of conduct, the establishment of an organizational structure that provides a well-defined division of responsibilities and accountability for performance, and the communication of policies and guidelines through the organization.

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

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



**Ron Mock**  
President and Chief Executive Officer  
March 2, 2017



**David McGraw**  
Chief Financial Officer

# AUDITOR'S REPORT TO THE ADMINISTRATOR

We have audited the accompanying consolidated financial statements of Ontario Teachers' Pension Plan Board which comprise the consolidated statements of financial position as at December 31, 2016, and the consolidated statements of changes in net assets available for benefits, consolidated statements of changes in accrued pension benefits and consolidated statements of changes in deficit for the year then ended and a summary of significant accounting policies and other explanatory information.

## MANAGEMENT'S RESPONSIBILITY FOR THE CONSOLIDATED FINANCIAL STATEMENTS

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

## AUDITOR'S RESPONSIBILITY

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

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

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

## OPINION

In our opinion, the financial statements present fairly, in all material respects, the financial position of Ontario Teachers' Pension Plan Board as at December 31, 2016, and the changes in its net assets available for benefits, changes in accrued pension benefits and changes in deficit for the year then ended in accordance with Canadian accounting standards for pension plans.

The signature of Deloitte LLP is written in a stylized, cursive script.

Chartered Professional Accountants  
Licensed Public Accountants  
Toronto, Ontario  
March 2, 2017

# 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, 2016, 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, 2016;
- 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 2016;
- 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, 2016, as a going concern. This is different from the statutory valuation (the actuarial valuation required by the Pension Benefits Act (Ontario)), which establishes a prudent level for future contributions.

While the actuarial assumptions used to estimate liabilities for the Plan's consolidated financial statements represent the Board's best estimate of future events and market conditions at the end of 2016, and while in our opinion these assumptions are reasonable, the Plan's future experience will inevitably differ, perhaps significantly, from the actuarial assumptions. Any differences between the actuarial assumptions and future experience will emerge as gains or losses in future valuations, and will affect the financial position of the Plan at that time.

We have tested the data for reasonableness and consistency, and we believe it to be sufficient and reliable for the purposes of the valuation. We also believe that the methods employed in the valuation are appropriate for the purposes of the valuation, and that the assumptions used in the valuation are in accordance with accepted actuarial practice. Our opinions have been given, and our valuation has been performed, in accordance with accepted actuarial practice in Canada.




Scott Clausen, F.C.I.A., F.S.A.  
March 2, 2017

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

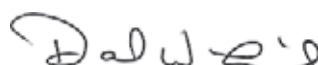
# CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

As at December 31 (Canadian \$ millions)	2016	2015
<b>Net assets available for benefits</b>		
<b>ASSETS</b>		
Cash	\$ 241	\$ 340
Receivable from the Province of Ontario (note 3)	3,273	3,208
Receivable from brokers	907	39
Investments (note 2)	255,716	262,912
Premises and equipment	57	64
	<b>260,194</b>	<b>266,563</b>
<b>LIABILITIES</b>		
Accounts payable and accrued liabilities	382	377
Due to brokers	608	80
Investment-related liabilities (note 2)	83,634	94,666
	<b>84,624</b>	<b>95,123</b>
<b>Net assets available for benefits</b>	<b>\$ 175,570</b>	<b>\$ 171,440</b>
<b>Accrued pension benefits and deficit</b>		
Accrued pension benefits (note 4)	\$ 189,397	\$ 173,266
Deficit	(13,827)	(1,826)
<b>Accrued pension benefits and deficit</b>	<b>\$ 175,570</b>	<b>\$ 171,440</b>

On behalf of the Plan administrator:



Chair



Board Member



# CONSOLIDATED STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

For the year ended December 31 (Canadian \$ millions)	2016	2015
<b>Net assets available for benefits, beginning of year</b>	<b>\$ 171,440</b>	<b>\$ 154,476</b>
<b>Investment operations</b>		
Net investment income (note 6)	6,998	19,672
Administrative expenses (note 11a)	(451)	(429)
<b>Net investment operations</b>	<b>6,547</b>	<b>19,243</b>
<b>Member service operations</b>		
Contributions (note 9)	3,363	3,310
Benefits paid (note 10)	(5,725)	(5,537)
Administrative expenses (note 11b)	(55)	(52)
<b>Net member service operations</b>	<b>(2,417)</b>	<b>(2,279)</b>
<b>Increase in net assets available for benefits</b>	<b>4,130</b>	<b>16,964</b>
<b>Net assets available for benefits, end of year</b>	<b>\$ 175,570</b>	<b>\$ 171,440</b>

## CONSOLIDATED STATEMENTS OF CHANGES IN ACCRUED PENSION BENEFITS

For the year ended December 31 (Canadian \$ millions)	2016	2015
<b>Accrued pension benefits, beginning of year</b>	<b>\$ 173,266</b>	<b>\$ 172,725</b>
<b>Increase in accrued pension benefits</b>		
Interest on accrued pension benefits	5,679	5,804
Benefits accrued	5,303	5,246
Changes in actuarial assumptions and methods (note 4a)	9,394	—
Changes in level of conditional indexing (note 4b)	1,674	675
	<b>22,050</b>	<b>11,725</b>
<b>Decrease in accrued pension benefits</b>		
Benefits paid (note 10)	5,725	5,537
Changes in actuarial assumptions and methods (note 4a)	—	3,538
Experience gains (note 4c)	194	2,109
	<b>5,919</b>	<b>11,184</b>
<b>Net increase in accrued pension benefits</b>	<b>16,131</b>	<b>541</b>
<b>Accrued pension benefits, end of year</b>	<b>\$ 189,397</b>	<b>\$ 173,266</b>

## CONSOLIDATED STATEMENTS OF CHANGES IN DEFICIT

For the year ended December 31 (Canadian \$ millions)	2016	2015
<b>Deficit, beginning of year</b>	<b>\$ (1,826)</b>	<b>\$ (18,249)</b>
Increase in net assets available for benefits	4,130	16,964
Net increase in accrued pension benefits	(16,131)	(541)
<b>Deficit, end of year</b>	<b>\$ (13,827)</b>	<b>\$ (1,826)</b>

# NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2016

## DESCRIPTION OF PLAN

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

### (a) General

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

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

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

### (b) Funding

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

### (c) Retirement pensions

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

### (d) Disability pensions

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

### (e) Death benefits

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

### (f) Escalation of benefits

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

### (g) Retirement Compensation Arrangement

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

(1) members of the Plan who retired with average earnings above \$156,299 (CPP-exempt members \$144,500) in 2016 and \$152,447 (CPP-exempt members \$140,945) in 2015; 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 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 CFCL, Ontario Teachers' Finance Trust (OTFT), a special purpose entity created to support the Plan's financing activities, and wholly owned investment holding companies that are 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, 2016 were authorized for issue through a resolution of the Board on March 2, 2017.

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

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

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

Management does not expect any significant impact on either the Plan's financial position or its investment income when adopting 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, and natural resources are valued based on estimated fair values determined by using appropriate techniques and best estimates by either management, appraisers, or both. Where external appraisers are engaged to perform the valuation, management ensures the appraisers are independent and compares the assumptions used by the appraisers with management's expectations based on current market conditions and industry practice to ensure the valuation captures the business and economic conditions specific to the investment.

At least 70% of the value of the rental property portfolio covering all product types and geographic regions is independently appraised annually. Properties with a value of over \$250 million will be valued independently every year.

Private equity funds are recorded at fair value based on net asset values obtained from each of the funds' administrators. These net asset values are reviewed by management.

- f. Derivative financial instruments are recorded at fair value using market prices where available. Where quoted market values are not readily available, appropriate alternative valuation techniques are used to determine fair value. In determining fair value, consideration is also given to the credit risk of the counterparty through the calculation of a credit valuation adjustment.
- g. Alternative investments, comprised of hedge funds and managed futures accounts, are recorded at fair value based on net asset values obtained from each of the funds' administrators. These net asset values are reviewed by management.

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

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

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

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

### **Fair value hierarchy**

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

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

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

### **Trade-date reporting**

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

### **Net investment income**

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

### **Transaction costs**

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

### **Management fees**

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

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

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

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

The value of accrued pension benefits and changes therein during the year are based on an actuarial valuation prepared by Mercer (Canada) Limited, an independent firm of actuaries. The valuation is made 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 benefits for credited service earned after December 31, 2009 is conditional, depending on the Plan's funded status. For the financial statement valuation, the Plan estimates the conditional inflation protection benefits based on the indexation 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 fixed income, equities, natural resources and real asset investments in accordance with the Board's policy of asset diversification.

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

The schedule below summarizes the Plan's investments and investment-related liabilities, including net accrued interest and dividends of \$527 million (2015 – \$625 million), before allocating the effect of derivative contracts:

As at December 31	2016		2015	
(Canadian \$ millions)	Fair Value	Cost	Fair Value	Cost
<b>Fixed income</b>				
Bonds	\$ 52,355	\$ 51,050	\$ 53,776	\$ 49,376
Short-term investments	9,521	9,504	8,919	8,860
Alternative investments <sup>2</sup>	11,727	8,862	13,014	9,110
Canadian real-rate products	20,381	14,993	20,694	15,346
Non-Canadian real-rate products	16,011	12,866	17,061	13,934
	<b>109,995</b>	<b>97,275</b>	<b>113,464</b>	<b>96,626</b>
<b>Equity</b>				
Publicly traded				
Canadian	2,075	2,053	2,048	2,551
Non-Canadian	27,423	22,081	33,317	25,840
Non-publicly traded				
Canadian	2,786	2,480	2,533	2,505
Non-Canadian	25,110	19,704	26,555	19,249
	<b>57,394</b>	<b>46,318</b>	<b>64,453</b>	<b>50,145</b>
<b>Natural resources</b>				
Timberland	2,442	1,356	2,705	1,437
Sector investment <sup>3</sup>	3,831	3,802	3,547	3,745
	<b>6,273</b>	<b>5,158</b>	<b>6,252</b>	<b>5,182</b>
<b>Real assets</b>				
Real estate (note 5)	30,923	19,064	29,441	18,034
Infrastructure	17,826	13,832	15,193	10,694
	<b>48,749</b>	<b>32,896</b>	<b>44,634</b>	<b>28,728</b>
	<b>222,411</b>	<b>181,647</b>	<b>228,803</b>	<b>180,681</b>
<b>Investment-related receivables</b>				
Securities purchased under agreements to resell	27,910	27,621	29,465	28,419
Cash collateral deposited under securities borrowing arrangements	1,967	1,967	2,111	2,111
Cash collateral paid under credit support annexes	121	121	108	108
Derivative-related, net	3,307	1,761	2,425	486
	<b>33,305</b>	<b>31,470</b>	<b>34,109</b>	<b>31,124</b>
<b>Investments</b>	<b>\$ 255,716</b>	<b>\$ 213,117</b>	<b>\$ 262,912</b>	<b>\$ 211,805</b>

<sup>1</sup> For additional details, refer to the Major Investments on page 80.

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

<sup>3</sup> Sector investment includes oil, gas, and agricultural assets.



As at December 31	2016		2015	
(Canadian \$ millions)	Fair Value	Cost	Fair Value	Cost
<b>Investment-related liabilities</b>				
Securities sold under agreements to repurchase	\$ (47,422)	\$ (47,131)	\$ (60,768)	\$ (59,665)
Securities sold but not yet purchased				
Fixed income	(19,108)	(17,656)	(20,509)	(16,632)
Equities	(1,947)	(1,752)	(2,125)	(1,988)
Real estate (note 5)	(3,196)	(2,876)	(4,581)	(4,178)
Commercial Paper	(9,120)	(8,935)	(3,058)	(2,985)
Cash collateral received under credit support annexes	(163)	(163)	(154)	(154)
Derivative-related, net	(2,678)	(845)	(3,471)	(724)
	<b>(83,634)</b>	<b>(79,358)</b>	<b>(94,666)</b>	<b>(86,326)</b>
<b>Net investments (note 2d)</b>	<b>\$ 172,082</b>	<b>\$ 133,759</b>	<b>\$ 168,246</b>	<b>\$ 125,479</b>

## (b) Fair value hierarchy

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

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

December 31, 2015				
(Canadian \$ millions)	Level 1	Level 2	Level 3	Total
Fixed income	\$ 88,106	\$ 9,327	\$ 16,031	\$ 113,464
Equity	33,141	716	30,596	64,453
Natural resources	—	—	6,252	6,252
Real assets	3,257	168	41,209	44,634
Investment-related receivables	2,289	31,623	197	34,109
Investment-related liabilities	(22,910)	(69,661)	(2,095)	(94,666)
<b>Net investments</b>	<b>\$ 103,883</b>	<b>\$ (27,827)</b>	<b>\$ 92,190</b>	<b>\$ 168,246</b>

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

2016							
(Canadian \$ millions)	Fixed Income	Equity	Natural Resources	Real Assets	Investment- Related Receivables	Investment- Related Liabilities	Total
Balance, beginning of year	\$ 16,031	\$ 30,596	\$ 6,252	\$ 41,209	\$ 197	\$ (2,095)	\$ 92,190
Purchases	5,228	7,294	289	7,714	6,489	6,851	33,865
Sales	(6,937)	(9,188)	(375)	(4,008)	(6,485)	(6,863)	(33,856)
Transfers in <sup>4</sup>	206	—	—	—	12	(77)	141
Transfers out <sup>4</sup>	—	—	—	—	(24)	131	107
Gains/(losses) included in investment income							
Realized	1,118	2,231	71	507	49	32	4,008
Unrealized	(1,408)	(1,572)	36	(239)	(1)	14	(3,170)
Balance, end of year	\$ 14,238	\$ 29,361	\$ 6,273	\$ 45,183	\$ 237	\$ (2,007)	\$ 93,285

2015							
(Canadian \$ millions)	Fixed Income	Equity	Natural Resources	Real Assets	Investment- Related Receivables	Investment- Related Liabilities	Total
Balance, beginning of year	\$ 13,816	\$ 22,354	\$ 2,867	\$ 36,433	\$ 501	\$ (2,433)	\$ 73,538
Purchases	4,279	8,320	4,038	4,842	2,128	2,687	26,294
Sales	(4,201)	(6,104)	(1,176)	(4,140)	(2,576)	(2,257)	(20,454)
Transfers in <sup>4</sup>	—	—	—	—	(4)	—	(4)
Transfers out <sup>4</sup>	—	—	—	—	(1)	26	25
Gains/(losses) included in investment income							
Realized	569	2,722	311	380	176	(135)	4,023
Unrealized	1,568	3,304	212	3,694	(27)	17	8,768
Balance, end of year	\$ 16,031	\$ 30,596	\$ 6,252	\$ 41,209	\$ 197	\$ (2,095)	\$ 92,190

<sup>4</sup> Transfers in and transfers out of Level 3 are due to the change in the availability of observable inputs used for fair value measurement of investment assets or related liabilities. Similarly, the transfers between Level 2 and Level 1 in 2016 of \$330 million (2015 - nil) are due to the change in the applicability of non-observable inputs. 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:

		2016		2015	
(Canadian \$ millions)		Notional	Fair Value	Notional	Fair Value
<b>Equity and commodity derivatives</b>					
Swaps		\$ 21,454	\$ 402	\$ 32,893	\$ (666)
Futures		5,572	14	3,581	11
Options: Listed	– purchased	350	21	190	3
	– written	669	(28)	145	(7)
OTC	– purchased	14,114	730	1,125	83
	– written	3,125	(195)	1,464	(69)
		<b>45,284</b>	<b>944</b>	<b>39,398</b>	<b>(645)</b>
<b>Interest rate derivatives</b>					
Swaps		90,105	29	93,721	(42)
Futures		103,444	(10)	218,564	—
Options: Listed	– purchased	11,318	5	20,550	8
	– written	10,673	(6)	9,730	(9)
OTC	– purchased	30,398	115	13,942	39
	– written	42,699	(110)	28,302	(40)
		<b>288,637</b>	<b>23</b>	<b>384,809</b>	<b>(44)</b>
<b>Currency derivatives</b>					
Swaps		11,215	(70)	6,653	(162)
Forwards <sup>5</sup>		70,956	(119)	55,688	(66)
Options: OTC	– purchased	8,299	121	6,277	104
	– written	7,839	(111)	6,086	(94)
		<b>98,309</b>	<b>(179)</b>	<b>74,704</b>	<b>(218)</b>
<b>Credit derivatives</b>					
Credit default	– purchased	16,099	(286)	15,158	(47)
	– written	19,793	140	13,389	(78)
		<b>35,892</b>	<b>(146)</b>	<b>28,547</b>	<b>(125)</b>
<b>Other derivatives</b>					
Statistic swaps		5,061	(19)	5,304	(59)
Dividend swaps		254	(21)	199	(3)
		<b>5,315</b>	<b>(40)</b>	<b>5,503</b>	<b>(62)</b>
		<b>473,437</b>	<b>602</b>	<b>532,961</b>	<b>(1,094)</b>
Net cash collateral paid under derivative contracts		—	27	—	48
<b>Notional and net fair value of derivative contracts</b>		<b>\$ 473,437</b>	<b>\$ 629</b>	<b>\$ 532,961</b>	<b>\$ (1,046)</b>

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

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

(Canadian \$ millions)	2016	2015
Derivative-related receivables	\$ 2,678	\$ 2,388
Cash collateral paid under derivative contracts	31	52
Derivative-related liabilities	(2,076)	(3,482)
Cash collateral received under derivative contracts	(4)	(4)
	<b>\$ 629</b>	<b>\$ (1,046)</b>

#### (d) Investment asset mix

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

	2016		2015	
	Effective Net Investments at Fair Value (\$ millions)	Asset Mix %	Effective Net Investments at Fair Value (\$ millions)	Asset Mix %
<b>Equity</b>				
Canadian	\$ 4,275	2%	\$ 3,538	2%
Non-Canadian	61,679	36	74,003	44
	<b>65,954</b>	<b>38</b>	<b>77,541</b>	<b>46</b>
<b>Fixed income</b>				
Bonds	43,529	25	37,974	23
Real-rate products	31,725	19	31,131	18
	<b>75,254</b>	<b>44</b>	<b>69,105</b>	<b>41</b>
<b>Natural resources</b>				
Commodities	4,184	3	3,996	2
Timberland	2,442	1	2,705	2
Sector investment <sup>6</sup>	3,831	2	3,547	2
	<b>10,457</b>	<b>6</b>	<b>10,248</b>	<b>6</b>
<b>Real assets</b>				
Real estate	26,470	16	24,860	15
Infrastructure	17,826	10	15,661	9
	<b>44,296</b>	<b>26</b>	<b>40,521</b>	<b>24</b>
<b>Absolute return strategies</b>				
Internal absolute return strategies	4,864	3	8,291	5
Alternative investments	8,414	5	9,468	6
	<b>13,278</b>	<b>8</b>	<b>17,759</b>	<b>11</b>
<b>Overlay<sup>7</sup></b>	<b>512</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Money market</b>	<b>(37,669)</b>	<b>(22)</b>	<b>(46,928)</b>	<b>(28)</b>
<b>Net investments</b>	<b>\$ 172,082</b>	<b>100%</b>	<b>\$ 168,246</b>	<b>100%</b>

<sup>6</sup>Sector investment includes oil, gas, and agricultural assets.

<sup>7</sup> Overlay includes strategies to overweight or underweight certain index and foreign currency positions.

## (e) Risk management

### Objectives

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

The Plan also manages its liquidity risk so that there is sufficient liquidity to enable the Plan to meet all of its future obligations as they become payable, which includes meeting short-term marked-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.

### 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, 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 June 16, 2016. No significant changes were made to the statement at that time. The long-term rate of return goal is set at the actuarial assumed discount rate contained in the funding valuation using the going-concern basis. The Plan's investments are selected and held in accordance with the criteria and limitations set forth in the statement and in accordance with all relevant legislation. The statement includes a long-term asset-mix policy:

Exposure	Minimum	Goal	Maximum
Equities	37%	42%	47%
Fixed income	37%	50%	58%
Natural resources	3%	6%	11%
Real assets	20%	25%	30%
Money market <sup>8</sup>	(26)%	(23)%	(15)%
		100%	

<sup>8</sup> The money market asset class provides funding for investments in other asset classes.

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

## Processes

The Plan uses risk budgeting to allocate risk across the investment asset classes. The risk budget is presented to the Board annually for review and approval. Each investment department is responsible for managing the investment risks associated with the investments they manage within the risk budget allocated to them. Each department is subject to compliance with the Statement of Investment Policies and Procedures, the Board Investment Policy (which includes the risk budget allocated to them), Investment Division Policy, Trade Authorization and Execution Operation Policy, Pre-Investment Approval Policy and the applicable portfolio policies. In addition, the Capital Markets department is responsible for maintaining the liquidity positions in accordance with the Plan's policies on liquidity. 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. For investments not traded on exchanges, such as alternative investments and private equity investments, the investment departments conduct due diligence before acquisition and use it as a tool to monitor the investments after acquisition. The objective is to obtain as much transparency as possible for the departments to assess the risk exposure arising from these private and alternative investments.

The senior representatives from each investment department form the Investment Committee Total Fund (IC-TF) which focuses on managing investment risks at a total-fund level. The Chief Financial Officer attends all meetings of the committee as an observer. 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. The committee meets every other week, or more frequently as required. Reporting to the IC-TF are the Investment Division Counterparty Credit Committee, the Investment Division Liquidity Committee, the Emerging Markets Committee, and the Responsible Investment Committee.

The Enterprise Risk Management Committee oversees investment and non-investment risks faced by the Plan. The committee is chaired by the Chief Executive Officer 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.

### (f) Credit risk

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

### Credit risk management

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

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

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

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

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

### Maximum exposure to credit risk before collateral held

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

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

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

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

						2016
Credit rating (Canadian \$ millions)	Bonds and Short-Term Investments	Real-Rate Products	Securities Purchased under Agreements to Resell	Loans and Private Debt	OTC Derivatives	
AAA/R-1 (high)	\$ 41,168	\$ 32,697	\$ —	\$ —	\$ —	
AA/R-1 (mid)	2,502	—	5,990	—	83	
A/R-1 (low)	9,376	3,482	21,006	—	891	
BBB/R-2	5,259	—	—	—	—	
Below BBB/R-2	2,123	—	—	—	—	
Unrated <sup>9</sup>	1,448	213	914	12,243	—	
	\$ 61,876	\$ 36,392	\$ 27,910	\$ 12,243	\$ 974	

						2015
Credit rating (Canadian \$ millions)	Bonds and Short-Term Investments	Real-Rate Products	Securities Purchased under Agreements to Resell	Loans and Private Debt	OTC Derivatives	
AAA/R-1 (high)	\$ 41,555	\$ 33,533	\$ —	\$ —	\$ —	
AA/R-1 (mid)	1,872	101	913	—	69	
A/R-1 (low)	10,542	3,879	26,570	—	94	
BBB/R-2	3,096	12	—	—	5	
Below BBB/R-2	2,813	—	—	—	—	
Unrated <sup>9</sup>	2,817	230	1,982	9,818	—	
	\$ 62,695	\$ 37,755	\$ 29,465	\$ 9,818	\$ 168	

<sup>9</sup> Unrated comprises securities that are either privately held, managed externally, or not rated by the rating agencies.



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

As at December 31 (Canadian \$ millions)	2016	2015
Guarantees	\$ 314	\$ 574
Loan commitments	133	385
Notional amount of written credit derivatives	19,793	13,389
<b>Total off balance sheet credit risk exposure</b>	<b>\$ 20,240</b>	<b>\$ 14,348</b>

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

## Credit risk concentrations

As at December 31, 2016, 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 \$51.0 billion (2015 – \$47.0 billion), U.S. Treasury issued securities of \$0.2 billion (2015 – \$5.9 billion), Province of Ontario bonds of \$5.0 billion (2015 – \$5.4 billion), receivable from the Province of Ontario (see note 3) of \$3.3 billion (2015 – \$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 equity and commodity prices, interest and foreign exchange rates, and credit spreads. The Plan is exposed to market risk from its investing activities. The level of market risk to which the Plan is exposed varies depending on 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. This risk captures the investment risk exposure by asset class reflecting 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.

## Changes to risk measurement

During 2016 we transitioned to a new system to calculate Total Asset Risk. The new system uses the most recent 10 years of market data, compared to the previous system which used 29 years of history. The reduced historical period means a higher proportion of actual market data is used to calculate Total Asset Risk, with use of fewer proxies and statistical methods.

As of year end 2015, Total Asset Risk was measured at \$29.0 billion in the previous system, compared to \$41.5 billion in the new system. The difference between these measurements is due to changes between the two systems resulting from refinement of our risk measurement methodology.

The shortened historical window contributes over half of the increase in measured Total Asset Risk. This is due to two reasons. The first is that the market events of 2007-2009 comprise a larger proportion of the historical market data used. As a consequence, certain assets which are most affected by such market events, such as equities, corporate bonds, credit derivatives, hedge funds and commodities have a higher measured risk. The second is that low interest rates have been more prevalent over the past 10 years, increasing the measured risk related to the fund experiencing very low interest rates.

Most of the remaining increase in Total Asset Risk is due to changes in modeling assumptions. For example, for many of our private equity holdings we have introduced a leverage adjustment to reflect that the risk of a loss increases as a company's leverage increases. In addition, for our fixed income investments we no longer incorporate the positive impact of yield in our measured risk, which is more consistent with how risk is traditionally measured.

### Measurement limitations

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. The sampling approach and long historical window, however, mitigate this limitation to some extent by enabling the generation of a set of scenarios that include extreme adverse events. Another limitation is that the Plan computes the risk relative to asset positions at the close of the business day. Positions may change substantially during the course of a trading day. These limitations and the nature of the ETL measure mean that the Plan's losses may exceed the risk exposure amounts indicated in any risk reports.

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

The table below shows the year over year change in Total Asset Risk ETL of the Plan as at December 31 based on our new risk measurement system.

(Canadian \$ billions) <sup>10</sup>	2016	2015
<b>Equity</b>		
Canadian	\$ 2.0	\$ 2.5
Non-Canadian	22.5	25.5
<b>Fixed income</b>		
Bonds	4.5	6.0
Real-rate products	6.5	6.5
<b>Natural Resources</b>		
Commodities	2.0	2.0
Timberland	0.5	0.5
Sector investment <sup>11</sup>	2.0	1.5
<b>Real assets</b>		
Real estate	4.0	4.0
Infrastructure	3.0	3.0
<b>Absolute return strategies</b>	2.0	3.5
<b>Money market</b>	6.5	8.5
<b>Total Asset Risk ETL Exposure<sup>12</sup></b>	<b>\$ 37.5</b>	<b>\$ 41.5</b>

<sup>10</sup> Rounded to the nearest \$0.5 billion.

<sup>11</sup> Sector investment includes oil, gas, and agricultural assets.

<sup>12</sup> Total Asset Risk ETL Exposure does not equal the sum of ETL exposure for each asset class because diversification reduces total risk exposure.

## Interest rate risk

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

The Plan manages the interest rate risk by using interest rate derivatives as detailed in note 2c to the consolidated financial statements. After giving effect to the derivative contracts and investment-related receivables and liabilities discussed in note 2c, a 1% increase in nominal interest rates would result in a decline in the value of the Plan's investments in fixed-income securities of 7% or \$2.9 billion (2015 – 7% or \$2.7 billion). Similarly, a 1% increase in real interest rates would result in a decline in the value of the Plan's investments in real-rate products of 16% or \$4.8 billion (2015 – 14% or \$5.3 billion).

As at December 31, 2016, 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 \$40.8 billion (2015 – 21% or \$36.0 billion).

## Foreign currency risk

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

As at December 31, the Plan had investments exposed to foreign currency. In Canadian dollars this exposure is as follows:

(Canadian \$ millions)	2016	2015
Currency	Net Exposure	Net Exposure
United States Dollar	\$ 49,553	\$ 52,564
Euro	7,774	9,238
British Pound Sterling	4,505	10,305
Japanese Yen	3,275	4,625
Chilean Peso	3,108	2,744
Brazilian Real	2,673	1,665
Australian Dollar	1,944	2,156
South Korean Won	1,343	1,867
Chinese Renminbi	1,307	3,785
Danish Krone	1,175	1,718
Other	7,450	9,419
	<b>\$ 84,107</b>	<b>\$ 100,086</b>

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

(Canadian \$ millions)	2016	2015
Currency	Change in Net Investment Value	Change in Net Investment Value
United States Dollar	\$ 2,478	\$ 2,628
Euro	389	462
British Pound Sterling	225	515
Japanese Yen	164	231
Other	950	1,168
	<b>\$ 4,206</b>	<b>\$ 5,004</b>

## (h) Liquidity risk

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

### **Liquidity risk management**

The liquidity position of the Plan is analyzed daily to ensure the Plan maintains at least 17% of its assets in unencumbered Canadian treasury bills. The Plan also manages its liquidity by holding additional unencumbered Government of Canada securities (bonds, treasury bills and real-rate bonds) and U.S. Government securities that are available for repurchase agreements so that the Plan is able to withstand the liquidity effects of a market stress event and pay its contractual cash flows and projected cash requirements over a one-year horizon with a 99% probability. The Plan's liquidity position is periodically tested by simulations of major events such as significant movements in the market.

### **Liquid assets**

The Plan maintains a portfolio of highly marketable assets including Canadian and U.S. government bonds that can be sold or funded on a secured basis as protection against any unforeseen interruption to cash flow. The fair value of the Canadian and U.S. government bonds is \$51,208 million as at December 31, 2016 (2015 – \$52,991 million). The Plan also has a net position of publicly traded equities of \$27,551 million (2015 – \$33,240 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)				2016
	Within One Year	One to Five Years	Over Five Years	Total
Securities sold under agreements to repurchase	\$ (39,736)	\$ (7,686)	\$ —	\$ (47,422)
Securities sold but not yet purchased				
Fixed income	(19,108)	—	—	(19,108)
Equities	(1,947)	—	—	(1,947)
Real estate	(920)	(1,929)	(347)	(3,196)
Commercial Paper	(9,120)	—	—	(9,120)
Cash collateral received under credit support annexes	(163)	—	—	(163)
Derivative-related, net	(2,678)	—	—	(2,678)
	\$ (73,672)	\$ (9,615)	\$ (347)	\$ (83,634)

(Canadian \$ millions)				2015
	Within One Year	One to Five Years	Over Five Years	Total
Securities sold under agreements to repurchase	\$ (53,477)	\$ (7,291)	\$ —	\$ (60,768)
Securities sold but not yet purchased				
Fixed income	(20,509)	—	—	(20,509)
Equities	(2,125)	—	—	(2,125)
Real estate	(2,225)	(1,351)	(1,005)	(4,581)
Commercial Paper	(3,058)	—	—	(3,058)
Cash collateral received under credit support annexes	(154)	—	—	(154)
Derivative-related, net	(3,471)	—	—	(3,471)
	\$ (85,019)	\$ (8,642)	\$ (1,005)	\$ (94,666)

#### (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 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, 2016 is \$20 million (2015 - \$ nil).

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

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

(Canadian \$ millions)	2016	2015
<b>Securities purchased under agreements to resell and sold under agreements to repurchase</b>		
Securities purchased under agreements to resell	\$ 27,910	\$ 29,465
Collateral held	27,749	29,767
Securities sold under agreements to repurchase	47,422	60,768
Collateral pledged	47,438	64,250
<b>Securities borrowing</b>		
Securities borrowed	4,979	4,545
Collateral pledged <sup>13</sup>	5,382	4,936
<b>Derivative-related</b>		
Collateral received <sup>14</sup>	1,003	230
Collateral pledged <sup>15</sup>	1,175	1,584

<sup>13</sup>Includes cash collateral of \$1,967 (2015 - \$2,111)

<sup>14</sup>Includes cash collateral of \$163 (2015 - \$154)

<sup>15</sup>Includes cash collateral of \$121 (2015 - \$108)

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

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

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

(Canadian \$ millions)				2016
	Gross amount presented in note 2a	Amounts subject to netting agreements	Securities and cash collateral <sup>16</sup>	Net Exposure
<b>Financial assets</b>				
Securities purchased under agreements to resell	\$ 27,910	\$ (18,753)	\$ (9,154)	\$ 3
Derivative-related receivables	3,307	(1,699)	(927)	681
	\$ 31,217	\$ (20,452)	\$ (10,081)	\$ 684
<b>Financial liabilities</b>				
Securities sold under agreements to repurchase	\$ (47,422)	\$ 18,753	\$ 28,666	\$ (3)
Derivative-related liabilities	(2,678)	1,699	967	(12)
	\$ (50,100)	\$ 20,452	\$ 29,633	\$ (15)
(Canadian \$ millions)				2015
	Gross amount presented in note 2a	Amounts subject to netting agreements	Securities and cash collateral <sup>16</sup>	Net Exposure
<b>Financial assets</b>				
Securities purchased under agreements to resell	\$ 29,465	\$ (27,931)	\$ (1,529)	\$ 5
Derivative-related receivables	2,425	(1,905)	(161)	359
	\$ 31,890	\$ (29,836)	\$ (1,690)	\$ 364
<b>Financial liabilities</b>				
Securities sold under agreements to repurchase	\$ (60,768)	\$ 27,931	\$ 32,824	\$ (13)
Derivative-related liabilities	(3,471)	1,905	1,380	(186)
	\$ (64,239)	\$ 29,836	\$ 34,204	\$ (199)

<sup>16</sup> Securities and cash collateral exclude over-collateralization and collateral in transit. See note 2i for the total amount of collateral.

### NOTE 3.

#### RECEIVABLE FROM THE PROVINCE OF ONTARIO

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

As at December 31 (Canadian \$ millions)	2016	2015
Contributions receivable	\$ 3,224	\$ 3,157
Accrued interest receivable	49	51
	\$ 3,273	\$ 3,208

The receivable as at December 31, 2016, from the Province of Ontario consists of \$1,635 million, which was received in January 2017, and an estimated \$1,638 million to be received with interest in January 2018. The receivable as at December 31, 2015, from the Province consisted of \$1,598 million, which was received in January 2016, and an initial estimate of \$1,610 million to be received in January 2017. 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 \$189,397 million (2015 – \$173,266 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	2016	2015
Discount rate	<b>3.25%</b>	3.25%
Salary escalation rate	<b>2.80%</b>	2.50%
Inflation rate	<b>1.80%</b>	1.50%
Real rate <sup>1</sup>	<b>1.40%</b>	1.70%

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

The primary economic assumptions were changed as a result of changes in capital markets during 2016. The changes in economic assumptions resulted in a net increase in the value of accrued pension benefits of \$9,281 million (2015 – \$5,003 million decrease inclusive of the impact of the salary agreements reached with the Affiliates of Ontario Teachers' Federation in 2015 noted below).

The primary economic assumptions for 2015 incorporated the agreement between the Province of Ontario and the Affiliates of Ontario Teachers' Federation providing for a 1% increase in salaries on September 1, 2016 plus an additional increase of 0.5% on the 98<sup>th</sup> day of the 2016 school year. The agreement also provided for a lump sum payment on September 1, 2015 of 1% of earned wages to all members covered by the collective agreement. This lump sum payment is included in members' pensionable earnings.

There were no material changes adopted in 2016 to the non-economic assumptions. However, there was a small refinement to the assumed retirement age for inactive members. The non-economic assumptions were updated in 2015 to reflect recent experience of Plan members related to retirement, termination of plan membership and increases in salaries related to experience. The change in non-economic assumptions increased the accrued pension benefits by \$113 million (2015 - \$1,465 million). The changes in economic and non-economic assumptions resulted in a net increase in the value of accrued pension benefits of \$9,394 million (2015 - \$3,538 million decrease).

#### (b) Plan provisions

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



For the financial statement valuation, future pension payments for the credited service earned are indexed at the levels stated in the most recent funding valuation filing. The indexation levels from the most recent filing as at January 1, 2016 are as follows:

Credited service	Inflation protection level
Earned before 2010	100% of CPI
Earned during 2010 – 2013	90% of CPI
Earned after 2013	90% of CPI

In the most recent filing, inflation protection was partially restored for recent retirees. Effective January 1, 2017, pensioners who retired after 2009 received a one-time increase to their pensions to prospectively restore benefits to the level they would have been had 100% inflation protection been provided on January 1, 2016. Future cost of living increases will be equal to 90% of the annual increase in the CPI on credited service earned after 2009 (up from the previous level of 70%). 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 or increased depending on the funded status of the Plan. The change in the level of conditional indexing resulted in an increase in the value of accrued pension benefits of \$1,674 million (2015 – \$675 million).

### (c) Experience gains and losses

Experience gains on the accrued pension benefits of \$194 million (2015 – \$2,109 million) arose from differences between the actuarial assumptions and actual results.

## NOTE 5.

### INVESTMENT IN REAL ESTATE

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

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

As at December 31	<b>2016</b>		<b>2015</b>	
(Canadian \$ millions)	<b>Fair Value</b>	<b>Cost</b>	Fair Value	Cost
<b>Assets<sup>1, 2</sup></b>				
Real estate properties	\$ 26,506	\$ 15,695	\$ 25,220	\$ 14,783
Investments	4,159	3,113	3,966	3,003
Other assets	258	256	255	248
<b>Total assets</b>	<b>30,923</b>	<b>19,064</b>	29,441	18,034
<b>Liabilities<sup>1, 2</sup></b>				
Long-term debt	2,324	2,196	3,640	3,451
Other liabilities	872	680	941	727
<b>Total liabilities</b>	<b>3,196</b>	<b>2,876</b>	4,581	4,178
<b>Net investment in real estate</b>	<b>\$ 27,727</b>	<b>\$ 16,188</b>	\$ 24,860	\$ 13,856

<sup>1</sup> U.S. Dollar, Mexican Pesos and Colombian Pesos net assets have been hedged by way of foreign currency forward contracts for a notional amount of \$1,423 million (2015 – \$1,660 million) with a combined fair value of (\$8) million (2015 – (\$54) million).

<sup>2</sup> Joint ventures managed by external parties hold real estate properties and have liabilities. The net asset value of these joint ventures is included in investments, representing assets of \$708 million (2015 – \$751 million) and liabilities of \$305 million (2015 – \$402 million).

(Canadian \$ millions)	<b>2016</b>	<b>2015</b>
<b>Revenue</b>		
Rental	\$ 1,949	\$ 1,822
Investment and other	92	244
	<b>2,041</b>	2,066
<b>Expenses</b>		
Property operating	850	799
General and administrative	36	57
Other	15	21
	<b>901</b>	877
Operating income	<b>1,140</b>	1,189
Interest expense	(90)	(124)
Income (note 6)	<b>1,050</b>	1,065
Net investment gain	<b>906</b>	1,792
<b>Net real estate income</b>	<b>\$ 1,956</b>	\$ 2,857

## 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							2016
(Canadian \$ millions)	Income <sup>1</sup>	Realized <sup>2</sup>	Unrealized <sup>2 3</sup>	Investment Income	Management Fees	Transaction Costs	Net Investment Income
<b>Fixed income</b>							
Bonds	\$ 800	\$ (540)	\$ (1,040)	\$ (780)	\$ (3)	\$ (16)	\$ (799)
Short-term investments	(7)	502	(154)	341	—	—	341
Alternative investments <sup>4</sup>	173	1,077	(769)	481	(25)	(2)	454
Canadian real-rate products	482	177	40	699	(2)	(5)	692
Non-Canadian real-rate products	208	137	48	393	—	—	393
	1,656	1,353	(1,875)	1,134	(30)	(23)	1,081
<b>Equity</b>							
Publicly traded							
Canadian	34	(137)	545	442	(1)	(10)	431
Non-Canadian	534	3,197	(2,355)	1,376	(44)	(43)	1,289
Non-publicly traded							
Canadian	50	(84)	278	244	(10)	(33)	201
Non-Canadian	746	2,084	(1,903)	927	(242)	(117)	568
	1,364	5,060	(3,435)	2,989	(297)	(203)	2,489
<b>Natural resources</b>							
Commodities	(24)	(110)	791	657	—	(3)	654
Timberland	153	70	(182)	41	—	—	41
Sector investment <sup>5</sup>	186	1	227	414	(20)	(3)	391
	315	(39)	836	1,112	(20)	(6)	1,086
<b>Real assets</b>							
Real estate (note 5)	1,065	371	535	1,971	(1)	(14)	1,956
Infrastructure	896	58	(505)	449	(10)	(53)	386
	1,961	429	30	2,420	(11)	(67)	2,342
	\$ 5,296	\$ 6,803	\$ (4,444)	\$ 7,655	\$ (358)	\$ (299)	\$ 6,998

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

<sup>2</sup>Includes net foreign currency losses of \$209 million (both realized and unrealized).

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

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

<sup>5</sup>Sector investment includes oil, gas, and agricultural assets.

				Investment	Management	Transaction	Net
(Canadian \$ millions)	Income	Realized <sup>6</sup>	Unrealized <sup>6,7</sup>	Income	Fees	Costs	Investment
							Income
<b>Fixed income</b>							
Bonds	\$ 630	\$ 2,646	\$ (1,273)	\$ 2,003	\$ (5)	\$ (9)	\$ 1,989
Short-term investments	—	88	41	129	—	—	129
Alternative investments <sup>8</sup>	60	(961)	1,239	338	(53)	(1)	284
Canadian real-rate products	467	85	7	559	—	(1)	558
Non-Canadian real-rate products	207	108	1,267	1,582	—	—	1,582
	1,364	1,966	1,281	4,611	(58)	(11)	4,542
<b>Equity</b>							
Publicly traded							
Canadian	(41)	97	(816)	(760)	—	(13)	(773)
Non-Canadian	757	5,923	(778)	5,902	(73)	(68)	5,761
Non-publicly traded							
Canadian	42	63	(141)	(36)	(17)	(8)	(61)
Non-Canadian	652	2,510	3,139	6,301	(239)	(184)	5,878
	1,410	8,593	1,404	11,407	(329)	(273)	10,805
<b>Natural resources</b>							
Commodities	(19)	(3,700)	1,974	(1,745)	—	(3)	(1,748)
Timberland	79	345	343	767	(1)	—	766
Sector investment <sup>9</sup>	53	—	(196)	(143)	(22)	(20)	(185)
	113	(3,355)	2,121	(1,121)	(23)	(23)	(1,167)
<b>Real assets</b>							
Real estate (note 5)	1,085	153	1,639	2,877	(1)	(19)	2,857
Infrastructure	751	2	1,914	2,667	(10)	(22)	2,635
	1,836	155	3,553	5,544	(11)	(41)	5,492
	\$ 4,723	\$ 7,359	\$ 8,359	\$ 20,441	\$ (421)	\$ (348)	\$ 19,672

<sup>6</sup> Includes net foreign currency losses of \$588 million (both realized and unrealized).

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

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

<sup>9</sup> Sector investment includes oil, gas, and agricultural assets.

## NOTE 7.

### INVESTMENT RETURNS AND RELATED BENCHMARK RETURNS

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

(percent)	2016		2015	
	Investment Returns	Investment Benchmark Returns	Investment Returns	Investment Benchmark Returns
Fixed income	0.8%	1.0%	5.9%	6.0%
Canadian equity	19.1	16.9	(11.7)	(6.8)
Non-Canadian equity	4.1	4.3	21.2	17.6
Natural resources	8.3	6.7	(1.3)	(6.1)
Real assets	5.3	3.4	16.0	10.2
Total Plan	4.2%	3.5%	13.0%	10.1%

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 investment strategies employed by the investment managers identified for the asset class.

The total Plan return is measured against a Canadian dollar-denominated composite benchmark produced by aggregating returns from each of the policy asset-class benchmarks, using the Plan's asset-mix policy weights.

## NOTE 8.

### STATUTORY ACTUARIAL VALUATIONS

Statutory actuarial valuations are prepared periodically to determine the funding requirements of the Plan. Active members are required to contribute 11.50% of the portion of their salaries covered by the CPP and 13.10% of salaries above this level. Member contributions are matched by the Province and designated employers. In addition, the Funding Management Policy established by the co-sponsors provides procedures for the co-sponsors to determine contributions and benefits.

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

(percent)	Contribution Rate	
	Covered by CPP	Not covered by CPP
2012	10.80%	12.40%
2013	11.15%	12.75%
2014 to 2026	11.50%	13.10%

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

The most recent statutory actuarial valuation that has been filed with regulatory authorities was prepared as at January 1, 2016, by Mercer (Canada) Limited and disclosed a funding surplus of \$4,522 million, after adopting conditional inflation protection of 90% for credited service earned between 2010 and 2013 and after 2013, as well as recognizing the special contributions included in the 2016 contribution rate described above, of 1.1% of salary payable until December 31, 2026.

## NOTE 9. CONTRIBUTIONS

(Canadian \$ millions)	2016	2015
<b>Members</b>		
Current service <sup>1</sup>	\$ 1,619	\$ 1,592
Optional credit	34	35
	<b>1,653</b>	<b>1,627</b>
<b>Province of Ontario</b>		
Current service	1,596	1,567
Interest	36	37
Optional credit	31	32
	<b>1,663</b>	<b>1,636</b>
Designated employers	34	33
Transfers from other pension plans	13	14
	<b>47</b>	<b>47</b>
	<b>\$ 3,363</b>	<b>\$ 3,310</b>

<sup>1</sup> Contributions past due are less than \$1 million in 2016 and 2015.

## NOTE 10. BENEFITS PAID

(Canadian \$ millions)	2016	2015
Retirement pensions	\$ 5,227	\$ 5,056
Death benefits	376	344
Disability pensions	26	27
Commuted value transfers	64	74
Family law transfers	24	27
Transfers to other plans	8	8
Refunds	—	1
	<b>\$ 5,725</b>	<b>\$ 5,537</b>

## NOTE 11.

### ADMINISTRATIVE EXPENSES

#### (a) Investment expenses

(Canadian \$ millions)	2016	2015
Salaries, incentives and benefits	\$ 290.1	\$ 277.7
Premises and equipment	49.4	44.9
Professional and consulting services	50.1	46.0
Information services	28.7	25.8
Communication and travel	16.4	16.8
Custodial fees	7.3	10.2
Statutory audit fees	2.3	1.9
Board and committee remuneration	0.9	0.8
Other	6.0	5.0
	<b>\$ 451.2</b>	<b>\$ 429.1</b>

#### (b) Member services expenses

(Canadian \$ millions)	2016	2015
Salaries, incentives and benefits	\$ 37.4	\$ 36.3
Premises and equipment	10.6	8.8
Professional and consulting services	4.8	4.2
Communication and travel	1.2	1.4
Statutory audit fees	0.1	0.1
Board and committee remuneration	0.1	0.1
Other	0.8	0.9
	<b>\$ 55.0</b>	<b>\$ 51.8</b>

#### (c) Compensation of key management personnel

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

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

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

(Canadian \$ millions)	2016	2015
Short-term employee benefits	\$ 14.6	\$ 13.0
Post-employment benefits	2.4	5.9
Termination benefits	3.5	—
Other long-term benefits	12.6	16.3
	<b>\$ 33.1</b>	<b>\$ 35.2</b>

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

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

The employees of the Plan are members of the defined benefit plans, of either the Ontario Public Service Employees Union (OPSEU) Pension Plan or Public Service Pension Plan (PSPP). The expected contributions from the Plan in 2017 are approximately \$12.3 million. Some employees are also members of the Public Service Supplementary Plan (PSSP). These three pension plans are sponsored by the Province of Ontario and information is available on [www.optrust.com](http://www.optrust.com) and [www.opb.ca](http://www.opb.ca). As the employer, the Plan matches the employees' contributions to these pension plans. Some senior management employees also participate in a non-registered, unfunded Supplemental Employee Retirement Plan (SERP) managed by the Plan to provide the employees non-indexed retirement benefits equal to 2% of the employee's pensionable earnings times the number of years of service, less the initial annual pension to which the employee is entitled under the PSPP and PSSP, combined. The contributions expensed by the Plan during the year were \$12.5 million (2015 – \$15.3 million). Contributions are included in the salaries, incentives and benefits expenses.

#### NOTE 12. CAPITAL

The funding surpluses or deficits determined regularly in the funding valuations prepared by an independent actuary are described as the Plan's capital in the consolidated financial statements. The actuary's funding valuation is used to measure the long-term health of the Plan. The actuary tests the Plan's ability to meet its obligations to all current Plan members and their survivors. Using an assumed rate of return, the actuary projects the Plan's benefits to estimate the current value of the liability (see note 4), which is compared to the sum of the Plan assets, the future contributions for all current Plan members and the present value of the contribution increases for future members. The result of the comparison is either a surplus or a deficit.

The objective of managing the Plan's capital is to ensure the Plan is fully funded to pay the plan benefits over the long term. The co-sponsors change the benefit and contribution levels to eliminate any deficits. The Funding Management Policy set by the co-sponsors in the Partners' Agreement provides guidance on how the co-sponsors manage the Plan's capital.

A funding valuation, including a plan to eliminate any deficit, is required to be filed with the pension regulator at least every three years. A preliminary funding valuation is performed by the actuary when the valuation is not filed with the regulator assisting the co-sponsors in managing the Plan's capital.

The most recent funding valuation filed is disclosed in note 8.

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

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

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

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

The RCA is funded on a pay-as-you-go basis from a portion of the contributions made to the Plan by members, the Province and designated employers. The portion is based on a limit on contributions to the Plan with contributions above the limit being remitted to the RCA. The limit is determined annually by the Plan's independent actuary such that the RCA contributions are expected to be more than sufficient to pay the benefits over the next 12 months. At the beginning of 2017, the actuary determined that the limit should remain at \$14,500. Due to the funding policy adopted by the co-sponsors, the net assets available for benefits will continue to be substantially less than the accrued benefits.



In addition, because it is difficult to predict the benefits expected to be paid over the next 12 months, it is possible that the assets may be insufficient to pay the benefits. In such a case, the payment of benefits will be temporarily suspended and contributions raised in order to fund the payments that are due under the RCA.

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)	2016	2015
<b>Statements of financial position</b>		
<b>NET ASSETS AVAILABLE FOR BENEFITS</b>		
Assets	\$ 41,619	\$ 27,186
Liabilities	(5,382)	(2,060)
	<b>\$ 36,237</b>	<b>\$ 25,126</b>
<b>ACCRUED BENEFITS AND DEFICIT</b>		
Accrued benefits	\$ 335,040	\$ 309,172
Deficit	(298,803)	(284,046)
	<b>\$ 36,237</b>	<b>\$ 25,126</b>
<b>Statements of changes in net assets available for benefits</b>		
Contributions	\$ 20,662	\$ 11,251
Investment income	138	150
	<b>20,800</b>	<b>11,401</b>
Benefits paid	9,524	12,272
Expenses	165	105
	<b>9,689</b>	<b>12,377</b>
Increase/(decrease) in net assets available for benefits	<b>\$ 11,111</b>	<b>\$ (976)</b>

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

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

## NOTE 14. COMMITMENTS

The Plan has committed to enter into investment and other transactions, which may be funded over the next several years in accordance with the terms and conditions agreed to. As at December 31, 2016, these commitments totalled \$10,597 million (2015 – \$13,112 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 2016 or 2015 under these guarantees.

The Plan guarantees loan and credit agreements. The Plan's maximum exposure is \$nil million as at December 31, 2016 (2015 – \$149 million).

The Plan guarantees lease agreements for a subsidiary with expiry dates ranging from 2017 to 2059. The Plan's maximum exposure is \$96 million as at December 31, 2016 (2015 – \$96 million). There were no default lease payments in either 2016 or 2015.

The Plan also guarantees the ability of certain investee companies to settle certain financial obligations. The Plan's maximum exposure is \$67 million as at December 31, 2016 (2015 – \$116 million).

The Cadillac Fairview Corporation Limited manages the real estate investments and has provided guarantees relating to the completion of the construction of certain residential developments. The term of these guarantees spans the lives of the development projects, which range from one to five years. The maximum exposure cannot be determined because the projects are not yet complete. These guarantees amounted to \$151 million as at December 31, 2016 (2015 – \$213 million) and have not been recognized in the real estate liabilities.

The Plan guarantees the debentures issued by a real estate trust it consolidates. No payments have been made by the Plan into the real estate trust or related to the debentures. The debentures are comprised of \$0.75 billion 4.31% Series B Debentures maturing on January 25, 2021 and \$0.6 billion 3.64% Series C Debentures maturing on May 9, 2018. As at December 31, 2015, the Plan also guaranteed the \$1.25 billion 3.24% Series A Debentures which matured on January 25, 2016. The debentures, included in the Plan's real estate investment-related liabilities, may be redeemed by the issuer at any time prior to maturity.

The Plan also guarantees commercial paper issued by Ontario Teachers' Finance Trust which the Plan consolidates. No payments have been made by the Plan into the trust or related to the commercial paper, which are issued through private placements in U.S. and Canada. The maximum aggregate principal amounts outstanding at any one time do not exceed \$10 billion. As at December 31, 2016, commercial paper issued by the trust amounted to \$9,127 million (2015 – \$3,062 million). The commercial paper, included in the Plan's investment-related liabilities, is not redeemable prior to maturity or subject to voluntary prepayment. The maturity terms are up to 270 days from the date of issue in U.S. and up to 364 days in Canada.

### Indemnifications

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

# MAJOR INVESTMENTS

As at December 31, 2016

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

Type (Canadian \$ millions)	Maturity	Coupon (%)		Fair Value		Cost
Government of Canada bonds	2017–2064	0.00–9.00	\$	29,756	\$	28,454
Canadian corporate bonds	2017–2043	0.00–14.00		956		950
Securities purchased under agreements to resell	2017–2017	-1.50–1.25		27,910		27,621
Commercial paper	2017–2017	0.00–0.00		1,405		1,402
Canada treasury bills	2017–2017	0.00–0.00		4,606		4,604
International sovereign debt	2018–2060	0.00–26.38		2,655		2,909
International corporate bonds	2017–2053	0.00–13.00		7,047		7,023
U.S. treasury bonds	2017–2046	0.63–6.25		(10,084)		(8,559)
International agency bonds	2017–2024	3.13–8.25		376		375
Provincial bonds	2018–2048	1.20–8.50		8,307		8,043
Bank notes	2017–2017	0.00–0.55		3,420		3,408
Securities sold under agreements to repurchase	2017–2017	-0.40–2.10		(47,422)		(47,131)
Commercial paper issued	2017–2017	0.00–1.40		(9,120)		(8,935)

## REAL-RETURN INVESTMENTS OVER \$150 MILLION

Type (Canadian \$ millions)	Maturity	Coupon (%)		Fair Value		Cost
Real-return Canada bonds	2021–2047	1.25–4.25	\$	16,686	\$	12,966
Real-return Canadian corporate bonds	2021–2046	0.00–5.33		1,675		700
U.S. treasury inflation protection	2017–2044	0.13–3.88		10,153		6,976
Real-return provincial bonds	2021–2036	2.00–4.50		1,925		1,243

## CORPORATE SHARES/UNITS OVER \$150 MILLION

As at December 31, 2016 (millions)

Security Name	Shares	Fair Value	Security Name	Shares	Fair Value
The Macerich Company	23.3	\$2,212.2	FedEx Corp.	0.8	\$194.8
iShares MSCI Emerging Markets Index	37.5	1,755.4	LafargeHolcim Ltd.	2.7	189.3
Multiplan Empreendimentos Imobiliarios S.A.	54.8	1,302.5	Athene Holding Ltd.	3.2	185.1
Samsung Electronics Co., Ltd.	0.2	468.8	XPO Logistics, Inc.	3.2	183.7
Sprint Corporation	34.7	392.2	Tencent Holdings Limited	5.4	176.0
Alphabet Inc.	0.3	343.4	Sony Corporation	4.7	175.7
Hudson's Bay Company	23.0	304.8	EXOR N.V.	3.0	171.1
JPMorgan Chase & Co.*	2.4	273.0	Daimler AG	1.7	166.7
American International Group, Inc.	3.1	272.3	Comcast Corporation	1.7	162.4
Level 3 Communications, Inc.	3.1	236.0	Chubb Limited	0.9	160.8
Microsoft Corporation	2.7	226.4	Citigroup Inc.	2.0	159.5
General Motors Company	4.8	225.2	Nokia Corporation	24.3	157.7
Aircastle Limited	7.9	220.5	Facebook, Inc.	1.0	156.9
SoftBank Group Corp.	2.4	209.9	Lloyds Banking Group plc	150.8	156.2
Nissan Shatai Co., Ltd.	15.7	205.6	Wells Fargo & Company*	2.6	153.2
TMX Group Limited	2.8	203.4	Nestlé S.A.	1.6	153.0

\* Includes fair market value of warrants.

## REAL ESTATE PROPERTIES OVER \$150 MILLION

As at December 31, 2016

Property	Total Square Footage (in thousands)	Effective % Ownership	Property	Total Square Footage (in thousands)	Effective % Ownership
<b>Canadian Regional Shopping Centres</b>			<b>Canadian Office Properties</b>		
Champlain Place, Dieppe	850	100%	City Centre Office, Calgary	853	100%
Chinook Centre, Calgary	1,419	100%	Deloitte Tower, Montreal	515	100%
Fairview Mall, Toronto	875	50%	Granville Square, Vancouver	403	100%
Fairview Park Mall, Kitchener	747	100%	HSBC Building, Vancouver	395	100%
Fairview Pointe Claire, Montreal	1,045	50%	Pacific Centre Office Complex, Vancouver	1,820	100%
Le Carrefour Laval, Montreal	1,435	100%	PricewaterhouseCoopers Place, Vancouver	241	100%
Les Galeries D'Anjou, Montreal	1,351	50%	RBC Centre, Toronto	1,223	50%
Les Promenades St. Bruno, Montreal	1,132	100%	Shell Centre, Calgary	693	100%
Lime Ridge Mall, Hamilton	806	100%	Toronto-Dominion Centre Office Complex, Toronto	4,425	70%
Market Mall, Calgary	934	50%	Toronto Eaton Centre Office Complex, Toronto	1,845	100%
Markville Shopping Centre, Markham	1,017	100%	Waterfront Centre, Vancouver	402	100%
Masonville Place, London	637	100%	Yonge Corporate Centre, Toronto	668	100%
Pacific Centre, Vancouver	1,070	100%			
Polo Park Mall, Winnipeg	1,199	100%			
Richmond Centre, Richmond	795	50%			
Rideau Centre, Ottawa	1,403	100%			
Sherway Gardens, Toronto	1,236	100%			
Shops at Don Mills, Toronto	468	100%			
The Promenade, Toronto	706	100%			
Toronto-Dominion Centre, Toronto	158	70%			
Toronto Eaton Centre, Toronto	2,903	100%			

## PRIVATE COMPANIES AND PARTNERSHIPS OVER \$150 MILLION

As at December 31, 2016

24 Hour Fitness Worldwide Inc.	Empresa de Servicios Sanitarios del Bio-Bio S.A.	MSB Capital Limited
AEA Investors Fund V LP	Esval S.A.	Munchkin, Inc.
Aethon Energy Management LLC	Euclid Fund	Nextgen Group Holdings Pty Limited
Alliance Laundry Systems, LLC	Exal International Limited	Nuevosur, S.A.
Apollo Overseas Partners (Delaware 892) VI, L.P.	FAPS Holdings, Inc.	NXT Capital Holdings, L.P.
Apollo Overseas Partners (Delaware 892) VIII, L.P.	Fifth Cinven Fund (No. 6) Limited Partnership	OGF SA
Apollo Special Situations Fund, L.P.	Flexera Holdings, L.P.	OLE Media Management L.P.
AQR Offshore Multi-Strategy Fund VII Ltd.	Flynn Restaurant Group LLC	Orbis Institutional Global Equity L.P.
Ares Corporate Opportunities Fund III, L.P.	FMAP CIM Limited	PAG Asia I L.P.
Ares Corporate Opportunities Fund IV, L.P.	FMAP PCM Limited	PetVet Care Centers, Inc.
Aroona Farms SA Pty Ltd.	FMAP WMC Limited	PhyMed Healthcare Group
Ascend Learning Holdings, LLC	FountainVest China Growth Fund II, L.P.	Plano Molding Company
Asia Opportunity Fund III, L.P.	FountainVest China Growth Fund, L.P.	Polar Multi-Strategy Fund (Legacy)
Automobile Protection Corporation	GCT Global Container Terminals Inc.	Providence Equity Partners VI L.P.
Autopista Arco Norte, S.A. de CV	Hancock Timber Resource Group	Providence Equity Partners VII-A L.P.
Baldr Fund Inc.	HayFin Topaz L.P.	RedBird Capital Partners Platform L.P.
Baybridge Seniors Housing Inc.	Heartland Dental Care, Inc.	Resource Management Service Inc.
BDCM Offshore Opportunity Fund II, Ltd.	Helly Hansen Group AS	Riverbed Technology, Inc.
Birmingham International Airport	Heritage Royalty Limited Partnership	Scotia Gas Networks plc
BluEarth Renewables Inc.	HS1 Limited	SeaCube Container Leasing Ltd.
Bridgewater Pure Alpha Fund II, Ltd.	Hudson Catastrophe Fund, Ltd.	Serta Simmons Holdings, LLC
Bristol Airport Limited	Imperial Parking Corporation	Shearer's Foods, Inc.
BroadStreet Capital Partners, Inc.	Infiltrator Systems, Inc.	Silver Lake Partners III, L.P.
Busy Bees Benefits Holdings Limited	InterGen N.V.	Silver Lake Partners IV, L.P.
Camelot Group plc	Irish National Lottery	Skyway Concession Company LLC
Canada Guaranty Mortgage Insurance Company	Kepos Alpha Fund Ltd.	Sociedad Austral de Electricidad S.A.
Canbriam Energy, Inc.	Koole Tankstorage Zaandam B.V.	Solus Offshore Opportunities Fund 5 L.P.
Catalina Holdings (Bermuda) Ltd.	Kyobo Life Insurance Co., Ltd.	Storapod Holding Company, Inc.
Catterton Partners VII, L.P.	Lancaster Aircraft Leasing Limited Partnership	Sydney Desalination Plant Pty Limited
Cerberus OT Partners, L.P.	LMAP 902 Limited	Synlab Limited
Constellation Brands Canada, Inc.	LMAP 903 Limited	TDR Capital II 'B' L.P.
Copenhagen Airport A/S	LMAP 904 Limited	Terranum Corporate Properties
Coway Holdings, Inc.	LMAP 909	The Brussels Airport Company
CPG International Inc.	LMAP Chi Limited	TierPoint, LLC
CSC ServiceWorks Holdings, Inc.	London City Airport	TP Partners Fund, L.P.
Cubico Sustainable Investments Limited	Lowell Group Limited	Triam Partners Co-Investment Opportunities Fund, L.P.
DaVinciRe Holdings Ltd.	MBK Partners Fund II, L.P.	Triam Partners, Ltd.
DTZ Jersey Holdings Ltd.	MBK Partners III, L.P.	Univision Communications Inc.
EdgeMarc Energy Holdings, LLC	MR Argent Offshore Fund AB L.P.	ValueAct Capital International II, L.P.
		Westerleigh Group Holdings Limited
		Woodspur Farming LLC

## MANAGEMENT'S DISCUSSION & ANALYSIS

Management's Discussion and Analysis (MD&A) presents a view of the pension plan through the eyes of management by interpreting the material trends and uncertainties affecting the results and financial condition of the plan. The MD&A includes historical information and forward-looking statements about management's objectives, outlook and expectations. Such statements involve risks, assumptions and uncertainties, and the plan's actual results will likely differ from those anticipated. The plan's consolidated financial statements should be read in conjunction with the MD&A.



## EXECUTIVE TEAM



(l-r) **Ron Mock**, B.A.Sc., MBA, President and Chief Executive Officer; **Bjarne Graven Larsen**, M.Econ., Executive Vice-President, Investments, and Chief Investment Officer (as of February 1, 2016); **Tracy Abel**, BA, MBA, Senior Vice-President, Member Services; **David McGraw**, B.Comm., MBA, FCPA, FCA, ICD.D, Senior Vice-President and Chief Financial Officer; **Rosemarie McClean**, BA, MBA, CPA, CMA, ICD.D, Senior Vice-President and Chief Operations Officer; **Barbara Zvan**, M.Math, FSA, FCIA, CERA, Senior Vice-President, Strategy & Risk, and Chief Investment Risk Officer; **Jeff Davis**, BA, LLB, General Counsel, Senior Vice-President, Corporate Affairs, and Corporate Secretary; **Marcia Mendes-d'Abreu**, BA, M.Sc., HRCCC, Senior Vice-President, Human Resources & Facilities

## PLAN OVERVIEW

The Ontario Teachers' Pension Plan (Ontario Teachers') manages investments and administers pension benefits on behalf of its members: 183,000 school teachers and 133,000 pensioners.

Ontario Teachers' has approximately 1,100 employees in Toronto, London and Hong Kong. Approximately 1,400 people work at our real estate subsidiary, The Cadillac Fairview Corporation Limited.

The pension plan is governed by the *Teachers' Pension Act* and must comply with Ontario's *Pension Benefits Act*, the federal *Income Tax Act*, and laws in the various jurisdictions in which it invests.

Ontario Teachers' Federation (OTF) and the Ontario government are the plan's joint sponsors. Together, OTF and the government ensure the plan remains appropriately funded to pay pension benefits. The sponsors jointly decide the contribution rate paid by working teachers (and matched by the government and designated employers); the benefits that members will receive, including inflation protection; and how to address any funding shortfall or apply any surplus. The plan is a jointly sponsored defined benefit plan under Ontario's *Pension Benefits Act*.

## Management's role

Management of the pension plan has three main responsibilities:

- invest plan assets to help pay pensions;
- administer the plan and pay pension benefits to members and their survivors;
- report and advise on the plan's funding status and regulatory requirements.

Management sets long-term investment and service strategies that take member demographics, economics, investment markets and numerous other factors into account.

## STATE OF THE PLAN

The Ontario Teachers' Pension Plan is designed to deliver pension benefits to its members for life.

Balancing plan assets and the cost of future benefits is an ongoing objective for the two sponsors of the plan: Ontario Teachers' Federation (OTF) and the Ontario government. The sponsors set contribution rates and pension benefits based on the plan's funded status.

At January 1, 2016, for the third consecutive year, the plan had a preliminary surplus. This surplus assumes current levels of contributions and benefits continue in the future. The sponsors will determine how to apply this surplus if they decide to file the funding report with the regulatory authorities.

### FUNDING STATUS

#### 2016 preliminary valuation

The plan's preliminary funding valuation showed a surplus of \$13.2 billion at the start of the year. At January 1, 2016, the plan had 107% of the assets required to meet future pension liabilities, based on current contribution rates and current (reduced) levels of inflation protection.

Current inflation protection is set at 70% of the Consumer Price Index (CPI) increase for pension credit earned after 2009 and 100% for pension credit earned before 2010. Current contributions are based on 10.4% of earnings below the Canada Pension Plan (CPP) limit, 12% of earnings above the CPP limit, plus a 1.1% special contribution on all earnings. The 2015 CPP limit was \$53,600.

#### 2015 filed valuation

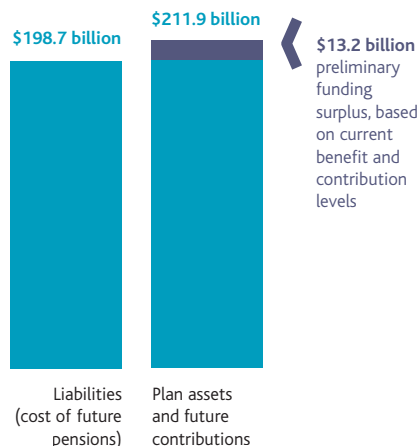
In 2015, OTF and the Ontario government filed a funding valuation with the regulators that is detailed in the Funding Valuation Summary on page 7. They used some of the \$6.8 billion preliminary funding surplus to restore inflation protection levels for pension credit earned after 2009 to 70% (from 60%) of the annual increase in the cost of living. In addition, pensioners who retired after 2009 received a one-time increase in January 2016 to bring their pension up to the level it would have been at if full inflation protection had been provided on January 1, 2015. The sponsors also reserved funds to help facilitate stability in contribution and benefit levels in case a future funding valuation shows a decline in assets or an increase in pension costs. All members will benefit from the additional stability provided by funds held in reserve.

Inflation protection on the portion of pension credit that plan members earned after 2009 is conditional on the funded status of the plan. This lever is used to help keep the plan sustainable in the long term. Inflation increases may be bigger if there is a projected funding surplus, or smaller if there is a projected funding shortfall. Pension credit that members earned before 2010 remains fully indexed to inflation.

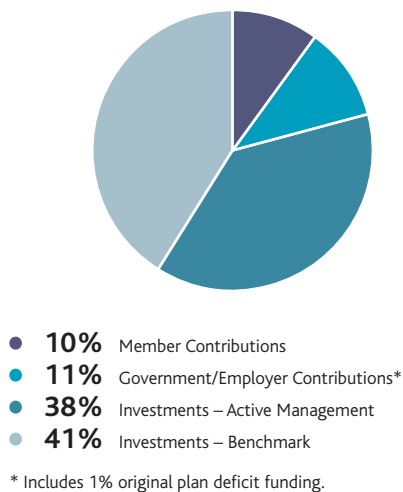


## PRELIMINARY FUNDING VALUATION

As at January 1, 2016



## PENSION FUNDING SOURCES SINCE 1990



# 316,000

Total number of active members and pensioners

# 5

Number of years that expected pension payments exceed contributory years

## FUNDING VALUATION SUMMARY

As at January 1 (Canadian \$ billions)

	2016 Preliminary	2015 Filed	2015 Preliminary
Net assets available for benefits	\$ 171.4	\$ 154.5	\$ 154.5
Smoothing adjustment	(10.8)	(8.2)	(8.2)
<b>Value of assets</b>	<b>\$ 160.6</b>	<b>\$ 146.3</b>	<b>\$ 146.3</b>
Future basic contributions	41.5	38.8	38.8
Future special contributions	3.2	3.5	3.4
Future matching of conditional inflation protection benefit reduction	6.6	5.9	7.8
<b>Total assets</b>	<b>\$ 211.9</b>	<b>\$ 194.5</b>	<b>\$ 196.3</b>
Cost of future pensions	(205.3)	(197.3)	(197.3)
Reduction in cost due to less than 100% indexing	6.6	5.9	7.8
<b>Surplus</b>	<b>\$ 13.2</b>	<b>\$ 3.1</b>	<b>\$ 6.8</b>
<b>Assumptions (percent)</b>			
Inflation rate	2.00	2.00	2.00
Real discount rate <sup>1</sup>	2.75	2.85	2.85
Discount rate	4.80	4.85	4.85

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

## Funding valuation background

A funding valuation is an assessment of the financial health of a pension plan showing the balance of assets and liabilities at a defined date. Ontario Teachers' funding valuation:

- looks ahead more than 70 years;
- is prepared by an independent actuary;
- projects members' future contributions, benefits and their cost;
- is filed with government authorities at least every three years;
- must be balanced when filed.

The valuation uses a number of assumptions to project the value of future pension plan liabilities. Assumptions are made about future inflation, salary increases, retirement ages, life expectancy and other variables. One of the most important assumptions for the board to consider is the discount rate, which is used to calculate the present value of future amounts. Plan liabilities are sensitive to changes in the discount rate, with a decreased rate resulting in increased liabilities. 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 major adverse events, such as the 2008 financial crisis.

The assumption setting process is extremely robust and includes an annual in-depth analysis of plan experience as well as input from the sponsors. If assumptions show a pattern of deviating from actual experience, they are reviewed and may be revised. The independent actuary must confirm that the assumptions are appropriate and works closely with board members in the assumption setting exercise. The Canadian Institute of Actuaries (CIA) Standards of Practice require that each assumption be independently reasonable and that assumptions be appropriate in aggregate.

The inflation and discount rate assumptions in the most recent valuations are shown in the Funding Valuation Summary table on page 7.

## PLAN FUNDING CONSIDERATIONS

When making decisions on behalf of all beneficiaries, the plan's management and the sponsors consider ever-changing demographic and economic factors and risks.

The table below shows how some important variables have changed over time. It is followed by brief discussions of some key funding considerations. The plan has identified four main funding risks – longevity, interest rates, inflation and asset volatility – and seeks to manage intergenerational equity given these risks.

### FUNDING VARIABLES – PAST AND PRESENT

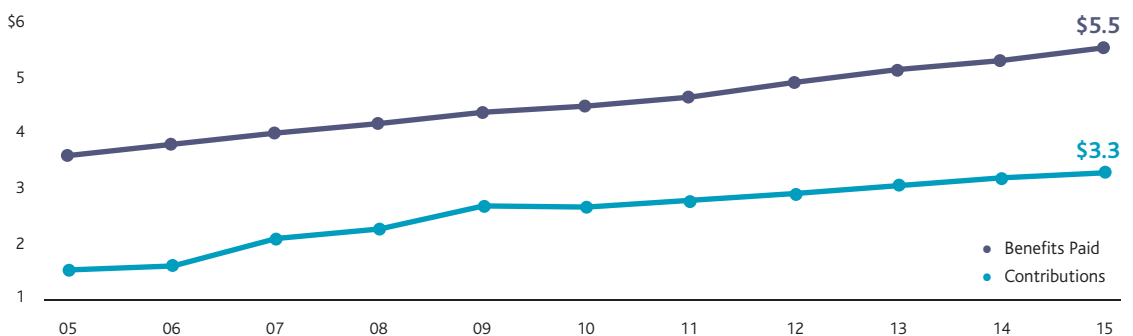
	1990	2015
Average retirement age	58	59
Average starting pension	\$29,000	\$45,000
Average contributory years at retirement	29	26
Expected years on pension	25	31
Number of pensioners aged 100 or more	13	130
Ratio of active teachers to pensioners	4 to 1	1.4 to 1
Average contribution rate	8.0%	12.3%

### Longevity

Teachers in Ontario live longer than the general Canadian population and their life expectancy continues to increase. It costs more to pay lifetime pensions when members live longer. Members are contributing to the plan for fewer years than in the 1990s, and their retirement periods are longer. The plan regularly updates its mortality assumptions (most recently for the January 1, 2015, valuation) and has adopted more innovative modelling to predict improvements in longevity, consistent with ongoing efforts by the actuarial profession in Canada, the United States and the United Kingdom.

### CONTRIBUTIONS VS. BENEFITS PAID

For the years ended December 31 (Canadian \$ billions)



Ontario Teachers' is a mature plan with a decreasing ratio of active to retired members

## Interest rates

Subdued economic growth and low inflation have kept interest rates at historically low levels. When interest rates are low, pension liabilities rise as more money must be set aside to earn enough to pay future pensions. In Canada, long-term real-return bond yields have declined from 1.17% over the last 10 years, on average, to 0.65% at the end of 2015. Interest rates also affect asset prices, so while an increase in rates could reduce the plan's liabilities, it could also reduce the value of our assets.

## Inflation

The plan seeks to provide retired members with annual pension increases to offset the impact of inflation. Higher inflation increases the plan's liabilities given the plan's inflation protection feature, while low inflation reduces the plan's liabilities. The annual increase received by members who retire after 2009 is conditional on the plan's funded status. Inflation in Canada has been stable since 1991, generally remaining within one percentage point of the Bank of Canada's 2% target. The annual percentage change in the monthly Consumer Price Index ranged from 0.8% to 1.6% in 2015. In this era of low policy rates, economic uncertainty and volatile commodity and currency markets, it is more likely that inflation could miss the bank's target.

## Asset volatility

Strong stock market performance in recent years has helped produce positive investment returns for the plan. In an environment of modest global growth, macroeconomic and geopolitical risks and tighter U.S. monetary policy, higher valuations will result in higher market volatility. A number of major currencies were significantly weaker in 2015 and further currency volatility can be expected as some central banks begin to raise interest rates, while others maintain low policy rates. Volatile markets can present opportunities for long-term investors but they can also lead to investment losses.

## Intergenerational equity

The plan's sustainability is defined as its ability to meet the needs of the present without compromising the ability of future generations to meet their own needs. Intergenerational equity is the principle that members of each generation contribute the right amount to pay for the benefits they receive. It is an important aspect of sustainability.

In the event of significant investment losses or a funding shortfall, there are two primary funding levers that the sponsors can use to bring the plan back into balance: increasing contribution rates and reducing conditional inflation protection (CIP).

Ontario Teachers' is a mature pension plan, with relatively fewer active, contributing members available to fund any major investment losses. It would be unlikely that increases in contribution rates alone would be sufficient to fund major investment losses and, in addition, these increases would be borne solely by active plan members. As noted, CIP provides flexibility in the amount of inflation increase provided for benefits earned after 2009. It is an effective lever for mitigating funding risks while also promoting intergenerational equity as the risk is distributed more broadly. As shown in the table below, CIP will become more effective over time as the amount of service earned after 2009 continues to grow.

	1990	2015	2025
Increase in contributions required for 10% loss in assets	1.9%	4.8%	5.4%
Decrease in level of CIP required for 10% loss in assets	n/a	40%	25%
Asset loss capable of being absorbed by fully invoked CIP	n/a	\$29B	\$62B

The figures above are relative to a fully funded plan, with 100% inflation protection provided for all benefits and average contributions of 11%. As an example, a 10% asset loss in 2025 could be absorbed by lowering inflation protection increases for benefits earned after 2009 from 100% to 75%. In the most extreme case, if CIP levels were lowered to 50% on benefits earned during 2010–2013 and 0% on benefits earned after 2013, this funding lever would be powerful enough to absorb a 2025 asset loss of \$62 billion.

The maturity of the pension plan, the desire for intergenerational equity and the effectiveness of CIP as a funding lever are key considerations for constructing and managing the investment portfolio.

## INVESTMENTS

Ontario Teachers' is a globally active investor with holdings in more than 50 countries across diversified sectors and asset classes. The investment program is designed to help the plan meet its obligations to pay pensions and minimize funding volatility. Since Ontario Teachers' inception in 1990, more than three-quarters of the plan's income has come from investment returns, with the remainder from member and government contributions.

In 2015, the plan earned a 13.0% rate of return and its portfolio generated \$19.6 billion of investment income. Net assets increased to a record \$171.4 billion, and the plan outperformed its composite benchmark by \$4.2 billion. Global diversification and direct investments were the primary performance factors during a year of increased investment competition and market turbulence.

### INVESTMENT OVERVIEW

Ontario Teachers' seeks to maximize investment returns at a level of risk that takes into account the cost and nature of future benefits (pension liabilities). The aim is to create a total portfolio with risk and return characteristics that support stable pension benefits and contribution rates, and plan sustainability.

The plan's investment professionals are based in Toronto, London and Hong Kong, sourcing and managing investments in the Americas, Europe, the Middle East, Africa, and the Asia-Pacific region. The plan's investment activities around the world are directly supported by its international presence and are a result of long-term strategies and partnerships.

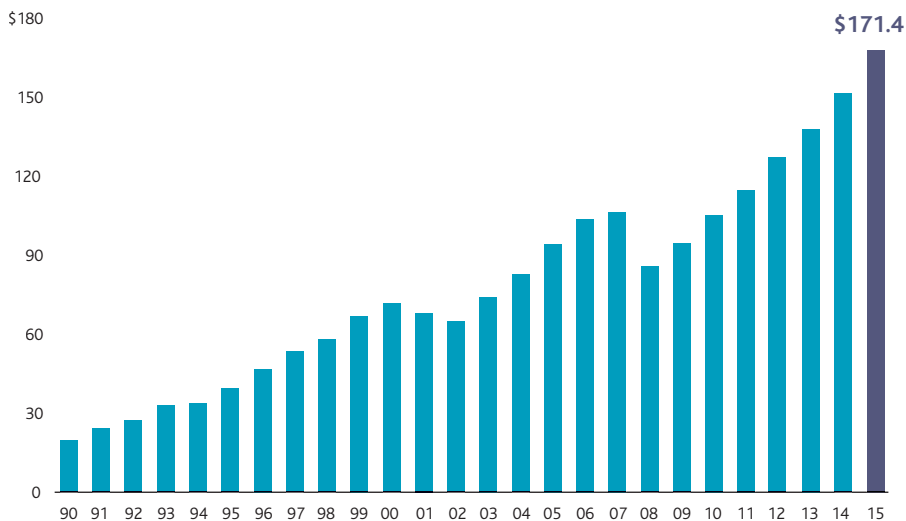
Ontario Teachers' integrated strategies are driven by a set of Investment Beliefs that define the plan's philosophy for earning superior risk-adjusted returns and are consistent with the investment mandate in its Statement of Investment Policies and Procedures.

#### Proactive risk management

Each year, the plan determines the level of total risk that is appropriate to meet its objectives. Risk budgeting is then used to spread active risk across asset classes. Ontario Teachers' has continually advanced its risk culture with sophisticated tools and processes to support risk measurement. Risk is managed on a coordinated basis across the entire fund, all asset classes, departments as well as within each portfolio.

## NET ASSETS

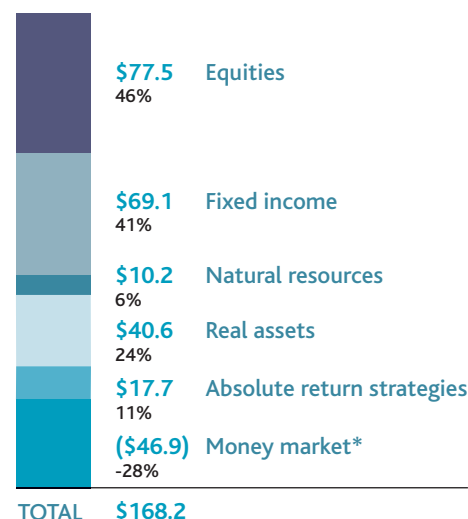
As at December 31 (Canadian \$ billions)



Net assets include investment assets less investment liabilities (net investments), plus the receivable from the Province of Ontario, and other assets less other liabilities.

## NET INVESTMENTS BY ASSET CLASS

(Canadian \$ billions)



\* Money market asset class provides funding for investments in other asset classes.

## Responsible investing

Our five responsible investing principles provide a framework for understanding and managing environmental, social and governance (ESG) risks across our investments:

- integrating ESG factors into our processes;
- being engaged asset owners;
- evolving our responsible investing practices;
- seeking relevant information and disclosure;
- collaborating with like-minded peers.

Climate change is a significant ESG risk to the returns of the Ontario Teachers' portfolio. We have adopted a four-pillar approach to climate change that encompasses:

- our fiduciary duty to pay pensions;
- responsibility to manage investment risks;
- engagement with companies and policy-makers;
- continually searching for climate-friendly investment opportunities.

Engagement is a key activity because it gives us greater insight into companies' management of their climate change risks and it allows us to promote clarity and fairness in policy – both of which enable us to better assess the risks and returns of an investment and improve decision making.

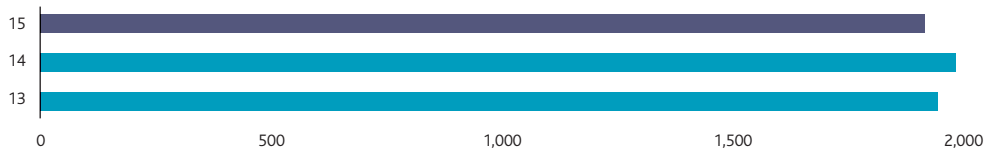
See the Responsible Investing section of [otpp.com](http://otpp.com) for further information on climate change and other issues.

**Corporate governance:** Well-governed companies tend to create lasting value for shareholders and better manage environmental and social issues. As part of its responsible investing approach, Ontario Teachers' exercises its stewardship responsibilities and promotes effective governance practices at our investments through voting and engagement with companies. Guided by our corporate governance principles and proxy voting guidelines, Ontario Teachers' votes all of the shares of the companies it owns and publishes its votes on [otpp.com](http://otpp.com). In 2015, the plan voted its shares at 1,914 shareholder meetings, with significant growth in voting activity in Japan and Hong Kong.

#### PROXY VOTING

For the years ended December 31

Ontario Teachers' votes all of the shares of the companies it owns



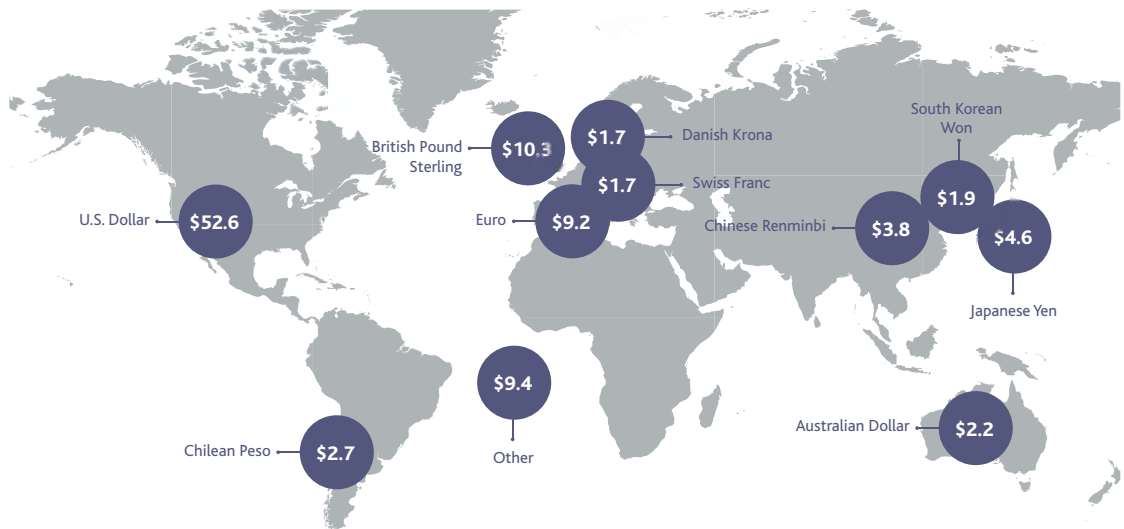
#### Asset-mix selection

Recognizing that asset-mix selection is the primary driver of long-term performance, the plan devotes considerable attention to choosing the types of assets owned and the relative emphasis placed on each asset group and geography. The plan's asset-mix policy is approved by Ontario Teachers' board members annually.

#### NET CURRENCY EXPOSURES

As at December 31, 2015 (Canadian \$ billions)

London and Hong Kong offices directly support growth in our global investments



#### Liquidity management

The plan must have sufficient cash on hand to meet current liabilities and to take advantage of investment opportunities, and therefore manages its liquidity position carefully. The plan tests its position regularly through simulations of major market events and reports its findings to the board's Investment Committee.

#### Active management

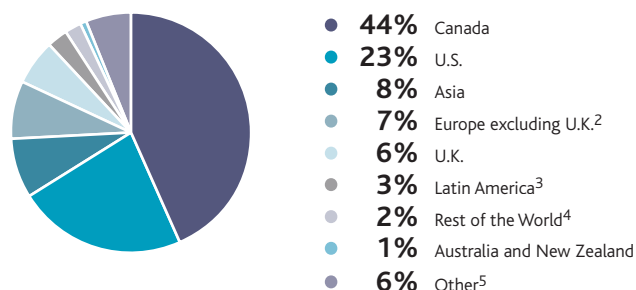
Passive investing through market indices cannot, alone, generate the risk-adjusted returns Ontario Teachers' needs to meet its obligations. To add value, the plan employs active management strategies with a global perspective to identify and acquire undervalued investments and optimize returns. Relationships with our investment partners around the world directly support the plan's successful active management program.

## In-house talent

Approximately 80% of the investment portfolio is managed in-house. As one of Canada's largest pension funds, Ontario Teachers' provides employees with the resources, training and career opportunities needed to achieve the highest professional standards. Talent development is key to building the intellectual capital and in-house expertise required to employ sophisticated and innovative strategies.

## GEOGRAPHIC EXPOSURE<sup>1</sup>

As at December 31, 2015



<sup>1</sup> Based on country of primary listing, location of head office, or location of the property.

<sup>2</sup> Developed countries only.

<sup>3</sup> South and Central Americas and Mexico.

<sup>4</sup> Countries not otherwise specified above.

<sup>5</sup> Predominantly alternative investment strategies to which a country exposure has not been assigned.

## 2015 PERFORMANCE

The total-fund rate of return is net of trading costs, investment management expenses and external management fees, and is reported in Canadian dollars for four periods: one, four and 10 years and since the current investment program began in 1990.

The plan also compares its performance to a Canadian dollar-denominated composite benchmark, which is calculated by aggregating results from each of the asset-class benchmarks using the same weightings as the plan's asset-mix policy weightings.

## INVESTMENT PERFORMANCE

(percent)

	2015	2014	4-Year	10-Year	Since Inception
Total return	13.0	11.8	12.2	8.2	10.3
Benchmark	10.1	10.1	10.1	6.9	8.1
Return above benchmark (Canadian \$ billions)	\$4.2	\$2.4	\$11.0	\$16.3	\$35.6

## Benchmarks

Benchmarking is important because it allows board members, plan members and investment professionals to evaluate the effectiveness of the plan's strategies and activities relative to the risks taken. Appropriate benchmarks are established by a committee, chaired by the CEO, and any material or non-technical changes to total plan benchmarks must be approved by Ontario Teachers' board members. A complete list of benchmarks is available at [otpp.com](http://otpp.com).

On a total-fund basis and for each investment class, the plan seeks to outperform benchmark rates of return, and this outperformance is described as "value added."

## Investment administration costs and management fees

The plan is committed to cost effectiveness. In 2015, investment costs, including expenditures for salaries, benefits, fees and research, were \$429 million or 27 cents per \$100 of average net assets, compared to \$409 million or 28 cents per \$100 in 2014. Including management fees and transaction costs, the costs were 74 cents per \$100 in 2015 compared with 72 cents per \$100 in 2014.

## ASSET-CLASS REVIEW



(l-r) **Michael Wissell**, MBA, CFA, ICD.D, Senior Vice-President, Portfolio Construction; **Jane Rowe**, MBA, ICD.D, Senior Vice-President, Private Capital; **Wayne Kozun**, MBA, CFA, ICD.D, Senior Vice-President, Public Equities; **John Sullivan**, MBA, President and CEO, Cadillac Fairview; **Andrew Claerhout**, HBA, ICD.D, Senior Vice-President, Infrastructure & Natural Resources; **Ziad Hindo**, M.Sc., CFA, Senior Vice-President, Capital Markets; **Jo Taylor**, MBA, Regional Managing Director, Europe, Middle East & Africa; **Nicole Musicco**, HBA, MBA, Regional Managing Director, Asia-Pacific

### NEW ASSET GROUPS FOR 2016

Ontario Teachers' reorganized its Investment Division, effective January 1, 2016, to implement an updated investment strategy. The asset-class review in this report reflects the structure that was in place in 2015. New asset groups have been created and are being managed by the plan's experienced investment professionals in Toronto, London and Hong Kong. They are supported by Portfolio Construction and by Strategy & Risk, which evaluates risk and leads a collaborative investment process. The asset groups listed below will be presented in the 2016 Annual Report.

**Capital Markets:** Delivers centralized treasury and execution capabilities to support all of Ontario Teachers' investment groups, manages passive investments portfolios, provides reliable income through fixed income investing and generates returns through liquid capital markets strategies.

**Infrastructure & Natural Resources:** Invests globally in infrastructure and natural resource assets that generate attractive risk-adjusted returns through the investment cycle.

**Private Capital:** Builds partnerships and value through direct investments in high-potential companies and investments in private equity funds.

**Public Equities:** Focuses primarily on equities traded on global stock exchanges.

**Real Estate:** Cadillac Fairview is one of the largest owners, operators and developers of best-in-class office, retail and mixed-use properties in North America. The company also invests in retail, mixed-use and industrial real estate in Brazil, Colombia and Mexico.

Additional information about these asset groups is available on [otpp.com](http://otpp.com).



## NET INVESTMENTS AND RATES OF RETURN BY ASSET CLASS

As at December 31

(Canadian \$ billions)

(percent)

	2015	2014	1-Year		4-Year	
			Actual	Benchmark	Actual	Benchmark
<b>Equities</b>			17.7	14.7	18.1	16.9
Canadian equity	3.5	10.7	(11.7)	(6.8)	4.1	6.3
Non-Canadian equity	74.0	58.2	21.2	17.6	20.4	18.7
<b>Fixed income</b>			5.9	6.0	3.5	3.3
Bonds	38.0	35.2	6.1	6.3	4.0	3.7
Real-rate products	31.1	30.4	5.6	5.6	3.1	3.1
<b>Natural resources</b>	10.2	11.9	(1.3)	(6.1)	(4.7)	(5.8)
<b>Real assets</b>			16.0	10.2	14.2	9.4
Real estate	24.9	22.1	12.9	8.0	14.1	10.7
Infrastructure	15.7	12.6	21.4	14.3	14.0	9.8
<b>Absolute return strategies<sup>1</sup></b>	17.7	15.8				
<b>Money market<sup>1</sup></b>	(46.9)	(44.5)				
<b>Total plan<sup>1</sup></b>	168.2	152.4	13.0	10.1	12.2	10.1

<sup>1</sup> Returns generated by absolute return strategies and money market are included in the total plan return and not attributed to an asset class. Net investments are defined as investments of \$262.9 billion minus investment-related liabilities of \$94.7 billion. See the consolidated statements of financial position (page 38).

### Equities

The plan uses equities to deliver long-term investment growth and income and applies various strategies to deliver value-added performance. This asset class includes public equities (those trading on a stock exchange) and private equities (not stock-exchange traded), managed by the Public Equities and Private Capital groups, respectively. Any funds not in an active program are managed passively to maintain exposure to the equity markets at the weighting outlined in our asset-mix policy.

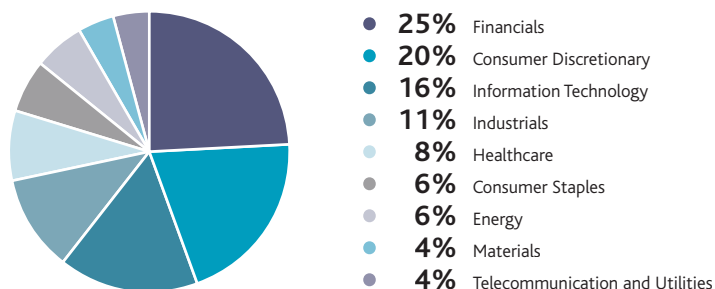
The asset class, which is reported as Canadian and non-Canadian equities, had total returns of 17.7% in 2015, compared to a benchmark of 14.7%. Non-Canadian equities significantly outperformed Canadian equities (21.2% and -11.7%, respectively). The total value of the plan's equities rose to \$77.5 billion at the end of 2015 from \$68.9 billion a year earlier.

**Public equities:** The Public Equities group chooses stocks using bottom-up fundamental analysis. Its Relationship Investing team takes significant minority ownership positions in public (and pre-IPO private) companies and provides expertise to increase value.

In 2015, performance of the world's major equity market indices were generally down in local terms but produced positive results when expressed in Canadian dollars due to lower exchange rates for the currency during the year.

### PUBLIC EQUITIES PORTFOLIO

As at December 31, 2015



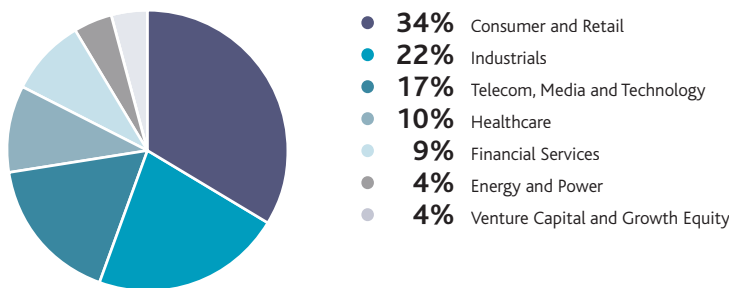
**Private capital:** The Private Capital group invests directly in private companies, either on its own or with partners, and indirectly through private equity and venture capital funds. It seeks to add value in its portfolio companies by assisting in long-term business planning, ensuring good governance practices and developing board and management talent. In 2016, Private Capital is marking 25 years of making direct and fund investments.

Private equity investments totalled \$28.4 billion at December 31, 2015, compared to \$21.0 billion at the end of 2014. The growth in the portfolio was primarily driven by increased market value of existing investments in both funds and direct investments. Six new companies were added to the portfolio in 2015 and additional investments were made in a number of companies to support their growth strategies. Two new fund investments were made and commitments were renewed with a number of existing private equity and venture capital funds. Portfolio growth was offset somewhat by realizations in which all or a portion of select companies and funds were sold.

In 2015, Private Capital delivered a return of 32.3% against a benchmark of 18.1%. The group's 25-year IRR for core private equity investing activities is 20.2%.

#### PRIVATE CAPITAL PORTFOLIO

As at December 31, 2015

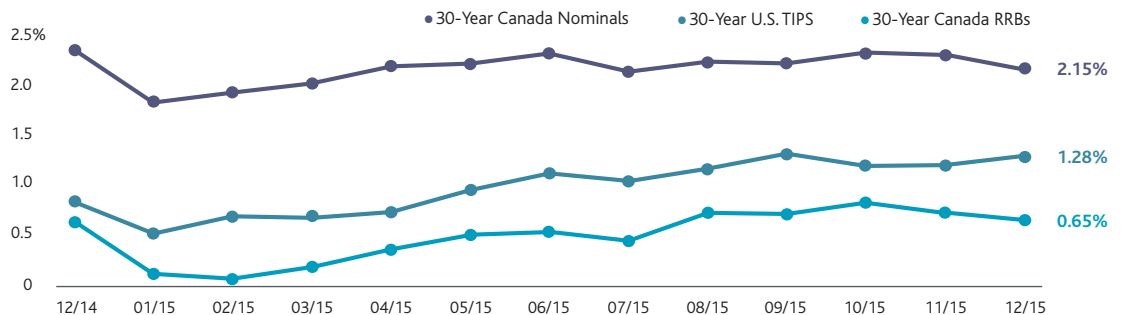


#### Fixed income

Ontario Teachers' uses fixed income investments to provide security and steady income, hedge against interest rate risks inherent in the plan's liabilities and stabilize total returns. The plan owns a diversified portfolio of government bonds, provincial bonds, corporate bonds and real-return bonds. Real-return bonds provide returns that are indexed to inflation, as measured by the Consumer Price Index, and include debt issued primarily by the Canadian and U.S. federal governments.

Fixed income assets totalled \$69.1 billion at the end of 2015, compared to \$65.6 billion a year earlier. The portfolio of bonds and real-return products delivered a return of 5.9%, consistent with the benchmark of 6.0%. The primary drivers of fixed income performance during the year were the decrease in Canadian interest rates compared to U.S. rates and the maintenance of the asset-mix weighting in relation to growth of the total fund.

#### GOVERNMENT BOND YIELDS



## Real assets

Real assets include real estate and infrastructure investments. Strategically, these assets provide returns that are often related to changes in inflation and therefore hedge against the cost of paying inflation-protected pensions.

At December 31, 2015, the total value of real assets was \$40.6 billion, compared to \$34.7 billion at year-end 2014. Total returns for 2015 were 16.0%, exceeding the 10.2% benchmark.

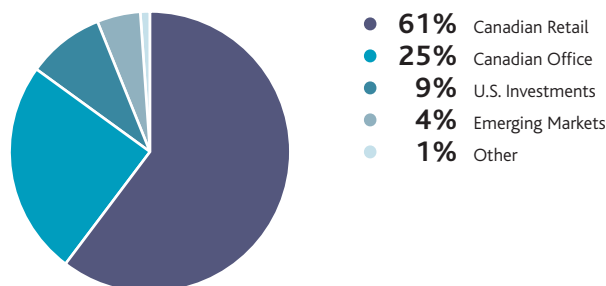
**Real estate:** The real estate portfolio is managed by the plan's wholly owned subsidiary, The Cadillac Fairview Corporation Limited, which maintains a well-balanced portfolio of retail and office properties designed to provide dependable cash flows.

The real estate portfolio returned 12.9% compared to a benchmark return of 8.0% for the year ended December 31, 2015. Net asset value of real estate holdings was \$24.9 billion at year-end 2015, compared to \$22.1 billion the previous year. The increase reflected valuation growth in North American properties driven by income growth and by strong demand for high-quality assets.

Portfolio highlights included: the sale of the 30% interest in the Toronto-Dominion Centre complex in Toronto; increased ownership in Macerich common shares; completion of major development projects including Deloitte Tower in Montreal and a major expansion at Sherway Gardens in Toronto. Further investment was made in major development projects including a new office tower in Calgary, expansion of Rideau Centre in Ottawa, and additional investment in emerging markets in Brazil, Colombia and Mexico. The portfolio earned operating income of \$1.2 billion in 2015, primarily from Canadian retail and office properties. At year end, the retail occupancy rate was 92% (94% in 2014), while the office occupancy rate was 92% (96% in 2014); the declines are attributed to recently completed development projects where stabilized occupancy will be achieved in the next 12 to 24 months.

### REAL ESTATE PORTFOLIO

As at December 31, 2015 (based on total assets)

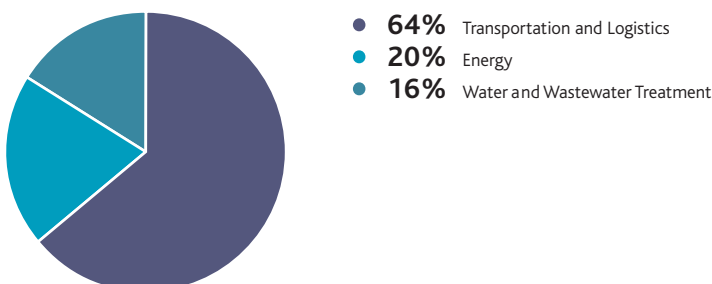


**Infrastructure:** The plan's infrastructure assets include investments in airports, seaports, liquid bulk storage, high-speed rail, conventional and renewable energy, water distribution and wastewater treatment. The majority of infrastructure assets are held outside of Canada, principally in the U.K., Europe, Chile, the U.S. and Australia. Overall, Ontario Teachers' seeks to build an infrastructure portfolio which will steadily increase in value, provide predictable cash flow and correlate to inflation.

The value of the infrastructure portfolio increased to \$15.7 billion at the end of 2015 compared to \$12.6 billion a year earlier, due to new investments and higher valuations for existing assets. In 2015, infrastructure assets delivered returns of 21.4% compared to a benchmark of 14.3%.

### INFRASTRUCTURE PORTFOLIO

As at December 31, 2015



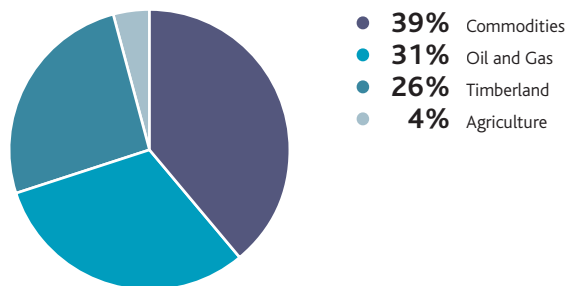
## Natural resources

The plan's natural resources holdings include investments in oil and gas assets, commodity indices and physical, producing assets such as timberlands and agriculture. The natural resources mandate also includes mining sector acquisitions. These assets provide the plan with superior risk-adjusted returns, diversification and protection against unexpectedly high inflation. As of January 2016, the physical holdings became part of the Infrastructure & Natural Resources asset group.

Investments in natural resources were \$10.2 billion at the end of 2015, compared to \$11.9 billion in 2014. The change primarily reflects investment activity to sustain asset-mix weightings. Portfolio returns for 2015 were -1.3%, reflecting a downturn in the general resources sector. Returns were ahead of the benchmark of -6.1% due to the relative investment performance of private assets.

### NATURAL RESOURCES PORTFOLIO

As at December 31, 2015



## Absolute return and money market

Ontario Teachers' uses absolute return strategies to generate positive returns that are constructed to be uncorrelated to the returns of the plan's other assets. Internally managed absolute return strategies generally look to capitalize on market inefficiencies. The plan also uses external hedge fund managers to earn uncorrelated returns, to access unique strategies that augment returns and to diversify risk. Assets employed in absolute return strategies totalled \$17.7 billion at 2015 year end compared to \$15.8 billion the previous year.

Money-market activity provides funding for investments in all asset classes, and is comparable to a corporation's treasury department. Derivative contracts and bond repurchase agreements have played a large part in the investment program since the early 1990s. For efficiency reasons, the plan often uses derivatives to gain passive exposure to global equity and commodity indices instead of buying the actual securities. The plan uses bond repurchase agreements to fund investments in all asset classes because it is cost effective and allows Ontario Teachers' to retain economic exposure to government bonds. These activities result in a negative net exposure in the asset mix and the amount is expected to vary from year to year based on the plan's needs.

In 2015, the plan's investment funding strategy was reviewed and a new, cost-effective funding vehicle was introduced. The Ontario Teachers' Finance Trust (OTFT) was created and commercial paper was issued in November 2015. The commercial paper was given the highest rating from Moody's, S&P and DBRS.

## NOTABLE TRANSACTIONS

The plan publishes a list of individual investments that exceeded \$150 million at year-end 2015, beginning on page 68. Some notable 2015 transactions are described below.

**Chicago Skyway:** In November 2015, Ontario Teachers', together with the Canada Pension Plan Investment Board and OMERS, agreed to acquire Skyway Concession Company LLC for total consideration of US\$2.8 billion. The company manages, operates and maintains the Chicago Skyway, a 12.5-kilometre toll road linking downtown Chicago and its southeastern suburbs, under a concession agreement lasting until 2104.



**Amica Mature Lifestyles:** The plan's wholly owned subsidiary, BayBridge Seniors Housing Inc., acquired Amica's 25 luxury seniors residences in Alberta, British Columbia and Ontario. Following the transaction, BayBridge and its management company owns, operates or has an interest in 59 senior living communities.



**Garena:** Ontario Teachers' led a new round of funding for private company Garena, Southeast Asia's largest Internet and mobile platform company. Garena has grown quickly to become the leading platform provider for digital entertainment, communication tools and digital payments across Southeast Asia, Taiwan and Hong Kong.



**Canadian energy:** Ontario Teachers' acquired Heritage Royalty Limited Partnership from Cenovus Energy Inc. for \$3.3 billion. The Heritage portfolio of Western Canada oil and gas royalties provides cash flows that diversify the pension fund and offer a hedge against unexpected inflation. Separately, to expand its clean energy diversification, the plan increased its stake to 100% in BluEarth Renewables, a private Canadian independent power producer focused on wind, hydro and solar projects. Ontario Teachers' has been a lead investor in BluEarth since 2010 and the transaction supports the next phase of the company's growth.



**OGF:** The plan acquired a significant minority interest in OGF, the leading funeral services provider in France. OGF has a portfolio of highly recognized brands and has consistently delivered strong growth and financial performance.



## FINANCIAL REPORTING

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

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

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

## FINANCIAL STATEMENT VALUATION

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

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

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

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

The discount rate for the financial statements is based on market rates, as at the valuation date, of bonds issued by the Province of Ontario, which have characteristics similar to the Plan's liabilities. In 2015, the cash flow-based estimation methodology for determining the discount rate was adopted as it applies a weighted average discount rate that reflects the estimated timing and amount of benefit payments and is considered more accurate than the previous approach. The discount rate used is 3.25% (3.35% in 2014). Further details on the methods and assumptions used can be found in note 4 of the plan's consolidated financial statements.

## FINANCIAL POSITION AS AT DECEMBER 31, 2015

The plan ended 2015 with a financial statement deficit of \$1.8 billion, down from the deficit of \$18.2 billion at the end of 2014. The deficit represents the difference between net assets available for benefits of \$171.4 billion and accrued pension benefits of \$173.2 billion at year end.

### YEAR-END FINANCIAL POSITION

(as at December 31) (Canadian \$ billions)	2015	2014
Net assets available for benefits	\$ 171.4	\$ 154.5
Accrued pension benefits	173.2	172.7
Deficit	\$ (1.8)	\$ (18.2)

During 2015, net assets available for benefits increased by \$16.9 billion. Investment income of \$19.6 billion and contributions of \$3.3 billion increased net assets available for benefits, while benefits paid of \$5.5 billion and administrative expenses of \$0.5 billion decreased the net assets available. Investment income of \$19.6 billion was due primarily to strong non-Canadian equity, fixed income, and real asset returns partially offset by negative Canadian equity and commodity returns (investment returns are discussed in the Investments section of the MD&A).

## NET ASSETS AVAILABLE FOR BENEFITS

(as at December 31) (Canadian \$ billions)	2015	2014
Net assets available for benefits, beginning of year	\$ 154.5	\$ 140.8
Investment income	19.6	16.3
Contributions	3.3	3.2
Benefits paid	(5.5)	(5.3)
Administrative expenses	(0.5)	(0.5)
Increase in net assets available for benefits	16.9	13.7
Net assets available for benefits, end of year	\$ 171.4	\$ 154.5

Accrued pension benefits increased by \$0.5 billion during the year to \$173.2 billion. Changes in actuarial assumptions decreased the accrued pension benefits amount by \$3.6 billion. Benefits paid during 2015 of \$5.5 billion include the addition of 4,900 retirement and disability pensions and 900 survivor pensions during 2015, as well as a 1.7% cost-of-living increase.

## ACCRUED PENSION BENEFITS

(as at December 31) (Canadian \$ billions)	2015	2014
Accrued pension benefits, beginning of year	\$ 172.7	\$ 148.6
Interest on accrued pension benefits	5.8	6.2
Benefits accrued	5.2	4.4
Benefits paid	(5.5)	(5.3)
Changes in actuarial assumptions	(3.6)	18.3
Changes in level of conditional indexing	0.7	0.4
Experience (gains)/losses	(2.1)	0.1
Increase in accrued pension benefits	0.5	24.1
Accrued pension benefits, end of year	\$ 173.2	\$ 172.7

## FAIR VALUE HIERARCHY

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

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

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

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

(for the year ended December 31, 2015) (Canadian \$ millions)	Level 1	Level 2	Level 3	Total
Fixed income	\$ 88,106	\$ 9,327	\$ 16,031	\$ 113,464
Equity	33,141	716	30,596	64,453
Natural resources	—	—	6,252	6,252
Real assets	3,257	168	41,209	44,634
Investment-related receivables	2,289	31,623	197	34,109
Investment-related liabilities	(22,910)	(69,661)	(2,095)	(94,666)
Net investments	\$ 103,883	\$ (27,827)	\$ 92,190	\$ 168,246

## EFFECTIVE OVERSIGHT AND CONTROLS

### Disclosure and financial reporting controls

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

We have designed disclosure controls and procedures to provide reasonable assurance that material information related to the plan is gathered and reported to management in order to allow timely decisions regarding public disclosure. We evaluated our disclosure controls and procedures and concluded as at December 31, 2015, that they are effective.

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

### Protecting audit quality and integrity

A key oversight activity of audit committees is annually assessing the effectiveness of the external auditor. This helps audit committees meet their responsibility to make informed recommendations to the board on whether or not to reappoint the external auditor. Ontario Teachers' has conducted assessments annually. Ontario Teachers' Audit & Actuarial Committee recommended, and the board approved, the reappointment of the external auditor for 2015.

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

We strive to minimize our own use of consulting services involving the plan's auditor and we disclose the total amount paid for such services. In 2015, fees paid to Deloitte Touche Tohmatsu Limited (of which the Canadian firm is the plan's auditor) totalled \$11.8 million (\$9.4 million in 2014), of which \$11.0 million was for audit activities and \$820,000 was for non-audit services. Of the \$820,000 paid for non-audit services, approximately \$100,000 related to the plan, \$680,000 related to subsidiaries audited by Deloitte and the balance of \$40,000 was for subsidiaries not audited by Deloitte. Of the \$680,000 paid by the subsidiaries, \$100,000 was paid to Deloitte (Canada) and \$580,000 was paid to Deloitte firms outside of Canada, which are considered to have lower risk of impairing the independence of the plan's auditor.



## MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

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

Systems of internal control and supporting procedures are maintained to provide assurance that transactions are authorized, assets safeguarded and proper records maintained. These controls include quality standards in hiring and training of employees, a code of conduct, the establishment of an organizational structure that provides a well-defined division of responsibilities and accountability for performance, and the communication of policies and guidelines through the organization.

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

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



**Ron Mock**

President and Chief Executive Officer  
March 3, 2016



**David McGraw**

Senior Vice-President and Chief Financial Officer

## AUDITOR'S REPORT TO THE ADMINISTRATOR

We have audited the accompanying consolidated financial statements of Ontario Teachers' Pension Plan Board which comprise the consolidated statements of financial position as at December 31, 2015, and the consolidated statements of changes in net assets available for benefits, consolidated statements of changes in accrued pension benefits and consolidated statements of changes in deficit for the year then ended and a summary of significant accounting policies and other explanatory information.

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

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

### AUDITOR'S RESPONSIBILITY

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

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

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

### OPINION

In our opinion, the financial statements present fairly, in all material respects, the financial position of Ontario Teachers' Pension Plan Board as at December 31, 2015, and the changes in its net assets available for benefits, changes in accrued pension benefits and changes in deficit for the year then ended in accordance with Canadian accounting standards for pension plans.

The image shows a handwritten signature in black ink that reads "Deloitte LLP". The signature is written in a cursive, flowing style.

Chartered Professional Accountants, Chartered Accountants

Licensed Public Accountants

March 3, 2016

## 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, 2015, 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, 2015;
- 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 2015;
- 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, 2015, as a going concern. This is different from the statutory valuation (the actuarial valuation required by the *Pension Benefits Act (Ontario)*), which establishes a prudent level for future contributions.

While the actuarial assumptions used to estimate liabilities for the Plan's consolidated financial statements represent the Board's best estimate of future events and market conditions at the end of 2015, and while in our opinion these assumptions are reasonable, the Plan's future experience will inevitably differ, perhaps significantly, from the actuarial assumptions. Any differences between the actuarial assumptions and future experience will emerge as gains or losses in future valuations, and will affect the financial position of the Plan at that time.

We have tested the data for reasonableness and consistency, and we believe it to be sufficient and reliable for the purposes of the valuation. We also believe that the methods employed in the valuation are appropriate for the purposes of the valuation, and that the assumptions used in the valuation are in accordance with accepted actuarial practice. Our opinions have been given, and our valuation has been performed, in accordance with accepted actuarial practice in Canada.



Scott Clausen, F.C.I.A., F.S.A  
March 3, 2016



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

# CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

As at December 31 (Canadian \$ millions)

2015

2014

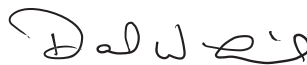
## Net assets available for benefits

<b>ASSETS</b>		
Cash	\$ 340	\$ 129
Receivable from the Province of Ontario (note 3)	3,208	3,098
Receivable from brokers	39	49
Investments (note 2)	262,912	225,172
Premises and equipment	64	44
	<b>266,563</b>	<b>228,492</b>
<b>LIABILITIES</b>		
Accounts payable and accrued liabilities	377	295
Due to brokers	80	935
Investment-related liabilities (note 2)	94,666	72,786
	<b>95,123</b>	<b>74,016</b>
<b>Net assets available for benefits</b>	<b>\$ 171,440</b>	<b>\$ 154,476</b>
<b>Accrued pension benefits and deficit</b>		
Accrued pension benefits (note 4)	\$ 173,266	\$ 172,725
Deficit	(1,826)	(18,249)
<b>Accrued pension benefits and deficit</b>	<b>\$ 171,440</b>	<b>\$ 154,476</b>

On behalf of the Plan administrator:



Chair



Board Member

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

For the year ended December 31 (Canadian \$ millions)	2015	2014
<b>Net assets available for benefits, beginning of year</b>	<b>\$ 154,476</b>	<b>\$ 140,764</b>
<b>Investment operations</b>		
Net investment income (note 6)	19,672	16,260
Administrative expenses (note 11a)	(429)	(409)
Net investment operations	19,243	15,851
<b>Member service operations</b>		
Contributions (note 9)	3,310	3,216
Benefits paid (note 10)	(5,537)	(5,306)
Administrative expenses (note 11b)	(52)	(49)
Net member service operations	(2,279)	(2,139)
<b>Increase in net assets available for benefits</b>	<b>16,964</b>	<b>13,712</b>
<b>Net assets available for benefits, end of year</b>	<b>\$ 171,440</b>	<b>\$ 154,476</b>

## CONSOLIDATED STATEMENTS OF CHANGES IN ACCRUED PENSION BENEFITS

For the year ended December 31 (Canadian \$ millions)	2015	2014
<b>Accrued pension benefits, beginning of year</b>	<b>\$ 172,725</b>	<b>\$ 148,571</b>
<b>Increase in accrued pension benefits</b>		
Interest on accrued pension benefits	5,804	6,239
Benefits accrued	5,246	4,367
Changes in actuarial assumptions and methods (note 4a)	–	18,264
Changes in level of conditional indexing (note 4b)	675	451
Experience losses (note 4c)	–	139
	<b>11,725</b>	<b>29,460</b>
<b>Decrease in accrued pension benefits</b>		
Benefits paid (note 10)	5,537	5,306
Changes in actuarial assumptions and methods (note 4a)	3,538	–
Experience gains (note 4c)	2,109	–
	<b>11,184</b>	<b>5,306</b>
<b>Net increase in accrued pension benefits</b>	<b>541</b>	<b>24,154</b>
<b>Accrued pension benefits, end of year</b>	<b>\$ 173,266</b>	<b>\$ 172,725</b>

## CONSOLIDATED STATEMENTS OF CHANGES IN DEFICIT

For the year ended December 31 (Canadian \$ millions)	2015	2014
<b>Deficit, beginning of year</b>	<b>\$ (18,249)</b>	<b>\$ (7,807)</b>
Increase in net assets available for benefits	16,964	13,712
Net increase in accrued pension benefits	(541)	(24,154)
<b>Deficit, end of year</b>	<b>\$ (1,826)</b>	<b>\$ (18,249)</b>

# NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2015

## DESCRIPTION OF PLAN

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

### (a) General

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

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

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

### (b) Funding

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

### (c) Retirement pensions

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

### (d) Disability pensions

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

### (e) Death benefits

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

### (f) Escalation of benefits

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

### (g) Retirement Compensation Arrangement

Restrictions in the ITA and its regulations on the payment of certain benefits from the registered pension plan for periods of service after 1991 may impact some Plan members. To address affected members, the Retirement Compensation Arrangement (the RCA) was established by agreement between the co-sponsors as a supplementary plan to provide for these benefits. Examples of these benefits include: (1) members of the Plan who retired with average earnings above \$152,447 (CPP-exempt members \$140,945) in 2015 and \$149,714 (CPP-exempt members \$138,500) in 2014; 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 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 CFCL, Ontario Teachers' Finance Trust (OTFT), a special purpose entity created to support the Plan's financing activities, and wholly owned investment holding companies that are 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, 2015 were authorized for issue through a resolution of the Board on March 3, 2016.

### (b) Future changes in accounting policies

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

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

Management does not expect any significant impact on either the Plan's financial position or its investment income when adopting 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, and natural resources are valued based on estimated fair values determined by using appropriate techniques and best estimates by either management, appraisers, or both. Where external appraisers are engaged to perform the valuation, management ensures the appraisers are independent and compares the assumptions used by the appraisers with management's expectations based on current market conditions and industry practice to ensure the valuation captures the business and economic conditions specific to the investment.



At least 70% of the value of the rental property portfolio covering all product types and geographic regions is independently appraised annually. Properties with a value of over \$250 million will be valued independently every year.

Private equity funds are recorded at fair value based on net asset values obtained from each of the funds' administrators. These net asset values are reviewed by management.

- f. Derivative financial instruments are recorded at fair value using market prices where available. Where quoted market values are not readily available, appropriate alternative valuation techniques are used to determine fair value. In determining fair value, consideration is also given to the credit risk of the counterparty through the calculation of a credit valuation adjustment.
- g. Alternative investments, comprised 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.

### **(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 made 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 benefits for credited service earned after December 31, 2009, is conditional, depending on the Plan's funded status. For the financial statement valuation, the Plan estimates the conditional inflation protection benefits based on the indexation 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 fixed income, equities, natural resources and real asset investments in accordance with the Board's policy of asset diversification.

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

The schedule below summarizes the Plan's investments and investment-related liabilities, including net accrued interest and dividends of \$625 million (2014 – \$500 million), before allocating the effect of derivative contracts:

As at December 31	2015		2014	
(Canadian \$ millions)	Fair Value	Cost	Fair Value	Cost
<b>Fixed income</b>				
Bonds	\$ 53,776	\$ 49,376	\$ 51,250	\$ 47,409
Short-term investments	8,919	8,860	5,495	5,477
Alternative investments <sup>2</sup>	13,014	9,110	10,400	8,054
Canadian real-rate products	20,694	15,346	20,563	15,222
Non-Canadian real-rate products	17,061	13,934	9,561	7,698
	113,464	96,626	97,269	83,860
<b>Equity</b>				
Publicly traded				
Canadian	2,048	2,551	2,900	2,635
Non-Canadian	33,317	25,840	33,664	25,542
Non-publicly traded				
Canadian	2,533	2,505	2,009	1,839
Non-Canadian	26,555	19,249	19,000	14,840
	64,453	50,145	57,573	44,856
<b>Natural resources</b>				
Timberland	2,705	1,437	2,592	1,699
Sector investment <sup>3</sup>	3,547	3,745	275	276
	6,252	5,182	2,867	1,975
<b>Real assets</b>				
Real estate (note 5)	29,441	18,034	26,595	16,870
Infrastructure	15,193	10,694	12,659	10,079
	44,634	28,728	39,254	26,949
	228,803	180,681	196,963	157,640
<b>Investment-related receivables</b>				
Securities purchased under agreements to resell	29,465	28,419	24,136	23,754
Cash collateral deposited under securities borrowing arrangements	2,111	2,111	2,322	2,322
Cash collateral paid under credit support annexes	108	108	178	178
Derivative-related, net	2,425	486	1,573	1,066
	34,109	31,124	28,209	27,320
<b>Investments</b>	<b>\$ 262,912</b>	<b>\$ 211,805</b>	<b>\$ 225,172</b>	<b>\$ 184,960</b>

<sup>1</sup> For additional details, refer to the Major Investments on page 68.

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

<sup>3</sup> Sector investment includes oil, gas and agricultural assets.

As at December 31	2015		2014	
(Canadian \$ millions)	Fair Value	Cost	Fair Value	Cost
<b>Investment-related liabilities</b>				
Securities sold under agreements to repurchase	\$ (60,768)	\$ (59,665)	\$ (45,260)	\$ (44,846)
Securities sold but not yet purchased				
Fixed income	(20,509)	(16,632)	(16,522)	(14,431)
Equities	(2,125)	(1,988)	(2,291)	(2,090)
Real estate (note 5)	(4,581)	(4,178)	(4,507)	(4,147)
Commercial paper	(3,058)	(2,985)	–	–
Cash collateral received under credit support annexes	(154)	(154)	(57)	(57)
Derivative-related, net	(3,471)	(724)	(4,149)	(1,411)
	(94,666)	(86,326)	(72,786)	(66,982)
<b>Net investments (note 2d)</b>	<b>\$ 168,246</b>	<b>\$ 125,479</b>	<b>\$ 152,386</b>	<b>\$ 117,978</b>

### (b) Fair value hierarchy

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

December 31, 2015				
(Canadian \$ millions)	Level 1	Level 2	Level 3	Total
Fixed income	\$ 88,106	\$ 9,327	\$ 16,031	\$ 113,464
Equity	33,141	716	30,596	64,453
Natural resources	–	–	6,252	6,252
Real assets	3,257	168	41,209	44,634
Investment-related receivables	2,289	31,623	197	34,109
Investment-related liabilities	(22,910)	(69,661)	(2,095)	(94,666)
<b>Net investments</b>	<b>\$ 103,883</b>	<b>\$ (27,827)</b>	<b>\$ 92,190</b>	<b>\$ 168,246</b>

December 31, 2014				
(Canadian \$ millions)	Level 1	Level 2	Level 3	Total
Fixed income	\$ 75,492	\$ 7,961	\$ 13,816	\$ 97,269
Equity	34,862	357	22,354	57,573
Natural resources	–	–	2,867	2,867
Real assets	2,551	270	36,433	39,254
Investment-related receivables	2,536	25,172	501	28,209
Investment-related liabilities	(18,944)	(51,409)	(2,433)	(72,786)
<b>Net investments</b>	<b>\$ 96,497</b>	<b>\$ (17,649)</b>	<b>\$ 73,538</b>	<b>\$ 152,386</b>

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

2015							
(Canadian \$ millions)	Fixed Income	Equity	Natural Resources	Real Assets	Investment-Related Receivables	Investment-Related Liabilities	Total
Balance, beginning of year	\$ 13,816	\$ 22,354	\$ 2,867	\$ 36,433	\$ 501	\$ (2,433)	\$ 73,538
Purchases	4,279	8,320	4,038	4,842	2,128	2,687	26,294
Sales	(4,201)	(6,104)	(1,176)	(4,140)	(2,576)	(2,257)	(20,454)
Transfers in <sup>4</sup>	–	–	–	–	(4)	–	(4)
Transfers out <sup>4</sup>	–	–	–	–	(1)	26	25
Gains/(losses) included in investment income							
Realized	569	2,722	311	380	176	(135)	4,023
Unrealized	1,568	3,304	212	3,694	(27)	17	8,768
<b>Balance, end of year</b>	<b>\$ 16,031</b>	<b>\$ 30,596</b>	<b>\$ 6,252</b>	<b>\$ 41,209</b>	<b>\$ 197</b>	<b>\$ (2,095)</b>	<b>\$ 92,190</b>

2014							
(Canadian \$ millions)	Fixed Income	Equity	Natural Resources	Real Assets	Investment-Related Receivables	Investment-Related Liabilities	Total
Balance, beginning of year	\$ 11,136	\$ 19,954	\$ 2,612	\$ 34,011	\$ 437	\$ (2,095)	\$ 66,055
Purchases	5,173	5,763	295	6,238	1,433	3,630	22,532
Sales	(3,797)	(5,699)	(522)	(6,652)	(1,434)	(2,904)	(21,008)
Transfers in <sup>4</sup>	–	–	–	–	(1)	(11)	(12)
Transfers out <sup>4</sup>	–	–	–	–	(2)	3	1
Gains/(losses) included in investment income							
Realized	118	1,265	(30)	2,282	77	(23)	3,689
Unrealized	1,186	1,071	512	554	(9)	(1,033)	2,281
<b>Balance, end of year</b>	<b>\$ 13,816</b>	<b>\$ 22,354</b>	<b>\$ 2,867</b>	<b>\$ 36,433</b>	<b>\$ 501</b>	<b>\$ (2,433)</b>	<b>\$ 73,538</b>

<sup>4</sup> Transfers in and transfers out of Level 3 are due to the change in the availability of observable inputs used for fair value measurement of investment assets or related liabilities. There were no transfers between Level 2 and Level 1 in 2015 (2014 – \$365 million). 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. With the Dodd-Frank regulations, certain interest rate swaps traded with U.S. counterparties in the OTC market are now 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:

		2015		2014	
(Canadian \$ millions)		Notional	Fair Value	Notional	Fair Value
<b>Equity and commodity derivatives</b>					
Swaps		\$ 32,893	\$ (666)	\$ 34,656	\$ (2,558)
Futures		3,581	11	5,438	61
Options: Listed	– purchased	190	3	57	4
	– written	145	(7)	32	(5)
OTC	– purchased	1,125	83	4,525	91
	– written	1,464	(69)	3,864	(164)
		39,398	(645)	48,572	(2,571)
<b>Interest rate derivatives</b>					
Swaps		93,721	(42)	50,716	61
Futures		218,564	–	176,507	6
Options: Listed	– purchased	20,550	8	3,532	2
	– written	9,730	(9)	1,823	–
OTC	– purchased	13,942	39	6,188	43
	– written	28,302	(40)	17,061	(33)
		384,809	(44)	255,827	79
<b>Currency derivatives</b>					
Swaps		6,653	(162)	7,199	29
Forwards <sup>5</sup>		55,688	(66)	48,298	180
Futures		–	–	27	–
Options: OTC	– purchased	6,277	104	7,431	106
	– written	6,086	(94)	6,539	(92)
		74,704	(218)	69,494	223
<b>Credit derivatives</b>					
Credit default swaps	– purchased	15,158	(47)	12,414	(634)
	– written	13,389	(78)	9,263	434
Total return swaps		–	–	32	2
		28,547	(125)	21,709	(198)
<b>Other derivatives</b>					
Statistic swaps		5,304	(59)	4,571	(48)
Dividend swaps		199	(3)	332	(11)
		5,503	(62)	4,903	(59)
		532,961	(1,094)	400,505	(2,526)
Net cash collateral paid/(received) under derivative contracts		–	48	–	(50)
<b>Notional and net fair value of derivative contracts</b>		<b>\$ 532,961</b>	<b>\$ (1,046)</b>	<b>\$ 400,505</b>	<b>\$ (2,576)</b>

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

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

(Canadian \$ millions)	2015	2014
Derivative-related receivables	\$ 2,388	\$ 1,624
Cash collateral paid under derivative contracts	52	–
Derivative-related liabilities	(3,482)	(4,150)
Cash collateral received under derivative contracts	(4)	(50)
	<b>\$ (1,046)</b>	<b>\$ (2,576)</b>

#### (d) Investment asset mix

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

	2015		2014	
	Effective Net Investments at Fair Value (\$ millions)	Asset Mix %	Effective Net Investments at Fair Value (\$ millions)	Asset Mix %
<b>Equity</b>				
Canadian	\$ 3,538	2%	\$ 10,707	7%
Non-Canadian	74,003	44	58,140	38
	<b>77,541</b>	<b>46</b>	<b>68,847</b>	<b>45</b>
<b>Fixed income</b>				
Bonds	37,974	23	35,188	23
Real-rate products	31,131	18	30,364	20
	<b>69,105</b>	<b>41</b>	<b>65,552</b>	<b>43</b>
<b>Natural resources</b>				
Commodities	3,996	2	9,032	6
Timberland	2,705	2	2,592	2
Sector investment <sup>6</sup>	3,547	2	275	–
	<b>10,248</b>	<b>6</b>	<b>11,899</b>	<b>8</b>
<b>Real assets</b>				
Real estate (note 5)	24,860	15	22,088	15
Infrastructure	15,661	9	12,659	8
	<b>40,521</b>	<b>24</b>	<b>34,747</b>	<b>23</b>
<b>Absolute return strategies</b>				
Internal absolute return strategies	8,291	5	7,976	5
Alternative investments	9,468	6	7,859	5
	<b>17,759</b>	<b>11</b>	<b>15,835</b>	<b>10</b>
<b>Money market</b>	<b>(46,928)</b>	<b>(28)</b>	<b>(44,494)</b>	<b>(29)</b>
<b>Net investments</b>	<b>\$ 168,246</b>	<b>100%</b>	<b>\$ 152,386</b>	<b>100%</b>

<sup>6</sup> Sector investment includes oil, gas and agricultural assets.



## (e) Risk management

### Objectives

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

The Plan also manages its liquidity risk so that there is sufficient liquidity to enable the Plan to meet all of its future obligations as they become payable, which includes meeting short-term marked-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.

### 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, 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 June 24, 2015. No significant changes were made to the statement at that time. The long-term rate of return goal is set at the actuarial assumed discount rate contained in the funding valuation using the going-concern basis. The Plan's investments are selected and held in accordance with the criteria and limitations set forth in the statement and in accordance with all relevant legislation. The statement includes a long-term asset-mix policy:

Exposure	Minimum	Goal	Maximum
Equities	41%	46%	51%
Fixed income	35%	48%	56%
Natural resources	3%	6%	11%
Real assets	18%	23%	28%
Money market <sup>7</sup>	(26)%	(23)%	(15)%
		100%	

<sup>7</sup> The money market asset class provides funding for investments in other asset classes.

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

## Processes

The Plan uses risk budgeting to allocate risk across the investment asset classes. The risk budget is presented to the Board annually for review and approval. Each investment department is responsible for managing the investment risks associated with the investments they manage within the risk budget allocated to them. Each department is subject to compliance with the Statement of Investment Policies and Procedures, the Board Investment Policy (which includes the risk budget allocated to them), Investment Division Policy, Trade Authorization and Execution Operation Policy, Pre-Investment Approval Policy and the applicable portfolio policies. In addition, the Fixed Income department is responsible for maintaining the liquidity positions in accordance with the Plan's policies on liquidity. 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. For investments not traded on exchanges, such as alternative investments and private equity investments, the investment departments conduct due diligence before acquisition and use it as a tool to monitor the investments after acquisition. The objective is to obtain as much transparency as possible for the departments to assess the risk exposure arising from these private and alternative investments.

The senior representatives from each investment department form the Investment Risk Committee (IRC), which focuses on managing investment risks at a total-fund level. The Chief Financial Officer attends all meetings of the committee as an observer. 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. The committee meets every other week, or more frequently as required. Reporting to the IRC are the Investment Division Counterparty Credit Committee, the Investment Division Liquidity Committee, the Emerging Markets Committee, and the Responsible Investment Committee.

The Enterprise Risk Management Committee oversees investment and non-investment risks faced by the Plan. The committee is chaired by the Chief Executive Officer 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.

### (f) Credit risk

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

#### Credit risk management

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

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

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

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

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

### Maximum exposure to credit risk before collateral held

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

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

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

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

						2015
Credit rating (Canadian \$ millions)	Bonds and Short-Term Investments	Real-Rate Products	Securities Purchased under Agreements to Resell	Loans and Private Debt	OTC Derivatives	
AAA/R-1 (high)	\$ 41,555	\$ 33,533	\$ –	\$ –	\$ –	
AA/R-1 (mid)	1,872	101	913	–	69	
A/R-1 (low)	10,542	3,879	26,570	–	94	
BBB/R-2	3,096	12	–	–	5	
Below BBB/R-2	2,813	–	–	–	–	
Unrated <sup>8</sup>	2,817	230	1,982	9,818	–	
<b>Total</b>	<b>\$ 62,695</b>	<b>\$ 37,755</b>	<b>\$ 29,465</b>	<b>\$ 9,818</b>	<b>\$ 168</b>	

						2014
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)	\$ 30,581	\$ 16,594	\$ –	\$ –	\$ –	
AA/R-1 (mid)	13,749	10,356	3,291	–	15	
A/R-1 (low)	4,549	2,918	14,903	–	275	
BBB/R-2	2,364	12	464	–	–	
Below BBB/R-2	2,361	–	–	–	–	
Unrated <sup>8</sup>	3,141	244	5,478	5,605	–	
<b>Total</b>	<b>\$ 56,745</b>	<b>\$ 30,124</b>	<b>\$ 24,136</b>	<b>\$ 5,605</b>	<b>\$ 290</b>	

<sup>8</sup> Unrated comprises securities that are either privately held, managed externally, or not rated by the rating agencies.

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

As at December 31 (Canadian \$ millions)	2015	2014
Guarantees	\$ 574	\$ 394
Loan commitments	385	139
Notional amount of written credit derivatives	13,389	9,263
Total off-balance sheet credit risk exposure	\$ 14,348	\$ 9,796

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, 2015, 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 \$47.0 billion (2014 – \$43.3 billion), U.S. Treasury issued securities of \$5.9 billion (2014 – \$2.8 billion), Province of Ontario bonds of \$5.4 billion (2014 – \$6.2 billion), receivable from the Province of Ontario (see note 3) of \$3.2 billion (2014 – \$3.1 billion) and future provincial funding requirements of the Plan.

### (g) Market risk

Market risk is the risk of loss that results from fluctuations in equity and commodity prices, interest and foreign exchange rates, and credit spreads. The Plan is exposed to market risk from its investing activities. The level of market risk to which the Plan is exposed varies depending on 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. This risk captures the investment risk exposure by asset class reflecting the risk of potential losses in net assets due to both market and credit risk factors. Statistically, the Plan would expect to see losses in excess of 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. The Plan currently uses the previous 29 years of market data. 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. The bootstrap sampling approach and long historical window, however, mitigate this limitation to some extent by enabling the generation of a set of scenarios that include extreme adverse events. Another limitation is that the Plan computes the risk relative to asset positions at the close of the business day. Positions may change substantially during the course of a trading day. These limitations and the nature of the ETL measure mean that the Plan's losses may exceed the risk exposure amounts indicated in any risk reports.

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

The table below shows the year over year change in Total Asset Risk ETL of the Plan as at December 31.

(Canadian \$ billions) <sup>9</sup>	2015	2014
<b>Equity</b>		
Canadian	\$ 1.5	\$ 4.0
Non-Canadian	22.5	18.5
<b>Fixed income</b>		
Bonds	2.5	1.5
Real-rate products	5.5	5.5
<b>Natural resources</b>		
Commodities	1.5	4.0
Timberland	0.5	0.5
Sector investment <sup>10</sup>	1.5	0.0
<b>Real assets</b>		
Real estate	2.0	1.5
Infrastructure	3.0	2.0
<b>Absolute return strategies</b>	2.0	2.5
<b>Money market</b>	7.0	5.5
<b>Total Asset Risk ETL Exposure<sup>11</sup></b>	<b>\$ 29.0</b>	<b>\$ 28.0</b>

<sup>9</sup> Rounded to the nearest \$0.5 billion.

<sup>10</sup> Sector investment includes oil, gas and agricultural assets.

<sup>11</sup> Total Asset Risk ETL Exposure does not equal the sum of ETL exposure for each asset class because diversification reduces total risk exposure.

### Interest rate risk

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

The Plan manages the interest rate risk by using interest rate derivatives as detailed in note 2c to the consolidated financial statements. After giving effect to the derivative contracts and investment-related receivables and liabilities discussed in note 2c, a 1% increase in nominal interest rates would result in a decline in the value of the Plan's investments in fixed income securities of 7% or \$2.7 billion (2014 – 7% or \$2.4 billion). Similarly, a 1% increase in real interest rates would result in a decline in the value of the Plan's investments in real-rate products of 14% or \$5.3 billion (2014 – 17% or \$5.2 billion).

As at December 31, 2015, 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 \$36.0 billion (2014 – 21% or \$36.0 billion).

## Foreign currency risk

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

As at December 31, the Plan had investments exposed to foreign currency. In Canadian dollars this exposure is as follows:

(Canadian \$ millions)	2015	2014
Currency	Net Exposure	Net Exposure
United States Dollar	\$ 52,564	\$ 44,383
British Pound Sterling	10,305	8,137
Euro	9,238	6,179
Japanese Yen	4,625	1,764
Chinese Renminbi	3,785	3,426
Chilean Peso	2,744	2,794
Australian Dollar	2,156	1,496
South Korean Won	1,867	1,704
Danish Krona	1,718	1,668
Swiss Franc	1,672	1,061
Other	9,412	8,607
	\$ 100,086	\$ 81,219

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)	2015	2014
Currency	Change in Net Investment Value	Change in Net Investment Value
United States Dollar	\$ 2,628	\$ 2,219
British Pound Sterling	515	407
Euro	462	309
Japanese Yen	231	88
Other	1,168	1,038
	\$ 5,004	\$ 4,061

## (h) Liquidity risk

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

### Liquidity risk management

The liquidity position of the Plan is analyzed daily to ensure the Plan maintains at least 1.0% of its assets in unencumbered Canadian treasury bills. The Plan also manages its liquidity by holding additional unencumbered Government of Canada securities (bonds, treasury bills and real-rate bonds) and U.S. government securities that are available for repurchase agreements so that the Plan is able to withstand the liquidity effects of a market stress event and pay its contractual cash flows and projected cash requirements over a one-year horizon with a 99% probability. The Plan's liquidity position is periodically tested by simulations of major events such as significant movements in the market.

### Liquid assets

The Plan maintains a portfolio of highly marketable assets including Canadian and U.S. government bonds that can be sold or funded on a secured basis as protection against any unforeseen interruption to cash flow. The fair value of the Canadian and U.S. government bonds is \$52,911 million as at December 31, 2015 (2014 – \$46,080 million). The Plan also has a net position of publicly traded equities of \$33,240 million (2014 – \$34,273 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)				2015
	Within One Year	One to Five Years	Over Five Years	Total
Securities sold under agreements to repurchase	\$ (53,477)	\$ (7,291)	\$ –	\$ (60,768)
Securities sold but not yet purchased				
Fixed income	(20,509)	–	–	(20,509)
Equities	(2,125)	–	–	(2,125)
Real estate	(2,225)	(1,351)	(1,005)	(4,581)
Commercial paper	(3,058)	–	–	(3,058)
Cash collateral received under credit support annexes	(154)	–	–	(154)
Derivative-related, net	(3,471)	–	–	(3,471)
<b>Total</b>	<b>\$ (85,019)</b>	<b>\$ (8,642)</b>	<b>\$ (1,005)</b>	<b>\$ (94,666)</b>

(Canadian \$ millions)				2014
	Within One Year	One to Five Years	Over Five Years	Total
Securities sold under agreements to repurchase	\$ (39,783)	\$ (5,477)	\$ –	\$ (45,260)
Securities sold but not yet purchased				
Fixed income	(16,522)	–	–	(16,522)
Equities	(2,291)	–	–	(2,291)
Real estate	(728)	(2,408)	(1,371)	(4,507)
Cash collateral received under credit support annexes	(57)	–	–	(57)
Derivative-related, net	(4,149)	–	–	(4,149)
<b>Total</b>	<b>\$ (63,530)</b>	<b>\$ (7,885)</b>	<b>\$ (1,371)</b>	<b>\$ (72,786)</b>

### (i) Securities collateral

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.

As at December 31, 2015, securities transferred as collateral for securities sold under agreements to repurchase amount to \$64,250 million (2014 – \$46,662 million) with an associated liability of \$60,768 million (2014 – \$45,260 million). Securities transferred as collateral or margin for derivative-related liabilities amount to \$1,476 million (2014 – \$3,322 million) with an associated liability of \$3,482 million (2014 – \$4,150 million). Security collateral for securities sold but not yet purchased amounts to \$321 million (2014 – \$322 million) which, together with related cash collateral, has an associated liability of \$2,125 million (2014 – \$2,291 million).

Canadian and U.S. government securities with a fair value of \$32,237 million (2014 – \$25,924 million) have been received from various financial institutions as collateral. The collateral is not recognized as the Plan's asset since the risks and rewards of the ownership remain with the counterparties. 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, but it has neither sold nor repledged any collateral as of December 31, 2015, and 2014.

#### (j) Securities borrowing

The Plan does not recognize any securities borrowed as its investment assets because the risks and rewards of the borrowed securities remain with the lenders. The security collateral posted by the Plan, related to the securities borrowed, continues to be recognized as the Plan's assets because the Plan retains all associated risks and rewards. As at December 31, 2015, securities with a fair value of \$2,420 million (2014 – \$589 million) were borrowed and collateral with a fair value of \$2,504 million (2014 – \$617 million) were posted by the Plan.

### 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)	2015	2014
Contributions receivable	\$ 3,157	\$ 3,047
Accrued interest receivable	51	51
	<b>\$ 3,208</b>	<b>\$ 3,098</b>

The receivable as at December 31, 2015, from the Province of Ontario consists of \$1,598 million, which was received in January 2016, and an estimated \$1,610 million to be received with interest in January 2017. The receivable as at December 31, 2014, from the Province consisted of \$1,526 million, which was received in January 2015, and an initial estimate of \$1,572 million to be received in January 2016. 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 \$173,266 million (2014 – \$172,725 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	2015	2014
Discount rate	3.25%	3.35%
Salary escalation rate	2.50%	2.70%
Inflation rate	1.50%	1.70%
Real rate <sup>1</sup>	1.70%	1.65%

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



The primary economic assumptions were changed as a result of changes in capital markets during 2015 and the salary agreements reached with the Affiliates of Ontario Teachers' Federation in 2015 noted below. These changes in economic assumptions resulted in a net decrease in the value of accrued pension benefits of \$5,003 million (2014 – \$18,244 million increase).

The primary economic assumptions incorporate the agreement between the Province of Ontario and the Affiliates of Ontario Teachers' Federation providing for a 1% increase in salaries on September 1, 2016, plus an additional increase of 0.5% on the 98th day of the 2016 school year. The agreement also provides for a lump-sum payment on September 1, 2015, of 1% of earned wages to all members covered by the collective agreement. This lump-sum payment is included in members' pensionable earnings.

The non-economic assumptions were updated in 2015 to reflect recent experience of Plan members related to retirement, termination of plan membership and increases in salaries related to experience. In 2014, the non-economic assumptions were updated to reflect recent mortality rates and expected rates of improvement in future mortality. Changes in non-economic assumptions increased the accrued pension benefits by \$1,465 million (2014 – \$1,584 million increase). The changes in economic and non-economic assumptions resulted in a net decrease in the value of accrued pension benefits of \$3,538 million (2014 – \$18,264 million increase, including a \$1,564 million decrease due to the change in estimate for determining the discount rate as disclosed in the 2014 annual report).

## (b) Plan provisions

Credited service earned after December 31, 2009, is subject to conditional inflation protection as described in paragraph (f) of the Description of Plan note. The inflation protection benefits vary between 50% and 100% of the change in the Consumer Price Index (CPI) for credited service earned between January 1, 2010, and December 31, 2013, and vary between 0% and 100% of the change in the CPI for credited service earned after 2013. The conditional inflation protection provision can only be invoked or updated 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 forgo up to a maximum forgone inflation of 50% of CPI.

For the financial statement valuation, future pension payments for the credited service earned are indexed at the levels stated in the most recent funding valuation filing. The indexation levels from the most recent filing as at January 1, 2015, are as follows:

Credited Service	Inflation Protection Level
Earned before 2010	100% of CPI
Earned during 2010–2013	70% of CPI
Earned after 2013	70% of CPI

In the most recent filing, inflation protection was partially restored for recent retirees. Effective January 1, 2016, pensioners who retired after 2009 received a one-time increase to their pensions to prospectively restore benefits to the level they would have been had 100% inflation protection been provided on January 1, 2015. Future cost-of-living increases will be equal to 70% of the annual increase in the CPI on credited service earned after 2009 (up from the previous level of 60%). 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 or increased depending on the funded status of the Plan.

## (c) Experience gains and losses

Experience gains on the accrued pension benefits of \$2,109 million (2014 – \$139 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	2015		2014	
(Canadian \$ millions)	Fair Value	Cost	Fair Value	Cost
<b>Assets<sup>1,2</sup></b>				
Real estate properties	\$ 25,220	\$ 14,783	\$ 23,157	\$ 14,371
Investments	3,966	3,003	3,218	2,301
Other assets	255	248	220	198
<b>Total assets</b>	<b>29,441</b>	<b>18,034</b>	<b>26,595</b>	<b>16,870</b>
<b>Liabilities<sup>1,2</sup></b>				
Long-term debt	3,640	3,451	3,623	3,418
Other liabilities	941	727	884	729
<b>Total liabilities</b>	<b>4,581</b>	<b>4,178</b>	<b>4,507</b>	<b>4,147</b>
<b>Net investment in real estate</b>	<b>\$ 24,860</b>	<b>\$ 13,856</b>	<b>\$ 22,088</b>	<b>\$ 12,723</b>

<sup>1</sup> U.S. Dollar, Mexican Pesos and Colombian Pesos net assets have been hedged by way of foreign currency forward contracts for a notional amount of \$1,660 million (2014 – \$1,476 million) with a combined fair value of (\$54) million (2014 – (\$11) million).

<sup>2</sup> Joint ventures managed by external parties hold real estate properties and have liabilities. The net asset value of these joint ventures is included in investments, representing assets of \$751 million (2014 – \$566 million) and liabilities of \$402 million (2014 – \$305 million).

(Canadian \$ millions)	2015	2014
<b>Revenue</b>		
Rental	\$ 1,822	\$ 1,796
Investment and other	244	94
	<b>2,066</b>	<b>1,890</b>
<b>Expenses</b>		
Property operating	799	776
General and administrative	57	48
Other	21	29
	<b>877</b>	<b>853</b>
Operating income	<b>1,189</b>	<b>1,037</b>
Interest expense	(124)	(128)
Income (note 6)	<b>1,065</b>	<b>909</b>
Net investment gain	<b>1,792</b>	<b>1,293</b>
<b>Net real estate income</b>	<b>\$ 2,857</b>	<b>\$ 2,202</b>

## NOTE 6. NET INVESTMENT INCOME

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

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

Net Investment Income							2015
(Canadian \$ millions)	Income <sup>1</sup>	Realized <sup>2</sup>	Unrealized <sup>2</sup>	Investment Income	Management Fees	Transaction Costs	Net Investment Income
<b>Fixed income</b>							
Bonds	\$ 630	\$ 2,646	\$ (1,273)	\$ 2,003	\$ (5)	\$ (9)	\$ 1,989
Short-term investments	–	88	41	129	–	–	129
Alternative investments <sup>3</sup>	60	(961)	1,239	338	(53)	(1)	284
Canadian real-rate products	467	85	7	559	–	(1)	558
Non-Canadian real-rate products	207	108	1,267	1,582	–	–	1,582
	1,364	1,966	1,281	4,611	(58)	(11)	4,542
<b>Equity</b>							
Publicly traded							
Canadian	(41)	97	(816)	(760)	–	(13)	(773)
Non-Canadian	757	5,923	(778)	5,902	(73)	(68)	5,761
Non-publicly traded							
Canadian	42	63	(141)	(36)	(17)	(8)	(61)
Non-Canadian	652	2,510	3,139	6,301	(239)	(184)	5,878
	1,410	8,593	1,404	11,407	(329)	(273)	10,805
<b>Natural resources</b>							
Commodities	(19)	(3,700)	1,974	(1,745)	–	(3)	(1,748)
Timberland	79	345	343	767	(1)	–	766
Sector investment <sup>4</sup>	53	–	(196)	(143)	(22)	(20)	(185)
	113	(3,355)	2,121	(1,121)	(23)	(23)	(1,167)
<b>Real assets</b>							
Real estate (note 5)	1,085	153	1,639	2,877	(1)	(19)	2,857
Infrastructure	751	2	1,914	2,667	(10)	(22)	2,635
	1,836	155	3,553	5,544	(11)	(41)	5,492
	\$ 4,723	\$ 7,359	\$ 8,359	\$ 20,441	\$ (421)	\$ (348)	\$ 19,672

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

<sup>2</sup> Includes net foreign currency losses of \$588 million.

<sup>3</sup> Comprised primarily of hedge funds and managed futures accounts.

<sup>4</sup> Sector investment includes oil, gas and agricultural assets.

(Canadian \$ millions)	Income	Realized <sup>5</sup>	Unrealized <sup>5</sup>	Investment Income	Management Fees	Transaction Costs	Net Investment Income
<b>Fixed income</b>							
Bonds	\$ 942	\$ 1,281	\$ 492	\$ 2,715	\$ (3)	\$ (4)	\$ 2,708
Short-term investments	–	96	1	97	–	–	97
Alternative investments <sup>6</sup>	92	(288)	894	698	(40)	(1)	657
Canadian real-rate products	470	55	2,005	2,530	–	–	2,530
Non-Canadian real-rate products	164	343	1,585	2,092	–	–	2,092
	1,668	1,487	4,977	8,132	(43)	(5)	8,084
<b>Equity</b>							
Publicly traded							
Canadian	(58)	1,112	(5)	1,049	–	(4)	1,045
Non-Canadian	619	3,903	372	4,894	(60)	(57)	4,777
Non-publicly traded							
Canadian	41	(11)	67	97	(7)	(30)	60
Non-Canadian	553	1,149	907	2,609	(194)	(140)	2,275
	1,155	6,153	1,341	8,649	(261)	(231)	8,157
<b>Natural resources</b>							
Commodities	(24)	(1,395)	(2,449)	(3,868)	(1)	(3)	(3,872)
Timberland	48	(30)	525	543	(1)	(3)	539
Sector investment <sup>7</sup>	34	–	(13)	21	(30)	(5)	(14)
	58	(1,425)	(1,937)	(3,304)	(32)	(11)	(3,347)
<b>Real assets</b>							
Real estate (note 5)	937	735	558	2,230	–	(28)	2,202
Infrastructure	524	322	354	1,200	(8)	(28)	1,164
	1,461	1,057	912	3,430	(8)	(56)	3,366
	\$ 4,342	\$ 7,272	\$ 5,293	\$ 16,907	\$ (344)	\$ (303)	\$ 16,260

<sup>5</sup> Includes net foreign currency losses of \$74 million.

<sup>6</sup> Comprised primarily of hedge funds and managed futures accounts.

<sup>7</sup> Sector investment includes oil, gas and agricultural assets.

## 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:

	2015		2014	
(percent)	Investment Returns	Investment Benchmark Returns	Investment Returns	Investment Benchmark Returns
Fixed income	5.9%	6.0%	12.0%	11.9%
Canadian equity	(11.7)	(6.8)	12.7	12.2
Non-Canadian equity	21.2	17.6	13.5	13.6
Natural resources	(1.3)	(6.1)	(19.4)	(19.8)
Real assets	16.0	10.2	10.8	6.6
Total Plan	13.0%	10.1%	11.8%	10.1%

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 investment strategies employed by the investment managers identified for the asset class.

The total Plan return is measured against a Canadian dollar-denominated composite benchmark produced by aggregating returns from each of the policy asset-class benchmarks, using the Plan's asset-mix policy weights.

## NOTE 8. STATUTORY ACTUARIAL VALUATIONS

Statutory actuarial valuations are prepared periodically to determine the funding requirements of the Plan. Active members are required to contribute 11.50% of the portion of their salaries covered by the CPP and 13.10% of salaries above this level. Member contributions are matched by the Province and designated employers. In addition, the Funding Management Policy established by the co-sponsors provides procedures for the co-sponsors to determine contributions and benefits.

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

(percent)	Contribution Rate	
	Covered by CPP	Not Covered by CPP
2012	10.80%	12.40%
2013	11.15%	12.75%
2014 to 2026	11.50%	13.10%

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

The most recent statutory actuarial valuation that has been filed with regulatory authorities was prepared as at January 1, 2015, by Mercer (Canada) Limited and disclosed a funding surplus of \$3,122 million, after adopting conditional inflation protection of 70% for credited service earned between 2010 and 2013 and after 2013, as well as recognizing the special contributions included in the 2015 contribution rate described above, of 1.1% of salary payable until December 31, 2026.

## NOTE 9. CONTRIBUTIONS

(Canadian \$ millions)	2015	2014
<b>Members</b>		
Current service <sup>1</sup>	\$ 1,592	\$ 1,547
Optional credit	35	31
	<b>1,627</b>	<b>1,578</b>
<b>Province of Ontario</b>		
Current service	1,567	1,528
Interest	37	37
Optional credit	32	28
	<b>1,636</b>	<b>1,593</b>
Other employers	33	32
Transfers from other pension plans	14	13
	<b>47</b>	<b>45</b>
	<b>\$ 3,310</b>	<b>\$ 3,216</b>

<sup>1</sup> Contributions past due are less than \$1 million in 2015 and 2014.

## NOTE 10. BENEFITS PAID

(Canadian \$ millions)	2015	2014
Retirement pensions	\$ 5,056	\$ 4,883
Death benefits	344	315
Disability pensions	27	27
Commutated value transfers	74	45
Family law transfers	27	26
Transfers to other plans	8	9
Refunds	1	1
	<b>\$ 5,537</b>	<b>\$ 5,306</b>

## NOTE 11. ADMINISTRATIVE EXPENSES

### (a) Investment expenses

(Canadian \$ millions)	2015	2014
Salaries, incentives and benefits	\$ 277.7	\$ 267.3
Premises and equipment	44.9	35.9
Professional and consulting services	46.0	51.3
Information services	25.8	21.2
Communication and travel	16.8	16.0
Custodial fees	10.2	9.8
Statutory audit fees	1.9	1.9
Board and committee remuneration	0.8	0.7
Other	5.0	4.7
	<b>\$ 429.1</b>	<b>\$ 408.8</b>

### (b) Member services expenses

(Canadian \$ millions)	2015	2014
Salaries, incentives and benefits	\$ 36.3	\$ 33.2
Premises and equipment	8.8	9.1
Professional and consulting services	4.2	4.8
Communication and travel	1.4	1.2
Statutory audit fees	0.1	0.1
Board and committee remuneration	0.1	0.1
Other	0.9	0.9
	<b>\$ 51.8</b>	<b>\$ 49.4</b>

### (c) Compensation of key management personnel

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

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

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

(Canadian \$ millions)	2015	2014
Short-term employee benefits	\$ 13.0	\$ 14.3
Post-employment benefits	5.9	7.1
Other long-term benefits	16.3	15.1
Total	\$ 35.2	\$ 36.5

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

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

The employees of the Plan are members of the defined benefit plans, of either the Ontario Public Service Employees Union (OPSEU) Pension Plan or Public Service Pension Plan (PSPP). The expected contributions from the Plan in 2016 are approximately \$11.6 million. Some employees are also members of the Public Service Supplementary Plan (PSSP). These three pension plans are sponsored by the Province of Ontario and information is available on [www.optrust.com](http://www.optrust.com) and [www.opb.ca](http://www.opb.ca). As the employer, the Plan matches the employees' contributions to these pension plans. Some senior management employees also participate in a non-registered, unfunded Supplemental Employee Retirement Plan (SERP) managed by the Plan to provide the employees non-indexed retirement benefits equal to 2% of the employee's pensionable earnings times the number of years of service, less the initial annual pension to which the employee is entitled under the PSPP and PSSP, combined. The contributions expensed by the Plan during the year were \$15.3 million (2014 – \$17.6 million). Contributions are included in the salaries, incentives and benefits expenses.

## NOTE 12. CAPITAL

The funding surpluses or deficits determined regularly in the funding valuations prepared by an independent actuary are described as the Plan's capital in the consolidated financial statements. The actuary's funding valuation is used to measure the long-term health of the Plan. The actuary tests the Plan's ability to meet its obligations to all current Plan members and their survivors. Using an assumed rate of return, the actuary projects the Plan's benefits to estimate the current value of the liability (see note 4), which is compared to the sum of the Plan assets, the future contributions for all current Plan members and the present value of the contribution increases for future members. The result of the comparison is either a surplus or a deficit.

The objective of managing the Plan's capital is to ensure the Plan is fully funded to pay the plan benefits over the long term. The co-sponsors change the benefit and contribution levels to eliminate any deficits. The Funding Management Policy set by the co-sponsors in the Partners' Agreement provides guidance on how the co-sponsors manage the Plan's capital.

A funding valuation, including a plan to eliminate any deficit, is required to be filed with the pension regulator at least every three years. A preliminary funding valuation is performed by the actuary when the valuation is not filed with the regulator assisting the co-sponsors in managing the Plan's capital.

The most recent funding valuation filed is disclosed in note 8.

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

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

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

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

The RCA is funded on a pay-as-you-go basis from a portion of the contributions made to the Plan by members, the Province and designated employers. The portion is based on a limit on contributions to the Plan with contributions above the limit being remitted to the RCA. The limit is determined annually by the Plan's independent actuary such that the RCA contributions are expected to be sufficient to pay the benefits over the next 12 months. At the beginning of 2016, the actuary determined that the limit should decrease from \$15,100 to \$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.

In addition, because it is difficult to predict the benefits expected to be paid over the next 12 months, it is possible that the assets may be insufficient to pay the benefits. In such a case, the payment of benefits will be temporarily suspended and contributions raised in order to fund the payments that are due under the RCA.

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)	2015	2014
<b>Statements of financial position</b>		
<b>NET ASSETS AVAILABLE FOR BENEFITS</b>		
Assets	\$ 27,186	\$ 29,289
Liabilities	(2,060)	(3,187)
	<b>\$ 25,126</b>	<b>\$ 26,102</b>
<b>ACCRUED BENEFITS AND DEFICIT</b>		
Accrued benefits	\$ 309,172	\$ 329,994
Deficit	(284,046)	(303,892)
	<b>\$ 25,126</b>	<b>\$ 26,102</b>
<b>Statements of changes in net assets available for benefits</b>		
Contributions	\$ 11,251	\$ 10,843
Investment income	150	56
	<b>11,401</b>	<b>10,899</b>
Benefits paid	12,272	9,035
Expenses	105	127
	<b>12,377</b>	<b>9,162</b>
(Decrease)/increase in net assets	<b>\$ (976)</b>	<b>\$ 1,737</b>

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

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



## NOTE 14. COMMITMENTS

The Plan has committed to enter into investment and other transactions, which may be funded over the next several years in accordance with the terms and conditions agreed to. As at December 31, 2015, these commitments totalled \$13,112 million (2014 – \$11,494 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 2015 or 2014 under these guarantees.

The Plan guarantees loan and credit agreements which will expire by 2017. The Plan's maximum exposure is \$149 million as at December 31, 2015 (2014 – \$124 million). The companies have drawn \$134 million under the agreements (2014 – \$112 million).

The Plan guarantees lease agreements for a subsidiary with expiry dates ranging from 2017 to 2059. The Plan's maximum exposure is \$96 million as at December 31, 2015 (2014 – \$91 million). There were no default lease payments in either 2015 or 2014.

The Plan also guarantees the ability of certain investee companies to settle certain financial obligations. The Plan's maximum exposure is \$116 million as at December 31, 2015 (2014 – \$84 million).

The Cadillac Fairview Corporation Limited manages the real estate investments and has provided guarantees relating to the completion of the construction of certain residential developments. The term of these guarantees spans the lives of the development projects, which range from one to five years. The maximum exposure cannot be determined because the projects are not yet complete. These guarantees amounted to \$213 million as at December 31, 2015 (2014 – \$95 million) and have not been recognized in the real estate liabilities.

The Plan guarantees three debentures issued by a real estate trust it consolidates. No payments have been made by the Plan into the real estate trust or related to the three debentures. The debentures are comprised of \$1.25 billion 3.24% Series A Debentures maturing on January 25, 2016, \$0.75 billion 4.31% Series B Debentures maturing on January 25, 2021, and \$0.6 billion 3.64% Series C Debentures maturing on May 9, 2018. The debentures, included in the Plan's real estate investment-related liabilities, may be redeemed by the issuer at any time prior to maturity.

Starting in 2015, the Plan also guarantees commercial paper issued by Ontario Teachers' Finance Trust, which the Plan consolidates. No payments have been made by the Plan into the trust or related to the commercial paper, which are issued through private placements in U.S. and Canada. The maximum aggregate principal amounts outstanding at any one time do not exceed \$10 billion. As at December 31, 2015, commercial paper issued by the trust amounted to \$3,062 million. The commercial paper, included in the Plan's investment-related liabilities, is not redeemable prior to maturity or subject to voluntary prepayment. The maturity terms are up to 270 days from the date of issue in U.S. and up to 364 days in Canada.

### Indemnifications

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

# MAJOR INVESTMENTS

As at December 31, 2015

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

Type (Canadian \$ millions)	Maturity	Coupon (%)	Fair Value		Cost	
Securities purchased under agreements to resell	2016–2017	-0.76–1.75	\$	29,465	\$	28,419
Government of Canada bonds	2016–2064	0.25–9.00		25,338		22,679
Provincial bonds	2016–2048	0.96–8.50		9,056		8,566
International corporate bonds	2016–2049	0.00–12.25		6,340		5,820
Canada treasury bills	2016–2016	0.00–0.00		4,970		4,965
International sovereign debt	2016–2048	0.00–11.00		2,801		2,811
Bank notes	2016–2016	0.00–0.69		2,235		2,231
Canadian corporate bonds	2016–2045	0.00–14.00		1,038		1,046
Commercial paper	2016–2016	0.00–0.00		779		779
International agency bonds	2016–2024	3.13–8.25		584		530
Commercial paper issued	2016–2016	0.37–0.94		(3,058)		(2,985)
U.S. treasury bonds	2016–2045	0.38–6.25		(11,014)		(7,863)
Securities sold under agreements to repurchase	2016–2017	-0.40–7.00		(60,768)		(59,665)

## REAL-RETURN INVESTMENTS OVER \$150 MILLION

Type (Canadian \$ millions)	Maturity	Coupon (%)	Fair Value		Cost	
U.S. treasury inflation protection	2016–2044	0.13–3.88	\$	16,816	\$	13,680
Real-return Canada bonds	2021–2047	1.25–4.25		16,715		13,165
Real-return Canadian corporate bonds	2016–2046	0.00–5.33		1,955		842
Real-return provincial bonds	2021–2036	2.00–4.50		1,913		1,243
Real-return international bonds	2016–2044	0.10–5.00		182		188

## CORPORATE SHARES/UNITS OVER \$150 MILLION

As at December 31, 2015 (millions)

Security Name	Shares	Fair Value	Security Name	Shares	Fair Value
The Macerich Company	23.3	\$2,671.9	Credit Suisse Group AG	6.8	\$203.8
iShares MSCI Emerging Markets Index	18.0	861.5	Capital One Financial Corporation*	2.1	199.8
INC Research Holdings, Inc.	10.3	694.3	Citigroup Inc.	2.8	199.7
ISS A/S	11.4	573.0	Danone	2.1	193.4
Multiplan Empreendimentos Imobiliarios S.A.	54.8	743.0	Exor S.p.A	3.0	189.6
Samsung Electronics Co., Ltd.	0.3	511.6	Medtronic PLC	1.7	186.6
Hudson's Bay Company	23.0	417.9	Nokia Corporation	18.2	181.2
Alphabet Inc.	0.3	362.6	Novartis AG	1.5	179.3
Microsoft Corporation	4.7	361.5	Macdonald, Dettwiler and Associates Ltd.	2.0	169.4
JPMorgan Chase & Co.*	3.6	314.9	Daimler AG	1.4	167.5
General Motors Company	6.2	294.8	TMX Group Limited	4.6	166.2
Nissan Shatai Co., Ltd.	18.9	286.8	Nestlé S.A.	1.6	165.9
XPO Logistics, Inc.	5.7	280.7	The Walt Disney Company	1.1	164.6
American International Group, Inc.	3.1	265.0	Tencent Holdings Limited	6.0	163.8
Chubb Limited	1.4	236.2	Compagnie Financière Richemont SA	1.6	162.8
adidas AG	1.7	234.3	Thermo Fisher Scientific Inc.	0.8	162.6
Wells Fargo & Company*	3.6	231.6	Sony Corporation	4.5	156.1
Aircastle Limited	7.9	228.9	Twenty-First Century Fox, Inc.	4.0	152.5
JD.com, Inc.	4.9	219.6	Metlife, Inc.	2.3	151.7
Sprint Corporation	40.9	205.8	Alibaba Group Holding Limited	1.3	151.6
First Data Corporation	9.9	205.7			

\* Includes fair market value of warrants and subscription receipts.

## REAL ESTATE PROPERTIES OVER \$150 MILLION

As at December 31, 2015

Property	Total Square Footage (in thousands)	Effective % Ownership	Property	Total Square Footage (in thousands)	Effective % Ownership
<b>Canadian Regional Shopping Centres</b>			<b>Canadian Office Properties</b>		
Champlain Place, Dieppe	853	100%	Encor Place, Calgary	359	100%
Chinook Centre, Calgary	1,376	100%	Granville Square, Vancouver	404	100%
Fairview Mall, Toronto	875	50%	HSBC Building, Vancouver	395	100%
Fairview Park Mall, Kitchener	747	100%	Pacific Centre Office Complex, Vancouver	1,819	100%
Fairview Pointe Claire, Montreal	1,052	50%	PricewaterhouseCoopers Place, Vancouver	241	100%
Le Carrefour Laval, Montreal	1,396	100%	RBC Centre, Toronto	1,226	50%
Les Galeries D'Anjou, Montreal	1,354	50%	Shell Centre, Calgary	693	100%
Les Promenades St. Bruno, Montreal	1,133	100%	Toronto-Dominion Centre Office Complex, Toronto	4,448	70%
Lime Ridge Mall, Hamilton	807	100%	Toronto Eaton Centre Office Complex, Toronto	1,845	100%
Market Mall, Calgary	993	50%	Waterfront Centre, Vancouver	402	100%
Markville Shopping Centre, Markham	1,022	100%	Yonge Corporate Centre, Toronto	668	100%
Masonville Place, London	687	100%			
Pacific Centre, Vancouver	1,064	100%	<b>Properties Under Development</b>		
Polo Park Mall, Winnipeg	1,198	100%	City Centre Office, Calgary	851	100%
Richmond Centre, Richmond	795	50%	Deloitte Tower, Montreal	561	100%
Rideau Centre, Ottawa	1,322	100%			
Sherway Gardens, Toronto	1,272	100%			
Shops at Don Mills, Toronto	468	100%			
The Promenade, Toronto	704	100%			
Toronto-Dominion Centre, Toronto	159	70%			
Toronto Eaton Centre, Toronto	2,827	100%			

## PRIVATE COMPANIES AND PARTNERSHIPS OVER \$150 MILLION

As at December 31, 2015

24 Hour Fitness Worldwide Inc.	Empresa de Servicios Sanitarios del	Munchkin, Inc.
Actera Partners II L.P.	Bio-Bio S.A.	MW Market Neutral TOPS Fund
AEA Investors Fund V LP	Esval S.A.	Nextgen Group Holdings Pty Limited
Alliance Laundry Systems, LLC	Euclid Fund	Nuevosur, S.A.
ANV Holdings BV	Exal International Limited	NXT Capital Holdings, L.P.
Apollo Overseas Partners	FAPS Holdings, Inc.	OGF SA
(Delaware 892) VI, L.P.	Fifth Cinven Fund (No. 6) Limited Partnership	OLE Media Management L.P.
AQR Offshore Multi-Strategy Fund VII Ltd.	Flexera Holdings, L.P.	Orbis SICAV Global Equity Fund
Ares Corporate Opportunities Fund III, L.P.	Flynn Restaurant Group LLC	PAG Asia I LP
Ares Corporate Opportunities Fund IV, L.P.	FountainVest China Growth Fund II, L.P.	PetVet Care Centers, Inc.
Aroona Farms SA Pty Ltd	FountainVest China Growth Fund, L.P.	PhyMed Healthcare Group
Ascend Learning Holdings, LLC	GCT Global Container Terminals Inc.	Plano Molding Company
Athene Holding Ltd.	GE9X Tech Maturation II and III, LP	Proteus Fund Inc.
Autonomy Global Macro Fund Limited	GMO Mean Reversion Fund (Offshore), L.P.	Providence Equity Partners VI L.P.
Baldr Fund Inc.	Gottex Real Asset Fund, L.P.	Providence Equity Partners VII-A L.P.
Baybridge Seniors Housing Inc.	Hancock Timber Resource Group	RedBird Capital Partners Platform LP
BC European Capital IX-1 LP	HayFin Topaz LP	Resource Management Service Inc.
BDCM Offshore Opportunity Fund II, Ltd.	Heartland Dental Care, Inc.	Riverbed Technology, Inc
Birmingham International Airport	Helly Hansen Group AS	Scotia Gas Networks plc
BluEarth Renewables Inc.	Heritage Resource Limited Partnership	SeaCube Container Leasing Ltd.
Bridgewater Pure Alpha Fund II Ltd.	HS1 Limited	Serta Simmons Holdings, LLC
Bristol Airport Limited	Hudson Catastrophe Fund, Ltd.	Shearer's Foods, Inc.
BroadStreet Capital Partners, Inc.	Imperial Parking Corporation	Silver Lake Partners III, L.P.
Burton's Biscuit Company	Infiltrator Systems, Inc.	Sinopec Sales Co. Ltd.
Busy Bees Benefits Holdings Limited	InterGen N.V.	Sociedad Austral de Electricidad S.A.
Camelot Group plc	Irish National Lottery	Storapod Holding Company, Inc.
Canada Guaranty Mortgage	Kepos Alpha Fund Ltd.	Sydney Desalination Plant Pty Limited
Insurance Company	Koole Tankstorage Zaandam B.V.	TDR Capital II 'B' L.P.
Canbriam Energy, Inc.	Kyobo Life Insurance Co., Ltd.	Terranum Corporate Properties
Catalina Holdings (Bermuda) Ltd	Labco SA	The Brussels Airport Company
Cerberus OT Partners, L.P.	LMAP 903 Limited	TierPoint, LLC
Copenhagen Airport A/S	LMAP 904 Limited	TP Partners Fund, L.P.
Coway Holdings, Inc.	LMAP Chi Limited	Triam Partners Co-Investment
CPG International Inc.	LMAP Iota Limited	Opportunities Fund, L.P.
CSC ServiceWorks Holdings, Inc.	LMAP Pi Limited	Triam Partners, Ltd.
Cubico Sustainable Investments Limited	Louis XIII Holdings Limited	Univision Communications Inc.
DaVinciRe Holdings Ltd.	Lowell Group Limited	ValueAct Capital International II, L.P.
Dematic S.A.	MBK Partners Fund II, L.P.	Woodspur Farming LLC
DTZ Jersey Holdings Ltd.	MBK Partners III, L.P.	
Easton-Bell Sports, LLC	MBK Partners, L.P.	

## **ISSUER**

### **Ontario Teachers' Finance Trust**

5650 Yonge Street  
Toronto, Ontario M2M 4H5  
Canada

## **GUARANTOR**

### **Ontario Teachers' Pension Plan Board**

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Canada

## **LEGAL ADVISORS**

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## **IRISH LISTING AGENT**

**Matheson**  
70 Sir John Rogerson's Quay  
Dublin 2, Ireland

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**US\$1,750,000,000**

**Ontario Teachers' Finance Trust**

**2.125 % Senior Notes due 2022**

**Unconditionally and irrevocably guaranteed by**

**Ontario Teachers' Pension Plan Board**



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**OFFERING MEMORANDUM**

**September 12, 2017**

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***Joint Book-Running Managers***

**Goldman Sachs International**

**J.P. Morgan**

**RBC Capital Markets**

***Co-Managers***

**Barclays**

**BMO Capital Markets**

**CIBC Capital Markets**

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