# FINANCIAL STATEMENTS

2017

# Management's Responsibility for Financial Reporting

Management of the OPSEU Pension Plan Trust Fund (OPTrust) is responsible for the integrity and fairness of the data presented in the financial statements and the financial information presented in the *Funded Status Report* (FSR). The financial statements have been prepared in accordance with the Canadian *Chartered Professional Accountants of Canada (CPA Canada) Handbook* section 4600 — Pension Plans and comply with the financial reporting requirements of the *Pension Benefits Act* (Ontario). The financial statements include amounts that must, as necessary, be based on the best estimates and judgment of management with appropriate consideration as to materiality. Financial information presented throughout the FSR is consistent with the financial statements.

Management has recognized the importance of OPTrust maintaining and reinforcing a high standard of conduct in all of its actions, including the preparation and publication of statements fairly presenting the financial position of the OPSEU Pension Plan (the Plan). Systems of internal control and supporting procedures are maintained to provide assurance that transactions are properly authorized, assets are safeguarded against unauthorized use or disposition and proper records are maintained. The systems are augmented by the careful selection and training of qualified staff, the establishment of organizational structures providing for a well-defined division of responsibilities, and the communication of policies and guidelines of business conduct throughout OPTrust.

The Board of Trustees has the ultimate responsibility for the financial statements presented to plan members. The Audit, Finance and Risk Committee, consisting of Trustees appointed by each of the Province of Ontario and OPSEU, reviews the financial statements with management and the external auditor before such statements are recommended to the Board of Trustees for approval. The Audit, Finance and Risk Committee meets on a regular basis with management and the external auditor to review the scope of the audit, discuss auditor's findings, and satisfies itself that the Board of Trustees' responsibilities have been adequately discharged.

PricewaterhouseCoopers LLP, the Plan's external auditor, has conducted an independent examination of the financial statements in accordance with Canadian generally accepted auditing standards and have expressed their opinion upon completion of such examination in their report to the Board of Trustees. The auditors have full and unrestricted access to the Audit, Finance and Risk Committee and the Board of Trustees to discuss their audit and related findings as to the integrity of the Plan's financial reporting and the adequacy of the internal control systems.

**Hugh O'Reilly**
President and CEO

**Doug Michael**
Chief Financial Officer

March 8, 2018

# Actuaries' Opinion

Towers Watson Canada Inc. (Willis Towers Watson) was retained by the Board of Trustees of the Ontario Public Service Employees' Union Pension Plan (the Plan) to perform an actuarial valuation of the Plan as at December 31, 2017. The purpose of this valuation is to determine the pension obligations of the Plan as at December 31, 2017, for inclusion in the Plan's financial statements in accordance with Section 4600 of the *Chartered Professional Accountants of Canada (CPA Canada) Handbook*.

We have undertaken such a valuation and provided our related report. As this valuation was undertaken for purposes of the Plan's financial statements under the *CPA Canada Handbook* Section 4600, it might not be appropriate for other purposes and should not be relied upon or used for any other purpose.

The results of the valuation disclosed total going concern pension obligations of $18,265 million in respect of service accrued to December 31, 2017.

The valuation of the Plan's going concern pension obligations was based on:

- members' demographic data provided by OPTrust management as at September 22, 2017 projected to December 31, 2017, using management's estimates of experience for the intervening period;
- the actuarial cost method prescribed by the *CPA Canada Handbook* Section 4600; and
- best-estimate assumptions about future events (for example, economic factors such as future rates of inflation and returns on the pension fund, as well as demographic factors) which were developed by OPTrust management in consultation with Willis Towers Watson and have been adopted by OPTrust management and approved by the Board.

Changes have been made to the actuarial assumptions affecting the pension obligations since the previous valuation for the purpose of the Plan's financial statements at December 31, 2016, as described in the notes to the financial statements.

We have reviewed the data used for the valuation and have performed tests of reasonableness and consistency.

In our opinion, for the purposes of the valuation,

- the membership data are sufficient and reliable;
- the assumptions adopted are appropriate;
- the methods employed in the valuation are appropriate; and
- the valuation has been completed in accordance with our understanding of the requirements of the *Chartered Professional Accountants of Canada (CPA Canada) Handbook* Section 4600.

Nonetheless, differences between future experience and the assumptions about such future events will result in gains or losses which will be revealed in future valuations, none of which have been anticipated at this time.

Our valuation was prepared and our opinions given in accordance with accepted actuarial practice in Canada.

**Towers Watson Canada Inc.**

**Ian Markham**
Fellow, Canadian Institute of Actuaries

**Laura Newman**
Fellow, Canadian Institute of Actuaries

Toronto, Ontario
March 8, 2018

# Independent Auditor's Report

**To the Board of Trustees of the OPSEU Pension Plan Trust Fund (OPTrust)**

We have audited the accompanying financial statements of OPSEU Pension Plan Trust Fund (OPTrust), which comprise the statements of financial position as at December 31, 2017 and 2016 and the statement of changes in surplus, changes in net assets available for benefits and changes in pension obligations for the years then ended, and the related notes, which comprise a summary of significant accounting policies and other explanatory information.

## Management's Responsibility for the 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 audits. We conducted our audits 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 in our audits 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 OPSEU Pension Plan Trust Fund (OPTrust) as at December 31, 2017 and 2016 and the changes in surplus, changes in its net assets available for benefits and changes in its pension obligations for the years then ended in accordance with Canadian accounting standards for pension plans.

PricewaterhouseCoopers LLP

**Chartered Professional Accountants, Licensed Public Accountants**

Toronto, Ontario
March 8, 2018

## Statement of Financial Position

| As at December 31 ($ millions) | 2017 | 2016 |
|---|---|---|
| **ASSETS** | | |
| Investments (Note 4) | **23,586** | 19,945 |
| Contributions receivable (Note 8) | **48** | 53 |
| Other assets | **5** | 4 |
| | **23,639** | 20,002 |
| **LIABILITIES** | | |
| Accounts payable and accrued charges | **44** | 49 |
| Investment-related liabilities (Note 4) | **3,305** | 908 |
| | **3,349** | 957 |
| **NET ASSETS AVAILABLE FOR BENEFITS** | **20,290** | 19,045 |
| **PENSION OBLIGATIONS** (Note 6) | **18,265** | 17,316 |
| **SURPLUS** (Note 7) | **2,025** | 1,729 |
| **PENSION OBLIGATIONS AND SURPLUS** | **20,290** | 19,045 |

The accompanying notes are an integral part of these financial statements.

## Statement of Changes in Surplus

| For the years ended December 31 ($ millions) | 2017 | 2016 |
|---|---|---|
| **SURPLUS, BEGINNING OF YEAR** | **1,729** | 1,643 |
| **CHANGE IN SURPLUS** | | |
| Increase in net assets available for benefits | **1,245** | 646 |
| Increase in net pension obligations | **(949)** | (560) |
| **NET INCREASE IN SURPLUS** | **296** | 86 |
| **SURPLUS, END OF YEAR** | **2,025** | 1,729 |

The accompanying notes are an integral part of these financial statements.

The financial statements were authorized for issue by the Board of Trustees on March 8, 2018 and were signed on its behalf by:

**Vicki Ringelberg**
Chair

**Tim Hannah**
Vice-Chair

## Statement of Changes in Net Assets Available for Benefits

| For the years ended December 31 ($ millions) | 2017 | 2016 |
|---|---|---|
| **NET ASSETS AVAILABLE FOR BENEFITS, BEGINNING OF YEAR** | **19,045** | 18,399 |
| **Changes due to investment activities** | | |
| Investment income (Note 5) | **491** | 541 |
| Net gain on investments (Note 5) | **1,321** | 584 |
| Investment management and administrative expenses (Notes 5 and 10a) | **(70)** | (88) |
| | **1,742** | 1,037 |
| **Changes due to pension activities** | | |
| Contributions (Note 8) | **529** | 529 |
| Benefits paid (Note 9) | **(1,003)** | (900) |
| Pension administrative expenses (Note 10b) | **(23)** | (20) |
| | **(497)** | (391) |
| **INCREASE IN NET ASSETS AVAILABLE FOR BENEFITS** | **1,245** | 646 |
| **NET ASSETS AVAILABLE FOR BENEFITS, END OF YEAR** | **20,290** | 19,045 |

The accompanying notes are an integral part of these financial statements.

## Statement of Changes in Pension Obligations

| For the years ended December 31 ($ millions) | 2017 | 2016 |
|---|---|---|
| **PENSION OBLIGATIONS, BEGINNING OF YEAR** | **17,316** | 16,756 |
| **INCREASE IN PENSION OBLIGATIONS** | | |
| Interest accrued on benefits | **981** | 951 |
| Benefits accrued | **471** | 469 |
| Assumption changes (Note 6) | **509** | — |
| | **1,961** | 1,420 |
| **DECREASE IN PENSION OBLIGATIONS** | | |
| Benefits paid (Note 9) | **1,003** | 900 |
| Experience gains/(losses) (Note 6) | **9** | (40) |
| | **1,012** | 860 |
| **INCREASE IN NET PENSION OBLIGATIONS** | **949** | 560 |
| **PENSION OBLIGATIONS, END OF YEAR** | **18,265** | 17,316 |

The accompanying notes are an integral part of these financial statements.

# Notes to the Financial Statements

## 1. Description of the OPSEU Pension Plan

The OPSEU Pension Plan (the Plan) is a jointly sponsored pension plan that provides pension benefits for employees of the Province of Ontario (the Province or Government of Ontario) in bargaining units represented by the Ontario Public Service Employees Union (OPSEU) and certain other bargaining units and employers. The April 18, 1994 *Sponsorship Agreement* between the Province and OPSEU (the sponsors) documented the agreement between the Province and OPSEU to establish the Plan, with the Province and OPSEU as joint sponsors. The *Ontario Public Service Employees Union Pension Plan Act*, 1994 enacted in June 1994 facilitated certain aspects of the agreement.

The Plan and related trust fund (the Trust or OPTrust) were established pursuant to the October 25, 1994 *Agreement and Declaration of Trust* (the Trust Agreement). The Trust Agreement also established the Board of Trustees as the legal administrator of the Plan and Trust. The Board of Trustees is composed of 10 persons, five appointed by each of the Province and OPSEU. The legal name of the Board of Trustees is the OPSEU Pension Plan Trust Fund. The Board of Trustees and its employees operate under the name the Trust or OPTrust.

The Plan is registered under the *Pension Benefits Act* (Ontario) and the *Income Tax Act* (Canada) under registration number 1012046. The Plan is a registered pension plan as defined in the *Income Tax Act* and is not subject to income tax in Canada. However, the Trust and its subsidiaries are subject to other federal, provincial and municipal taxes in Canada, and may be subject to tax in other countries.

These financial statements reflect the aggregate financial position of the Trust, including the net assets available for benefits, pension obligations, and surplus.

### A. MEMBERSHIP

The Plan's membership is comprised of mandatory permanent (full-time, part-time and seasonal) and optional fixed-term contract employees represented by OPSEU, certain permissible bargaining agents, and other designated employees, employed by the following organizations:

- The Province of Ontario (civil servants and crown employees)
- Alcohol and Gaming Commission of Ontario
- Centre for Addiction and Mental Health
- Legislative Assembly of Ontario
- Liquor Control Board of Ontario
- Niagara Parks Commission
- North Bay Regional Health Centre (Northeast Mental Health Centre)
- Ontario Agency for Health Protection and Promotion
- Ontario Pension Board
- Ontario College of Trades
- Ontario Public Service Employees Union (seconded or acting employees)
- Ontario Shores Centre for Mental Health Sciences
- Ontario Teachers' Pension Plan Board
- OPSEU Pension Plan Trust Fund (includes non-bargaining unit employees)
- Providence Care Centre
- St. Joseph's Care Group — Lakehead Psychiatric Hospital
- Waypoint Centre for Mental Health Care
- Workplace Safety and Insurance Appeals Tribunal

### B. FUNDING

Contributions and investment earnings fund plan benefits. The determination of the value of the benefits and required contributions is based on periodic actuarial valuations for funding purposes.

### C. CONTRIBUTIONS

The Plan's contributions and benefits are integrated with the Canada Pension Plan (CPP).

The contribution rate for both employers and employees was 9.4% (2016 – 9.4%) of salary up to the Year's Maximum Pensionable Earnings (YMPE) under the CPP and 11% (2016 – 11%) of salary above the YMPE. The sponsors have agreed that until at least December 31, 2017 and except in extenuating circumstances, the contribution rate will not exceed this level.

### D. PURCHASE OR BUY BACK OF PAST SERVICE

Eligible members of the Plan can purchase (buy back) past service for leaves of absences or employment service before joining the Plan (e.g. contract, casual or non-Ontario Public Service employment), subject to *Income Tax Act* limits. Member payments are required for all buy back types and for some, employers make a matching payment.

### E. PENSION BENEFITS

Pension benefits vest immediately upon enrolment in the Plan and include a lifetime pension and a CPP bridge benefit. The CPP bridge is designed to supplement the lifetime pension until age 65 when unreduced CPP benefits become payable. The CPP bridge expires at age 65, irrespective of when a member's CPP payments begin.

The pension amount is determined by a two-step formula. The first step determines the amount of pension payable before age 65 including the lifetime pension and the CPP bridge. This is calculated as 2% of the member's annual salary averaged over the best five consecutive years for each year of pension service earned by the member during his or her membership. The second step determines the CPP bridge and deducts this amount from the total to arrive at the age 65 lifetime pension. The CPP bridge is calculated as 0.655% of the member's average salary determined in the first step or the five year average of the YMPE under the CPP, whichever is lower, for each year of pension service up to a maximum of 35 years.

The Plan's normal retirement age is 65. A member can retire earlier than 65 with an unreduced pension if the member's age and years of pension service total at least 90 (Factor 90) or when the member reaches age 60 and has 20 or more years of pension service (60/20). A member may retire at any time after age 55, but if the member is not entitled to receive an unreduced pension under Factor 90 or 60/20, the member's early pension is reduced. The pension reduction is equal to 5% for each year that the member is under age 65 when he or she retires.

### F. INFLATION PROTECTION

An adjustment to pension benefits to account for inflation is made annually based on changes to the Consumer Price Index to a maximum of 8% in any one year. Where the inflation adjustment exceeds 8% in any one year, the excess is carried forward to any subsequent year when the adjustment is less than 8%. The adjustment is made to both pensions in pay and deferred pensions. The inflation adjustment was 1.6% at January 1, 2018 (January 1, 2017 – 1.3%).

### G. DEATH BENEFITS

Upon the death of a member or pensioner, death benefits are available to a surviving eligible spouse, eligible children, designated beneficiary, or estate. The death benefit may be in the form of a survivor pension, a lump sum payment or both. The Plan provides a 60% survivor pension to an eligible spouse at no cost to the pensioner.

Survivor pensions are also available to the member's or pensioner's children in certain circumstances.

In the case of limited life expectancy, provisions exist to access lump sum payouts, provided eligible spouses waive their entitlement to a survivor pension.

### H. DISABILITY PENSIONS

A disability pension is available to members with a minimum of 10 years of pension service in the Plan and who meet the established criteria. The amount of the disability pension depends on the years of pension service and the average salary of the disabled member.

### I. DEFERRED PENSIONS

Members who terminate employment before retirement have the right to leave their entitlement in the Plan and receive a pension when they retire. Their deferred pension is increased annually for inflation.

Members who are moved to other employers in a divestment situation and who are enrolled in a new registered pension plan are required by law to leave their pension entitlement in the Plan until they terminate employment with their new employer, unless an agreement is established to enable the divested members to transfer their pension entitlements from the original plan to the new plan.

### J. TERMINATION PAYMENTS

Members who terminate membership in the Plan before they become eligible for early retirement are entitled to transfer the commuted value of their pension to alternative retirement arrangements, subject to maximum transfer limits under the *Income Tax Act*. If a member's commuted value exceeds the *Income Tax Act* maximum transfer limits, the excess is payable in cash less withholding tax.

In some cases, a member may also receive a refund of contributions. Depending on the *Income Tax Act* limits, the refund may be transferred to a registered retirement savings plan, otherwise it is paid directly to the member as a cash lump sum less withholding tax.

### K. TRANSFERS

Members who are promoted to management or certain professional groups are subject to a mandatory transfer of benefits to the Public Service Pension Plan (administered by the Ontario Pension Board). In addition, a member who terminates employment before retirement may be entitled to transfer the value of his or her pension to another pension plan, if OPTrust has a reciprocal transfer agreement with that plan.

## 2. Significant Accounting Policies

### A. BASIS OF PRESENTATION

These financial statements are prepared in accordance with the *Chartered Professional Accountants of Canada (CPA Canada) Handbook* Section 4600 — Pension Plans (s4600). This standard is the basis for Canadian accounting standards for pension plans. The recognition and measurement of OPTrust's assets and liabilities are consistent with the requirements of s4600.

In the selection or change of accounting policies that do not relate to its investment portfolio or pension obligations, OPTrust has chosen to comply on a consistent basis with *International Financial Reporting Standards* (IFRS) to the extent that those standards do not conflict with the requirements of s4600.

The financial statements present the aggregate financial position of the Trust as a separate financial reporting entity independent of the participating employers, bargaining units, plan members and pensioners. Certain prior year financial information has been reclassified to conform with the presentation adopted in the current year.

### B. USE OF ESTIMATES

In preparing these financial statements, management must make certain estimates and assumptions that primarily affect the reported values of assets and liabilities, income and expenses and related disclosures. Actual amounts could differ from these estimates. Significant estimates included in the financial statements relate to the valuation of real estate investments, private equity and infrastructure investments, certain fund investments and the determination of the pension obligations.

### C. INVESTMENTS

Investments, investment receivables and investment payables are financial instruments, and are recognized on a trade date basis and stated at fair value. OPTrust uses *IFRS 13 Fair Value Measurement* in determining fair value whereby fair value is the most representative price within the bid-ask spread.

#### i) Valuation of investments

The fair value of investments is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The determination of fair value is based on market conditions at a specific point in time and may not be reflective of future values. Fair values determined using valuation models and techniques require the use of assumptions that may not be supported by observable market transactions or available market data. In such cases, fair values may be significantly impacted by the choice of assumptions. In periods of economic turmoil or when markets are illiquid, the determination of fair value may be more difficult to establish.

Fair values are determined as follows:

**Short-term Investments**
For short-term investments, fair value is determined using cost plus accrued interest or the average of market quotes of closing bid and ask prices. Short-term investments comprise direct investments and include reinvested cash collateral that is comprised of fixed rate instruments.

**Bonds and Real Return Bonds**
Fair value is the average of market quotes of closing bid and ask prices. Where quoted prices are not available, estimated values are calculated using discounted cash flows based on current market yields for comparable securities or market information.

**Pooled Funds**
For pooled fixed income and equity funds, fair value is determined through reference to the net asset values as reported by the external fund manager and reviewed by management.

**Bank Loan Notes**
Bank loan notes that are arranged by banks are comprised of debt from companies and are backed with collateral assets. The average of the institutional bid and ask evaluation prices is used when both are present. In the absence of institutional bid evaluation, vendor pricing based on proprietary models are used, which approximate the price a dealer would pay for a security.

**Public Equity**
Generally, closing quoted market price is the most representative of fair value. Where a market price is not available, fair value is determined using comparable market information.

**Hedge Funds**
Hedge funds are recorded at fair value based on net asset values provided by external fund administrators and are reviewed by management.

**Real Estate**
Real estate investments directly held or held through limited partnerships are valued using appropriate valuation techniques and management's and/or third party best

estimates. Investments are valued based on independent appraisals that are conducted at least once every three years. Where an investment is not independently valued, it is valued internally. Management reviews all assumptions used for the valuations.

Investments held through fund investments are valued using the values reported by the external fund managers and updated for any specific market and other investment factors known to OPTrust that could affect the fair value of the investment.

Mortgages held on real estate investments are valued using discounted cash flows based on market yields of securities with comparable credit risk and term to maturity.

**Private Equity and Infrastructure**

Private equity and infrastructure investments are held directly or through ownership in limited partnership arrangements or via fund investments. Fair value is determined using appropriate valuation techniques and management's and/or third party best estimates. For investments held through limited partnerships or funds, fair value is generally determined by the external investment manager using accepted valuation methods and other relevant information, which is reviewed by management and updated for any specific market and other investment factors known to OPTrust that could affect the fair value of the investment.

**Derivatives**

Derivative contracts are financial contracts, the value of which is derived from changes in underlying assets, interest rates, foreign exchange rates, commodities or indices. Market prices are used for exchange-traded derivatives. Where quoted market prices are not available, appropriate valuation techniques are used to determine fair value. Derivative contracts are transacted by OPTrust either directly with counterparties in the over-the-counter (OTC) market or on regulated exchanges and execution platforms, and include the following types of contracts:

*Interest rate swaps*

An interest rate swap is a contractual agreement between two parties to exchange a series of fixed for floating cash flows based on a notional amount of principal. OPTrust utilizes interest rate swaps to manage interest rate exposures and duration exposures.

*Total return swaps*

A total return swap is a contract between two parties to swap the total return of an asset or index, including its dividends, coupons and capital appreciation or depreciation, and return with a regular fixed or floating cash flow. OPTrust utilizes total return swaps to gain exposure to an asset, index or hedge specific assets in its portfolio.

*Credit default swaps*

A credit default swap is a contractual agreement between two parties to provide protection against a change in value of referenced debt instruments. The purchaser pays premiums to the seller on the credit default swap in return for payment related to a change in the value of the referenced asset in case of a credit event. OPTrust utilizes credit default swaps to promote credit risk diversification.

*Currency swaps*

A currency swap is a contractual agreement between two parties to exchange cash flows based on changes in one currency versus another. OPTrust utilizes currency swaps to manage its interest rate and currency exposures for both hedging and active currency management.

*Currency forwards*

A currency forward contract is a contractual agreement between two parties to exchange a notional amount of one currency for another at a specified price for settlement on a predetermined date in the future. OPTrust utilizes foreign exchange forward contracts to modify currency exposure for both hedging and active currency management.

*Equity and bond futures*

Equity and bond futures are standardized contracts to either buy or sell specified equity/bond indices at a specific price and date in the future. Futures are transacted between counterparties on regulated futures exchanges and are subject to daily cash settlement of changes in fair value. OPTrust utilizes equity and bond index futures contracts to manage its exposure to public equity and bond markets.

*Options*

Options 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 at a predetermined price at or by the specified future date. Options may be transacted in standardized amounts on regulated exchanges or may be customized and acquired in the OTC market. OPTrust utilizes options to manage its directional and volatility exposures for both hedging and active currency management.

**Securities Sold Under Resell and Repurchase Agreements**

Securities purchased under resell agreements (resell agreements) and securities sold under repurchase agreements (repo agreements) are agreements where OPTrust buys and sells securities and simultaneously agrees to sell and buy them back at a specified price at a future date. Resell and repo agreements are carried at cost, which together with accrued interest approximates fair value due to their short-term nature.

**Collateral**
Cash collateral provided by OPTrust is included as a component of cash and short-term investments. For collateral other than cash, if the party to whom the collateral is provided does not have the right to sell or re-pledge, the asset remains as an investment in OPTrust's financial statements.

Cash collateral received by OPTrust from counterparties is recognized as a component of cash and a liability for the equivalent amount is recognized as an investment-related liability. For collateral other than cash, it is recognized in OPTrust's financial statements only if the risks and rewards of ownership are transferred to OPTrust.

### ii) Income recognition

Net investment income includes interest and dividends, income from investments, realized gains and losses on disposal of investments, and unrealized gains and losses resulting from changes in the fair value of investments. Investment income is recognized on an accrual basis when earned.

Realized gains and losses arise from the sale of the investment and represent the difference between net proceeds on disposal and cost. Unrealized gains and losses represent the change in the difference between the estimated fair value and cost of the investment held.

### iii) Transaction fees

Transaction fees include incremental costs attributable to the acquisition or issue of investment assets or liabilities, and are expensed as incurred.

### iv) External management fees

External management fees for portfolio management are expensed and included in investment management expenses.

## D. PENSION OBLIGATIONS

The value of pension obligations is determined based on actuarial valuations prepared by an independent actuarial firm. Actuarial valuations are prepared every year for financial statement reporting purposes (financial statement valuations) and at least every three years for purposes of determining funding requirements (funding valuations).

For financial reporting purposes, the *CPA Canada Handbook* requires that pension plans report the actuarial value of pension obligations using management's best estimate assumptions and the projected unit credit method, prorated on service. This method calculates the actuarial value of pension benefits accrued up to the financial reporting date, after the projected benefits have been attributed equally to each year of a member's service. This method differs from the modified aggregate method used for funding purposes, which includes the members' and employers' expected future contributions, pension benefits to be earned after the reporting date and margins of conservatism in the setting of economic assumptions.

## E. CONTRIBUTIONS

Contributions from members and employers that are due at year-end, including those relating to purchases of service for prior employment or leaves of absences, and transfers into the Plan, are recorded on accrual basis as a receivable. The carrying value of the receivable approximates fair value due to their short-term nature.

## F. BENEFIT PAYMENTS

Payments of pensions, refunds and transfers are recorded in the period in which they are incurred; amounts due at year-end are recorded in accounts payable and accrued charges.

## G. SURPLUS/DEFICIT

Surplus or deficit results from the excess or shortfall of the value of net assets available for benefits over the actuarial value of pension obligations.

## H. FOREIGN CURRENCY TRANSLATION

Foreign currency transactions are translated into Canadian dollars at the rates of exchange prevailing at the dates of the transactions. The fair value of investments and cash balances denominated in foreign currencies are translated at the rates in effect at year-end. The resulting unrealized gain or loss is included in the statement of changes in net assets available for benefits.

## I. FAIR VALUE DISCLOSURES

All financial instruments measured at fair value are categorized into one of three hierarchy levels, described below, for disclosure purposes. Each level is based on the transparency of the inputs used to measure the fair values of assets and liabilities:

**Level 1** — inputs are unadjusted quoted prices of identical assets or liabilities in active markets.

**Level 2** — inputs are other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly.

**Level 3** — one or more significant inputs used in a valuation technique are unobservable in determining fair values of the assets or liabilities.

Determination of fair value and the resulting hierarchy requires the use of observable market data whenever available. The classification of a financial instrument in the hierarchy is based upon the lowest level of input that is significant to the measurement of fair value.

### J. ACCOUNTING STANDARDS ISSUED BUT NOT APPLIED

On January 13, 2016 the International Accounting Standards Board (IASB) issued *IFRS 16 Leases* (IFRS 16) replacing *IAS 17 Leases*. IFRS 16 brings most leases on the Statement of Financial Position and eliminates the distinction between operating and finance leases. The new standard will come into effect for periods beginning on or after January 1, 2019 with early adoption permitted. OPTrust does not expect any material impact from adopting IFRS 16 on future financial results.

On July 24, 2014 the IASB issued *IFRS 9 Financial Instruments* (IFRS 9) replacing *IAS 39 Financial Instruments: Recognition and Measurement*. IFRS 9 includes new classification and measurement requirements for financial assets and liabilities. The new standard will come into effect for periods beginning on or after January 1, 2018 with early adoption permitted. OPTrust does not expect any impact from adopting IFRS 9 on future financial results.

## 3. Risk Management

### INVESTMENT RISK

The Trust is subject to certain investment risks and engages in risk management practices to help ensure that sufficient assets will be available to fund pension benefits. Investment risks include market risk (interest rate risk, foreign currency risk, equity price risk and inflation risk), credit risk and liquidity risk.

The management of these investment risks is addressed in OPTrust's *Risk Appetite Statement* and other management policies.

Investment risk includes the following types of risk:

#### i) Market risk

Market risk is the risk that the value of an investment will be adversely affected by changes in interest rates, foreign exchange rates, equity prices and/or inflation rates. OPTrust manages market risk through investment management practices designed to optimize the relationship between risk and return and the diversification of investments across a variety of asset classes. Risk mitigation strategies aimed at lowering the total fund's risk level are actively employed.

**Interest Rate Risk**

Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The potential exposure results from either changes in floating interest rates which increase/decrease cash flows or changes in the asset values for fixed rate securities (e.g. bonds). During periods of rising interest rates, the market value of the existing fixed income securities will generally decrease. See Note 4 for sensitivity to changes in assumptions.

The Trust manages interest rate risk relative to its liabilities, investing so that there is an appropriate mix between interest-sensitive investments and those subject to other risks. There are also certain real estate, private equity and infrastructure investments which may have interest rate components making them subject to interest rate exposure.

A 1% increase/(decrease) in interest rates, with all other variables held constant, would result in a (decrease)/increase in the value of the fixed income portfolio of $944 million (2016 – $648 million).

**Foreign Currency Risk**

Foreign currency risk is the risk that the value of foreign investments will be affected by changes in foreign currency exchange rates for Canadian dollars. Currency risk is managed at the total Trust level by targeting currency exposures that help to diversify risk.

The Trust's market value exposure to foreign exchange risk is as follows:

| As at December 31 ($ millions) | 2017 Gross exposure | 2017 Impact of derivatives[a] | 2017 Net exposure | 2016 Net exposure |
|---|---|---|---|---|
| **Canadian Dollar** | **12,981** | **4,572** | **17,553** | 14,031 |
| **Investments subject to currency risk** | | | | |
| **Developed markets** | | | | |
| United States Dollar | **3,877** | **(1,791)** | **2,086** | 3,681 |
| South Korean Won | **144** | **—** | **144** | 93 |
| Indian Rupee | **112** | **—** | **112** | 138 |
| New Taiwan Dollar | **104** | **—** | **104** | 131 |
| British Pound Sterling | **280** | **(232)** | **48** | 88 |
| Europe — other | **1,619** | **(1,661)** | **(42)** | 131 |
| Asia Pacific — other | **937** | **(888)** | **49** | 357 |
| **Emerging markets** | **227** | **—** | **227** | 387 |
| | **7,300** | **(4,572)** | **2,728** | 5,006 |
| **NET INVESTMENTS** | **20,281** | **—** | **20,281** | 19,037 |

a The impact of derivatives reflects the foreign currency exposure represented by the notional amount hedged using currency derivatives.

The impact of a 5% absolute change in the Canadian dollar against the top five currencies held at year-end, holding all other variables constant, would have resulted in a $136 million change in net assets available for benefits as at December 31, 2017 (2016 – $200 million).

| As at December 31 ($ millions) | Change versus Canadian Dollar | 2017 Change in net assets available for benefits | 2016 Change in net assets available for benefits |
|---|---|---|---|
| United States Dollar | **+/- 5%** | **+/- 117** | +/- 177 |
| South Korean Won | **+/- 5%** | **+/- 7** | +/- 4 |
| Indian Rupee | **+/- 5%** | **+/- 5** | +/- 7 |
| New Taiwan Dollar | **+/- 5%** | **+/- 5** | +/- 7 |
| British Pound Sterling | **+/- 5%** | **+/- 2** | +/- 5 |
| **TOTAL** | | **+/- 136** | +/- 200 |

### Equity Price Risk

Equity price risk is the risk that the fair value of a financial instrument will fluctuate because of changes in equity market prices whether those changes are caused by factors specific to the individual financial instrument, its issuer, or factors affecting all similar financial instruments traded in the market. OPTrust is exposed to equity price risk through its investment in public and private equities. OPTrust manages equity price risk through adherence to approved policies and guidelines.

The table below shows the impact of a 10% change in the developed, private equity, Canadian and emerging markets.

| As at December 31 ($ millions) Equity market[a] | Market index | Change in market index[b] | 2017 Change in net assets available for benefits | 2016 Change in net assets available for benefits |
|---|---|---|---|---|
| Active developed | **MSCI World Index** | **+/- 10%** | **+/- 272** | +/- 214 |
| Private equity | **MSCI World Index** | **+/- 10%** | **+/- 135** | +/- 86 |
| Active emerging | **MSCI EMF Index** | **+/- 10%** | **+/- 74** | +/- 61 |
| Canadian[c] | **S&P/TSX Composite Index** | **+/- 10%** | **+/- —** | +/- 39 |
| **TOTAL** | | | **+/- 481** | +/- 400 |

a Equity market is based on the portfolio mandates of the investment managers.
b For each equity category, the expected effect of a 10% change in the market index is estimated using the most recent four years of market data. Currency exchange rates are not affected by the change in market indices.
c No Canadian managers in 2017.

### Inflation Risk

Inflation risk is the risk that fair value of future cash flows of an instrument will fluctuate because of changes in current inflation or expected future inflation. OPTrust has direct inflation risk through investments in Canadian real return bonds and indirect inflation risk through nominal bonds, infrastructure and real estate investments where inflation inputs are used to determine the fair value of investments.

### Stressed Funded Status

In addition to the management of absolute risk, OPTrust uses stress scenarios to monitor the market risks in the plan. The *Risk Appetite Statement* sets limits on how market risks can affect the funded status of the plan in two stress scenarios. These stress scenarios represent severe stagflation and deflation market conditions. In each scenario, the value of assets and liabilities are recalculated and the change in funded status is monitored. The drawdown in funded status for these two scenarios are monitored and used as a strategic risk limit.

The table below highlights the change in funded status in the two stress scenarios.

| As at December 31 | 2017<br>%<br>**Potential reduction to funded status** | 2016<br>%<br>Potential reduction to funded status |
|---|---|---|
| Risk appetite statement scenario A[a] | **(9.7)%** | (6.0)% |
| Risk appetite statement scenario B[b] | **(10.1)%** | (7.8)% |

a Under Scenario A, the assumption is that the MSCI World Index decreases by 30% while the 10 year government yield **increases** by 100 basis points.

b Under Scenario B, the assumption is that the MSCI World Index decreases by 30%, while the 10 year government yield **decreases** by 100 basis points.

## ii) Credit risk

Credit risk is the risk of financial loss due to a counterparty, borrower, issuer, endorser or guarantor failing to make payments under its contractual obligations. OPTrust has exposure to credit risk through debt securities and OTC derivatives.

OPTrust mitigates credit risk on debt securities through adherence to approved policies and guidelines, which includes guidelines on the Trust's exposure to single issuers.

The credit risk exposure by credit rating, without taking account of any collateral held is as follows:

| | **2017** | | | | |
|---|---|---|---|---|---|
| As at December 31 ($ millions) | **Short-term investments** | **Bonds and bank loans** | **Resell agreements** | **Derivatives[a]** | **Total** |
| AAA/R-1 High | **2,418** | **2,285** | **—** | **—** | **4,703** |
| AA/R-1 Mid | **—** | **1,293** | **—** | **9** | **1,302** |
| A/R-1 Low | **548** | **2,425** | **372** | **33** | **3,378** |
| BBB/R-2 Low or lower | **—** | **—** | **—** | **—** | **—** |
| **TOTAL** | **2,966** | **6,003** | **372** | **42** | **9,383** |

| | 2016 | | | | |
|---|---|---|---|---|---|
| As at December 31 ($ millions) | Short-term investments | Bonds and bank loans | Resell agreements | Derivatives[a] | Total |
| AAA/R-1 High | 1,094 | 1,611 | — | — | 2,705 |
| AA/R-1 Mid | 1,020 | 542 | — | 56 | 1,618 |
| A/R-1 Low | 105 | 2,343 | 3 | 48 | 2,499 |
| BBB/R-2 Low or lower | 2 | 337 | — | 2 | 341 |
| TOTAL | 2,221 | 4,833 | 3 | 106 | 7,163 |

a Excludes exchange traded derivatives.

Credit risk from OTC derivatives is managed by only dealing with highly-rated counterparties and requiring certain counterparties to post collateral in order to back the fair value of these derivative contracts.

Credit risk for investments is measured by the positive fair value of the contractual obligations with the counterparties less any collateral or margin received as at the reporting date. The Trust also monitors how the positive fair value of OTC derivatives may change in the future. The Trust has exposure to derivatives as follows:

| | | | 2017 | | | 2016 |
|---|---|---|---|---|---|---|
| As at December 31 ($ millions) | **Notional amount[a]** | **Fair value assets** | **Fair value liabilities** | Notional amount[a] | Fair value assets | Fair value liabilities |
| **Interest rate contracts** | | | | | | |
| Bond futures | **4,416** | **—** | **—** | 746 | — | — |
| Interest rate swaps | **18** | **—** | **—** | 120 | 1 | (1) |
| Interest rate options | **10** | **5** | **—** | — | — | — |
| **Equity contracts** | | | | | | |
| Equity futures | **992** | **—** | **—** | 132 | — | — |
| Equity options | **1,189** | **15** | **—** | 2 | — | (1) |
| **Currency contracts** | | | | | | |
| Currency forwards | **6,127** | **42** | **(31)** | 8,530 | 82 | (52) |
| Currency swaps | **—** | **—** | **—** | 34 | — | — |
| Currency options | **—** | **—** | **—** | 3 | 4 | — |
| **Other derivatives** | | | | | | |
| Total return swaps | **—** | **—** | **—** | 55 | 23 | — |
| Credit default swaps | **11** | **—** | **—** | 29 | — | — |
| **TOTAL DERIVATIVES** | **12,763** | **62** | **(31)** | 9,651 | 110 | (54) |

a The notional amounts of derivative contracts represent the nominal or face amount that is used to calculate the cash payments made on that contract. The fair values of the derivative contracts included in the financial statements are determined by using the notional values and changes in the market rates or prices relative to the original terms of the contract. Note 4 includes the fair value of the derivative contracts with positive fair values recorded as investment assets and negative fair values as investment liabilities. The notional values do not necessarily reflect the future cash flows to be exchanged nor do they indicate the Plan's exposure to market or credit risk.

## COLLATERAL

Collateral transactions support certain investment activities under terms and conditions that are common and customary to collateral arrangements.

### Derivatives

Collateral is received from and pledged to counterparties to manage credit risk from OTC derivatives in accordance with the Credit Support Annex (CSA), which forms part of the International Swaps and Derivatives Association (ISDA) master agreements. It is common practice to execute a CSA in conjunction with an ISDA master agreement. Under the ISDA master agreement for OTC derivatives, OPTrust has a right to offset our credit risk against collateral received in the event of default, insolvency, bankruptcy or other early termination. In the case of exchange-traded derivatives subject to derivative clearing agreements with the exchanges and clearinghouses, there is no provision to offset against obligations to the same counterparty.

As at December 31, 2017, collateral of $12 million (2016 – $1 million) was received and $61 million (2016 – $5 million) was pledged by OPTrust.

### Resell and Repo Agreements

The Trust pledges and receives collateral to/from counterparties for resell and repo agreements. As at December 31, 2017, collateral received for resell agreements was $375 million (2016 – $3 million) and collateral pledged for repo agreements was $3,192 million (2016 – $791 million), with an associated receivable of $372 million (2016 – $3 million) and a liability of $3,212 million (2016 – $793 million).

### Securities Lending Program

The Trust also participates in a securities lending agreement whereby it lends securities to approved borrowers. OPTrust secures its exposure through the receipt of security collateral starting at 105% of the value of the securities lent. All securities lent are recallable on demand at the option of OPTrust. Credit risk associated with the borrower is mitigated by requiring the borrower to provide collateral with market values exceeding the market value of the loaned securities.

As at December 31, 2017, the Trust's investments included loaned securities with a fair value of $246 million (2016 – $407 million). The fair value of collateral received in respect of these securities on loan was $259 million (2016 – $432 million).

### Offsetting Arrangements

Financial assets and liabilities are offset and the net amount reported in the statement of financial position where OPTrust currently has a legally enforceable right to set-off the recognized amounts and there is an intention to settle on a net basis or realize the asset and settle the liability simultaneously. In the normal course of business, OPTrust enters into various master netting agreements or other similar arrangements that do not meet the criteria for offsetting in the statement of financial position but still allow for the related amounts to be set-off in certain circumstances, such as bankruptcy or the termination of the contracts.

The following table presents the recognized financial instruments that are offset, or subject to enforceable master netting agreements as at December 31, 2017 and 2016. Similar arrangements include repo agreements, resell agreements, securities lending agreements and any related rights to financial collateral.

| | 2017 | | | | | |
|---|---|---|---|---|---|---|
| | | | | Related amounts not set off in the statement of financial position | | |
| As at December 31 ($ millions) | Gross amounts of recognized financial instruments | Gross amounts of recognized financial instruments set-off | Net amounts of financial instruments presented (Note 4) | Financial instruments | Financial collateral (received)/ pledged | Net amount |
| **Financial assets** | | | | | | |
| Derivative instruments | **63** | **(1)** | **62** | **(5)** | **(57)** | **—** |
| Resell agreements | **372** | **—** | **372** | **—** | **(372)** | **—** |
| Securities lending | **246** | **—** | **246**[a] | **—** | **(246)** | **—** |
| **TOTAL FINANCIAL ASSETS** | **681** | **(1)** | **680** | **(5)** | **(675)** | **—** |
| **Financial liabilities** | | | | | | |
| Derivative instruments | **(32)** | **1** | **(31)** | **5** | **12** | **(14)** |
| Repo agreements | **(3,212)** | **—** | **(3,212)** | **—** | **3,192** | **(20)** |
| **TOTAL FINANCIAL LIABILITIES** | **(3,244)** | **1** | **(3,243)** | **5** | **3,204** | **(34)** |

| As at December 31 ($ millions) | | | | 2016 | | |
|---|---|---|---|---|---|---|
| **Financial assets** | | | | | | |
| Derivative instruments | 126 | (16) | 110 | (9) | (1) | 100 |
| Resell agreements | 3 | — | 3 | — | (3) | — |
| Securities lending | 407 | — | 407[a] | — | (407) | — |
| TOTAL FINANCIAL ASSETS | 536 | (16) | 520 | (9) | (411) | 100 |
| **Financial liabilities** | | | | | | |
| Derivative instruments | (70) | 16 | (54) | 9 | 5 | (40) |
| Repo agreements | (793) | — | (793) | — | 791 | (2) |
| TOTAL FINANCIAL LIABILITIES | (863) | 16 | (847) | 9 | 796 | (42) |

a These securities are included within fixed income and public equity investments in Note 4.

### iii) Liquidity risk

Liquidity risk is the potential that OPTrust will not be able to meet payment obligations from pension payments, operating expenses or investment activities as they come due without the forced sale of assets. OPTrust has exposure to liquidity risk through its investment commitments which are required to be funded in future periods, as well as through holding certain investments including funds, private equity, infrastructure and real estate investments, which by nature are less liquid than public market assets (see Note 11). An additional source of liquidity risk exposure is OPTrust's use of derivatives with their potential margin calls which are impacted by daily market movements.

The Trust forecasts and manages cash flows centrally to ensure it meets its obligations when due, without unintended early liquidation of assets in all market conditions.

The Trust's cash and liquidity positions are monitored daily for compliance with guidelines and limits established in a liquidity framework. Both short term and longer term cash and liquidity requirements are assessed within this framework. In addition, OPTrust conducts stress tests to examine how they may impact liquidity.

Liquidity risk is managed by holding cash and cash equivalents, including receipt of investment income, liquid money market securities and unencumbered high quality liquid securities that can be sold under repo agreements to raise funds. A core liquidity reserve is maintained for deployment in the event of severe market disruption.

OPTrust's liabilities include accrued pension benefits, investment-related liabilities, accounts payable and accrued charges.

As at December 31, the remaining terms to contractual maturity of OPTrust's investment-related liabilities and real estate mortgages are as follows:

| | 2017 | | | |
|---|---|---|---|---|
| As at December 31 ($ millions) | **Within 1 year** | **1 to 5 years** | **Over 5 years** | **Total** |
| Due to brokers and other liabilities | **(39)** | **(23)** | **—** | **(62)** |
| Derivatives instruments | **(31)** | **—** | **—** | **(31)** |
| Repo agreements | **(3,212)** | **—** | **—** | **(3,212)** |
| Mortgages related to real estate | **(28)** | **(106)** | **(265)** | **(399)** |
| **TOTAL** | **(3,310)** | **(129)** | **(265)** | **(3,704)** |
| | **2016** | | | |
| Due to brokers and other liabilities | (29) | (32) | — | (61) |
| Derivatives instruments | (53) | (1) | — | (54) |
| Repo agreements | (793) | — | — | (793) |
| Mortgages related to real estate | (22) | (124) | (312) | (458) |
| **TOTAL** | (897) | (157) | (312) | (1,366) |

OPTrust maintains unsecured credit facilities to meet potential liquidity requirements primarily for investment purposes. As at December 31, 2017 and December 31, 2016, certain amounts were drawn on the credit facilities in the form of letters of credit.

## 4. Investments

The following schedule presents the fair value of the Trust's investments categorized within the fair value hierarchy as described in Note 2 and their cost before allocating the market exposure related to derivative financial instruments to the asset classes to which they relate.

| | 2017 | | | | | 2016 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| As at December 31 ($ millions) | Level 1 | Level 2 | Level 3 | Fair value | Cost | Level 1 | Level 2 | Level 3 | Fair value | Cost |
| **Fixed income** | | | | | | | | | | |
| Cash | 366 | — | — | 366 | 366 | 196 | — | — | 196 | 196 |
| Short-term investments | — | 2,966 | — | 2,966 | 2,961 | — | 2,221 | — | 2,221 | 2,220 |
| Government and corporate bonds | | | | | | | | | | |
| Canadian | — | 4,878 | — | 4,878 | 4,840 | — | 4,034 | — | 4,034 | 4,178 |
| Foreign | — | 695 | — | 695 | 689 | — | 193 | — | 193 | 195 |
| Real return bonds | — | 430 | — | 430 | 302 | — | 438 | — | 438 | 302 |
| Bank loan notes | — | — | — | — | — | — | 168 | — | 168 | 154 |
| | 366 | 8,969 | — | 9,335 | 9,158 | 196 | 7,054 | — | 7,250 | 7,245 |
| **Public equity** | | | | | | | | | | |
| Canadian | 48 | — | — | 48 | 42 | 483 | — | — | 483 | 330 |
| Foreign | 2,269 | 1 | — | 2,270 | 1,801 | 2,928 | 11 | — | 2,939 | 2,403 |
| | 2,317 | 1 | — | 2,318 | 1,843 | 3,411 | 11 | — | 3,422 | 2,733 |
| **Pooled funds** | 14 | 237 | 2,328 | 2,579 | 2,463 | 81 | 314 | 549 | 944 | 889 |
| **Hedge funds** | — | — | 1,994 | 1,994 | 1,839 | — | — | 1,653 | 1,653 | 1,478 |
| **Real estate** | — | (403) | 3,226 | 2,823 | 2,298 | — | (465) | 3,349 | 2,884 | 2,310 |
| **Private equity** | — | — | 1,920 | 1,920 | 1,346 | 8 | — | 1,587 | 1,595 | 1,078 |
| **Infrastructure** | 111 | — | 2,025 | 2,136 | 1,729 | 115 | — | 1,950 | 2,065 | 1,711 |
| **Investment-related assets** | | | | | | | | | | |
| Accrued income | 37 | — | — | 37 | 37 | 36 | — | — | 36 | 36 |
| Due from brokers | 6 | 4 | — | 10 | 10 | 3 | 3 | — | 6 | 6 |
| Derivative instruments | — | 62 | — | 62 | 31 | — | 87 | — | 87 | 6 |
| Resell agreements | — | 372 | — | 372 | 382 | — | 3 | — | 3 | 3 |
| | 43 | 438 | — | 481 | 460 | 39 | 93 | — | 132 | 51 |
| **INVESTMENT ASSETS** | 2,851 | 9,242 | 11,493 | 23,586 | 21,136 | 3,850 | 7,007 | 9,088 | 19,945 | 17,495 |
| **Investment-related liabilities** | | | | | | | | | | |
| Due to brokers and other liabilities | (62) | — | — | (62) | (62) | (48) | (13) | — | (61) | (61) |
| Derivative instruments | — | (31) | — | (31) | — | — | (54) | — | (54) | — |
| Repo agreements | — | (3,212) | — | (3,212) | (3,240) | — | (793) | — | (793) | (793) |
| | (62) | (3,243) | — | (3,305) | (3,302) | (48) | (860) | — | (908) | (854) |
| **NET INVESTMENTS** | 2,789 | 5,999 | 11,493 | 20,281 | 17,834 | 3,802 | 6,147 | 9,088 | 19,037 | 16,641 |

The following table presents a reconciliation of financial instruments included in Level 3 of the fair value hierarchy:

| | 2017 | | | | | 2016 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| For the years ended December 31 ($ millions) | Hedge and pooled funds | Real estate | Private equity | Infra-structure | Total | Hedge and pooled funds | Real estate | Private equity | Infra-structure | Total |
| **Balance, beginning of year** | 2,202 | 3,349 | 1,587 | 1,950 | 9,088 | 751 | 3,592 | 1,675 | 2,210 | 8,228 |
| Investment income | — | 137 | 48 | 73 | 258 | — | 125 | 37 | 120 | 282 |
| Realized gains/(losses) | 53 | 252 | 116 | 134 | 555 | 12 | 127 | 150 | 248 | 537 |
| Unrealized gains/(losses)[a] | 39 | (53) | 124 | 52 | 162 | 38 | (31) | 36 | (309) | (266) |
| Purchases | 2,358 | 222 | 305 | 196 | 3,081 | 1,527 | 270 | 413 | 127 | 2,337 |
| Sales | (330) | (681) | (260) | (380) | (1,651) | (126) | (734) | (724) | (446) | (2,030) |
| **BALANCE, END OF YEAR[b]** | 4,322 | 3,226 | 1,920 | 2,025 | 11,493 | 2,202 | 3,349 | 1,587 | 1,950 | 9,088 |

a Unrealized gains/(losses) are attributable to investments held at December 31, 2017 and December 31, 2016.

b There were no transfers into and out of Level 3 and no settlements of Level 3 financial instruments for the years ended December 31, 2017 and 2016.

### Sensitivity to changes in assumptions

Sensitivity information is available for direct investments in real estate and certain private equity and infrastructure, and is presented in the table below. The fair value of certain fund investments where OPTrust does not have access to the underlying investment information is based on the value provided by the external manager, and therefore, no other reasonably possible alternative assumptions could be applied.

| | | 2017 | | | 2016 | | |
|---|---|---|---|---|---|---|---|
| As at December 31 ($ millions) | Key factor | Fair value | +0.25% | -0.25% | Fair value | +0.25% | -0.25% |
| Real estate | Capitalization rate[a] | 1,409 | (58) | 63 | 1,374 | (53) | 58 |
| Mortgages related to real estate | Interest rate | 403 | (5) | 5 | 465 | (6) | 6 |
| Infrastructure | Discount rate[b] | 529 | (15) | 14 | 696 | (23) | 24 |

A private equity investment was included in the 2016 sensitivity analysis (+/- $2 million) and was not included in the 2017 analysis, as the investment was valued in 2017 based on a recent transaction.

a A rate of return to derive the value of an investment property based on its expected income stream.

b The interest rate used in a discounted cash flow analysis to determine the present value of future cash flows.

## A. SIGNIFICANT INVESTMENTS

As at December 31, the Trust held certain investments having a fair value or cost exceeding 1% of the fair value or cost of net investment assets.

| | 2017 | | | 2016 | | |
|---|---|---|---|---|---|---|
| As at December 31 ($ millions) | **Number of investments** | **Fair value** | **Cost** | Number of investments | Fair value | Cost |
| Fixed income | **13** | **4,032** | **3,933** | 9 | 1,950 | 1,854 |
| Pooled fund | **2** | **2,234** | **2,141** | 1 | 510 | 500 |
| Hedge fund | **2** | **1,521** | **1,425** | 2 | 869 | 831 |
| Infrastructure | **3** | **1,332** | **1,053** | 4 | 1,399 | 1,174 |

The investments where the individual issue has a cost or fair value exceeding 1% of the cost or fair value of net investment assets were comprised of one or more holdings of the following:

### Fixed income

Government of Canada, Province of Ontario, Province of Quebec and United States Treasury Notes and Bonds.

### Pooled fund

Aviva Investors Multi-Strategy Target Return Private Pooled and Schroders OPTrust Diversified Growth Fund.

### Hedge fund

AQR Offshore Multi-Strategy Fund XVIII L.P. and Bridgewater Pure Alpha Major Markets, Ltd.

### Infrastructure

GlobalVia Infraestructuras, S.A., Firelight Infrastructure Partners L.P. and Harvest Pipeline Company.

## 5. Net Investment Income

| For the years ended December 31 ($ millions) | 2017 Investment income | 2017 Net gain/(loss) on investments[a] | 2017 Net investment income/(loss)[b] | 2016 Investment income | 2016 Net gain/(loss) on investments[a] | 2016 Net investment income/(loss)[b] |
|---|---|---|---|---|---|---|
| **Fixed income** | | | | | | |
| Cash and short-term investments | 18 | 5 | 23 | 9 | (3) | 6 |
| Government and corporate bonds | | | | | | |
| Canadian | 114 | 119 | 233 | 110 | (104) | 6 |
| Foreign | 17 | — | 17 | 14 | (6) | 8 |
| Real return bonds | | | | | | |
| Canadian | 9 | (8) | 1 | 10 | 1 | 11 |
| Foreign | — | — | — | — | (1) | (1) |
| Bank loans notes | 5 | (10) | (5) | 7 | 1 | 8 |
| | 163 | 106 | 269 | 150 | (112) | 38 |
| **Public equity** | | | | | | |
| Canadian | 5 | 4 | 9 | 24 | 128 | 152 |
| Foreign | 52 | 558 | 610 | 79 | 75 | 154 |
| | 57 | 562 | 619 | 103 | 203 | 306 |
| **Pooled funds** | — | 83 | 83 | — | 21 | 21 |
| **Hedge funds** | — | 17 | 17 | — | 33 | 33 |
| **Real estate** | 137 | 198 | 335 | 125 | 96 | 221 |
| **Private equity** | 55 | 232 | 287 | 37 | 186 | 223 |
| **Infrastructure** | 79 | 182 | 261 | 126 | (66) | 60 |
| **Derivative instruments** | — | (59) | (59) | — | 223 | 223 |
| | 271 | 653 | 924 | 288 | 493 | 781 |
| | 491 | 1,321 | 1,812 | 541 | 584 | 1,125 |
| **Investment management expenses** | | | | | | |
| External manager fees | | | (20) | | | (34) |
| Transaction fees | | | (6) | | | (9) |
| | | | (26) | | | (43) |
| **NET INVESTMENT INCOME** | | | 1,786 | | | 1,082 |

a Includes realized gain of $1,236 million and unrealized gain of $85 million in 2017 and realized gain of $1,233 million and unrealized loss $649 million in 2016.

b Certain investment-related disbursements of $57 million in 2017 (2016 – $48 million) have been netted against net investment income/(loss).

## 6. Pension Obligations

### A. FINANCIAL STATEMENT VALUATION

OPTrust annually reviews the actuarial assumptions used in the financial statement valuation to ensure that they reflect management's best estimate of expected trends. The key economic assumptions used for the valuation are as follows:

| As at December 31 | **2017** | 2016 |
|---|---|---|
| Inflation rate | **2.00%** | 2.00% |
| Discount rate (real) | **3.60%** | 3.75% |
| Discount rate (nominal) | **5.60%** | 5.75% |
| Salary increases (nominal) | **(1.5% for 2018 and 2.75% thereafter)** | (1.4% for 2017 and 2.75% thereafter) |

Experience gains/(losses) of $9 million (2016 – $(40) million) on the Plan's pension obligations are due to differences between actuarial experience and assumptions. The assumption change losses of $509 million (2016 – nil) on the Plan's pension obligations are comprised of $395 million loss due to changes in the economic assumptions noted above and $114 million loss due to changes in the demographic assumptions, the majority of which are due to the adoption of the new Canadian Institute of Actuary's improvement scale that reflects an assumption of increased future longevity for OPTrust's members, as well as from other assumption changes due to an experience study conducted in 2017.

The financial statement nominal discount rate decreased from 5.75% as at December 31, 2016 to 5.60% as at December 31, 2017 to reflect market conditions changes and expected returns.

### B. FUNDING VALUATION

The funding valuation is based on the modified aggregate method. This method considers a time horizon that includes accumulation of benefits and receipt of contributions in respect of current members in future periods. Generally, the actuarial assumptions used to determine the pension obligations for funding purposes are more conservative than those used for the financial statement valuation. The funding valuation is used to identify gains or losses, which are allocated equally between members and the Province of Ontario. Gains are allocated at the discretion of the sponsors to fund benefit improvements, reduce contributions, or reduce any existing funding deficiencies. Funding deficiencies resulting from losses are funded over a maximum of 15 years from increased contributions. Pension obligations are valued using economic assumptions developed by reference to long-term market conditions.

In accordance with the *Pension Benefits Act* and the *Income Tax Act* and regulations, an actuarial valuation for funding purposes is required to be filed at least every three years to assess the financial position of the Plan, and to determine the Plan's funding requirements. In 2018, OPTrust is expected to file the Plan's December 31, 2017 funding valuation, as prepared by Willis Towers Watson, with the regulator showing that the Plan is fully funded, and the next funding valuation will not be required to be filed until December 31, 2020.

## 7. Capital

OPTrust is not under regulatory requirements as it relates to capital. OPTrust defines capital as the funded position of the Plan, whether in surplus or deficit. Surplus is generated during periods of favourable economic performance and drawn down during periods of unfavourable economic performance in order to maintain the Trust's capacity to pay its pension obligations without unduly affecting contribution levels. The surplus was $2,025 million as of December 31, 2017 (2016 – $1,729 million).

The objective of managing capital is to ensure the Plan is fully funded to pay the plan benefits over the long-term. A funding valuation is used to manage capital by identifying gains or losses as described in Note 6. OPTrust prudently manages its investments to satisfy its long-term funding requirement in accordance with its *Statement of Investment Policies and Procedures* (SIP&P) and other policies and guidelines. The SIP&P was established in 1995 and was last amended in 2017 to further enhance the disclosure requirements for the member-driven investing strategy.

## 8. Contributions

| For the years ended December 31 ($ millions) | 2017 | 2016 |
|---|---|---|
| **Members** | | |
| Current service[a] | 233 | 229 |
| Prior service | 17 | 16 |
| Long-term income protection[b] | 14 | 14 |
| | 264 | 259 |
| **Employers**[b] | | |
| Current service | 233 | 229 |
| Prior service | 7 | 7 |
| Long-term income protection | 14 | 14 |
| | 254 | 250 |
| **Transfers from other plans** | 11 | 20 |
| **TOTAL CONTRIBUTIONS** | 529 | 529 |

a All contributions paid by members for current service are required contributions.
b The employer pays member contributions for long-term income protection.

As at December 31, 2017 employers' and members' contributions receivable were in the amount of $27 million (2016 – $33 million) and $21 million (2016 – $20 million) respectively. OPTrust has a reconciliation process which reconciles contributions for each employer on a member-by-member basis. This detailed process ensures that contributions are consistent with member information supplied by the employers.

## 9. Benefit Payments

| For the years ended December 31 ($ millions) | 2017 | 2016 |
|---|---|---|
| Retirement pensions | 799 | 740 |
| Transfers to Public Service Pension Plan | 123 | 80 |
| Transfers to other plans | 6 | 8 |
| Refunds, commuted value transfers and deaths | 75 | 72 |
| **TOTAL BENEFIT PAYMENTS** | 1,003 | 900 |

## 10. Administrative Expenses

### (a) Investment administrative expenses[a]

| For the years ended December 31 ($ millions) | 2017 | 2016 |
|---|---|---|
| Administration | 38 | 39 |
| Professional services | 4 | 4 |
| Custodial fees | 2 | 2 |
| **TOTAL INVESTMENT ADMINISTRATIVE EXPENSES** | 44 | 45 |

### (b) Pension administrative expenses[a]

| For the years ended December 31 ($ millions) | 2017 | 2016 |
|---|---|---|
| Administration | 21 | 19 |
| Professional services | 2 | 1 |
| **TOTAL PENSION ADMINISTRATIVE EXPENSES** | 23 | 20 |

Total professional services include external audit expense of $405 thousand in 2017 (2016 – $268 thousand) and actuarial expense of $317 thousand in 2017 (2016 – $420 thousand).
a Includes allocations of corporate expenses.

## 11. Guarantees, Commitments and Contingencies

In the normal course of business, certain OPTrust subsidiaries may, from time to time, provide guarantees to various counterparties. As at December 31, 2017 these guarantees totalled $115 million (2016 – $170 million).

OPTrust has committed to fund certain investments over the next several years in accordance with the terms and conditions agreed to, which may be considered material within the context of the Trust. As at December 31, 2017 these commitments totalled $2,560 million (2016 – $2,287 million).

As at December 31, 2017 OPTrust's lease commitments for premises totalled $16 million (2016 – $16 million).

OPTrust indemnifies its Trustees and staff against certain claims that may be made against them to the extent that these individuals are not covered under other arrangements.

As at December 31, 2017, OPTrust was involved in litigation and claims which arise in the normal course of business. The outcome of such litigation and claims is often inherently difficult to predict. Any liability that may arise from these litigations has been recognized as appropriate or has been determined to have an immaterial impact on the financial statements.

## 12. Related Party Disclosures

OPTrust, in the normal course of business, purchased bonds at the prevailing market prices that were issued by the Province of Ontario, a joint sponsor of the Plan and whose employees are members of the Plan. The fair market value of the bonds as at December 31, 2017, was $2,136 million (2016 – $1,313 million). Earned income recorded on the bonds amounted to $47 million for the year-ended December 31, 2017 (2016 – $35 million).

The Trustees of the Plan do not receive compensation from OPTrust. Reimbursement for Trustee-related incidental expenses and education received by Trustees totalled $85 thousand in 2017 (2016 – $58 thousand). The Trustees appointed by the Province of Ontario receive $200 per meeting that they attend and are paid directly by the Province. Trustees appointed by OPSEU are compensated by the union for any loss of regular income as a result of time spent fulfilling their duties as a member of the Board.

## 13. Key Management Personnel Compensation

Key management personnel consist of senior executives at OPTrust having authority and responsibility for planning and directing the activities of the Trust. The aggregate key management personnel compensation is shown below:

| For the years ended December 31 ($ thousands) | **2017** | 2016 |
|---|---|---|
| Salaries and short-term employee benefits | **2,616** | 3,497 |
| Post-employment benefits | **220** | 149 |
| Other long-term benefits | **2,536** | 799 |
| | **5,372** | 4,445 |

# Ten-Year Financial Review

| As at December 31 ($ millions) | **2017** | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010* | 2009 | 2008 |
|---|---|---|---|---|---|---|---|---|---|---|
| **CHANGES IN NET ASSETS** | | | | | | | | | | |
| Changes due to investment activities | **1,742** | 1,037 | 1,311 | 1,818 | 1,615 | 1,237 | 578 | 1,530 | 1,348 | (2,435) |
| Changes due to pension activities | **(497)** | (391) | (393) | (289) | (368) | (235) | (192) | (202) | (346) | (179) |
| **INCREASE/DECREASE IN NET ASSETS** | **1,245** | 646 | 918 | 1,529 | 1,247 | 1,002 | 386 | 1,328 | 1,002 | (2,614) |
| **NET ASSETS** | | | | | | | | | | |
| **Investments** | | | | | | | | | | |
| Cash and short-term investments | **3,332** | 2,417 | 1,460 | 2,750 | 2,275 | 2,251 | 2,296 | 1,395 | 2,149 | 3,251 |
| Government and corporate bonds and debentures | **5,573** | 4,227 | 3,854 | 2,001 | 1,629 | 1,887 | 2,201 | 2,282 | 2,242 | 2,405 |
| Real return bonds | **430** | 438 | 468 | 446 | 577 | 1,177 | 1,495 | 1,280 | 1,179 | 1,234 |
| Bank loan notes | **—** | 168 | 156 | 145 | 90 | — | — | — | — | — |
| Pooled funds | **2,579** | 944 | 247 | 200 | 291 | 126 | — | 170 | 156 | 60 |
| Public equity — Canadian and foreign | **2,318** | 3,422 | 5,497 | 5,738 | 5,749 | 4,664 | 4,213 | 5,731 | 5,051 | 3,976 |
| Hedge funds | **1,994** | 1,653 | 712 | 532 | 165 | — | — | — | — | — |
| Real estate | **2,823** | 2,884 | 2,857 | 2,394 | 2,167 | 2,148 | 1,802 | 1,419 | 1,582 | 1,521 |
| Private equity and infrastructure | **4,056** | 3,660 | 4,041 | 3,339 | 3,131 | 2,460 | 1,516 | 1,079 | 862 | 686 |
| Investment-related assets | **481** | 132 | 108 | 154 | 151 | 149 | 265 | 142 | 131 | 231 |
| | **23,586** | 19,945 | 19,400 | 17,699 | 16,225 | 14,862 | 13,788 | 13,498 | 13,352 | 13,364 |
| Contributions receivable | **48** | 53 | 51 | 52 | 58 | 56 | 50 | 44 | 39 | 39 |
| Other assets | **5** | 4 | 5 | 4 | 5 | 5 | 6 | 2 | 2 | 3 |
| **TOTAL ASSETS** | **23,639** | 20,002 | 19,456 | 17,755 | 16,288 | 14,923 | 13,844 | 13,544 | 13,393 | 13,406 |
| **Liabilities** | | | | | | | | | | |
| Accounts payable and accrued charges | **(44)** | (49) | (54) | (78) | (69) | (64) | (64) | (57) | (79) | (41) |
| Investment-related liabilities | **(3,305)** | (908) | (1,003) | (196) | (267) | (154) | (77) | (170) | (1,325) | (2,378) |
| **TOTAL LIABILITIES** | **(3,349)** | (957) | (1,057) | (274) | (336) | (218) | (141) | (227) | (1,404) | (2,419) |
| **NET ASSETS AVAILABLE FOR BENEFITS** | **20,290** | 19,045 | 18,399 | 17,481 | 15,952 | 14,705 | 13,703 | 13,317 | 11,989 | 10,987 |
| Pension obligations | **18,265** | 17,316 | 16,756 | 15,937 | 14,958 | 14,189 | 13,499 | 12,923 | 12,313 | 11,631 |
| Actuarial asset value adjustment | **—** | — | — | — | — | — | — | — | (1,523) | (2,428) |
| **SURPLUS** | **2,025** | 1,729 | 1,643 | 1,544 | 994 | 516 | 204 | 394 | 1,199 | 1,784 |

* Starting in 2010, amounts are presented in accordance with s4600 and IFRS.