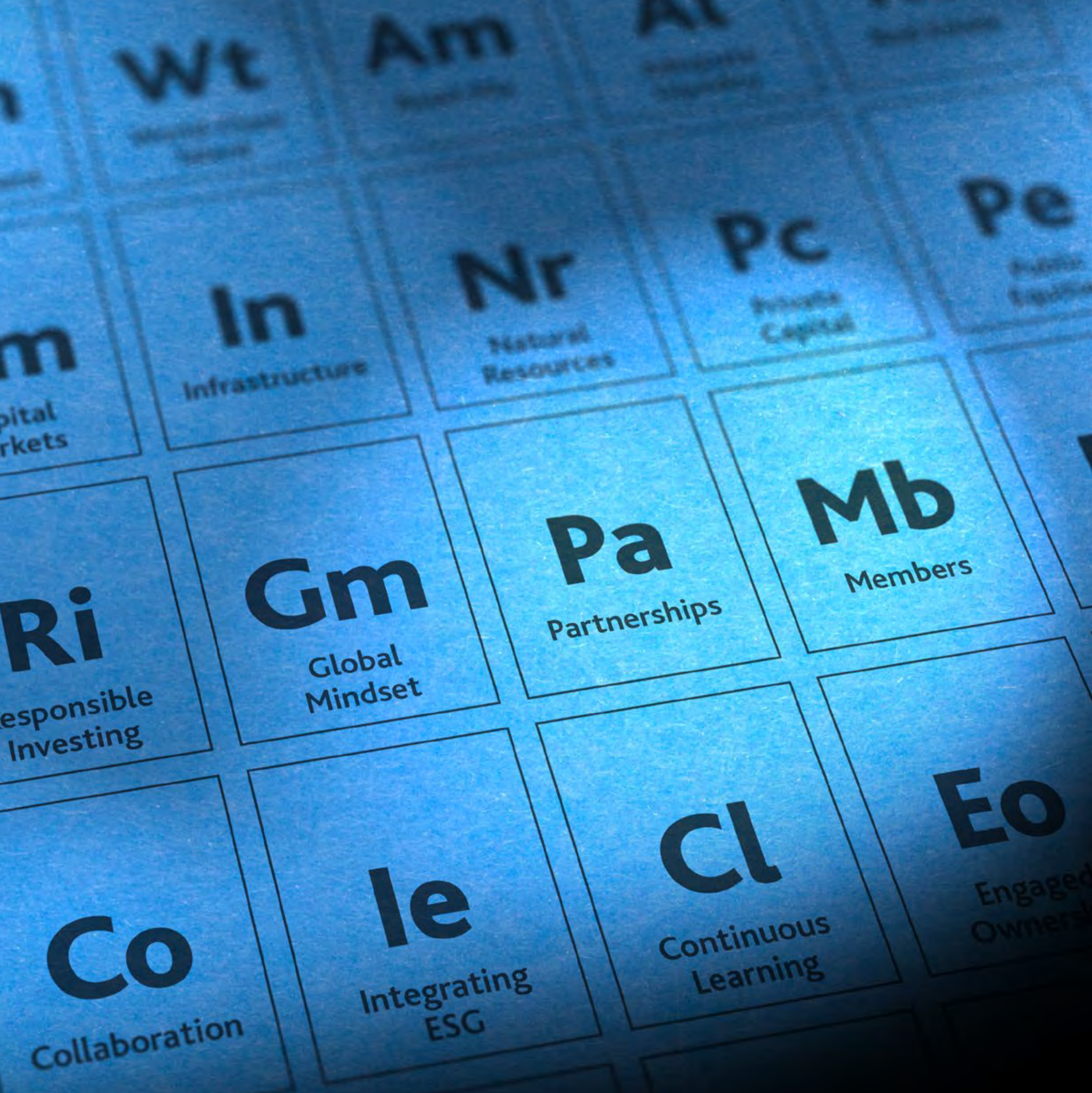


2018 ANNUAL REPORT

ALL THE RIGHT ELEMENTS

ONTARIO TEACHERS' PENSION PLAN

FULLY FUNDED STATUS

Ontario Teachers' has been fully funded for six consecutive years. As at January 1, 2019, the plan had a preliminary surplus of $10.0 billion based on an average contribution rate of 11% and 100% inflation protection being provided on all pensions.

104%
FUNDED RATIO

HEADLINE NUMBERS

In 2018, we were able to generate positive results even as we navigated some of the most volatile markets in recent years. Net assets grew by $1.6 billion from the year before. Through its Toronto, London and Hong Kong offices, Ontario Teachers' had a strong flow of global transactions.

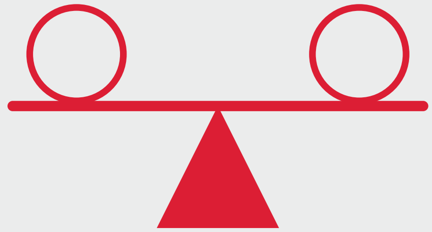
2.5%
TOTAL-FUND NET RETURN

$5.2B
NET INVESTMENT INCOME

$191.1B
NET ASSETS

RISK-BALANCED INVESTING

The plan must take an appropriate amount of risk to generate sufficient returns. We carefully evaluate the risks underlying our investments, including environmental, social and governance factors, to ensure our total portfolio has the right risk profile. Our culture and governance structure are aligned accordingly.



INNOVATION

FUTURE FOCUSED

WE BELIEVE THAT SUCCESS IS BUILT ON CONTINUOUS INNOVATION AND LEARNING

COMMUNITIES

WE INVEST WITH PURPOSE, RECOGNIZING OUR BROADER IMPACT IN THE WORLD

ALL THE RIGHT ELEMENTS

A RESPONSIBLE INVESTING APPROACH

A+

FOR "STRATEGY AND GOVERNANCE" FROM THE PRINCIPLES FOR RESPONSIBLE INVESTMENT 2018 ASSESSMENT REPORT

TOP 25

BRETTON WOODS II LEADERS LIST OF THE MOST RESPONSIBLE ASSET ALLOCATORS

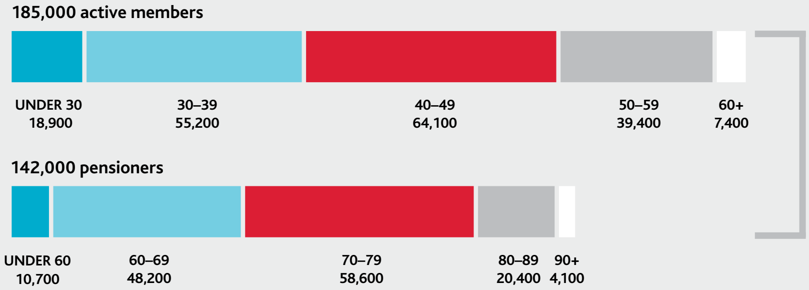
FOUNDING MEMBER

INVESTOR LEADERSHIP NETWORK, AN INVESTOR-LED INITIATIVE FOCUSED ON ISSUES RELATED TO SUSTAINABILITY AND LONG-TERM GROWTH

8

CANADIAN AND GLOBAL ORGANIZATIONS WHERE ONTARIO TEACHERS' PLAYS A LEADING ROLE IN SHAPING POLICY RELATED TO SUSTAINABILITY

SERVING OUR MEMBERS



ACTIVE MEMBERS AND PENSIONERS As at December 31, 2018

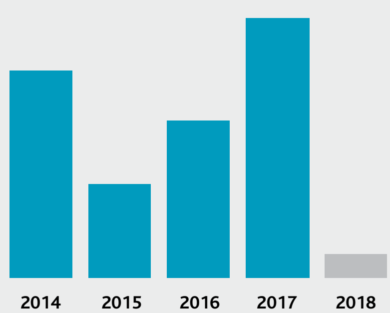
327,000
TOTAL NUMBER OF ACTIVE MEMBERS AND PENSIONERS

8.8/10
QUALITY SERVICE INDEX MEMBER RATING

133
PENSIONERS OVER 100

LOCAL RETURN

As a global investor, we manage currency from a total-fund perspective.



1.3%
TOTAL-FUND LOCAL RETURN

Fn
Funding

The plan remains financially healthy and is 104% funded. As at January 1, 2019, the plan had a preliminary surplus of $10.0 billion based on an average contribution rate of 11% and 100% inflation protection being provided on all pensions.

Iv
Investments

Investing with a total-fund approach, a global mindset and top talent is core to our OneTeachers' investment strategy. We partner with investors around the world, taking an active approach to bring opportunities to life. 2018 was a dynamic year during which we bought, sold and reinvested in assets globally.

Mb
Members

Our approach is clear – we strive to make everything related to our members' pensions as easy as possible. We simplify complex information with personal service and leverage insights to anticipate and meet their needs across multiple channels.

TABLE OF CONTENTS

REPORT FROM THE CHAIR

"It's a time for both confidence and prudence, as the plan remains in sound financial shape in the face of volatile market conditions. Ontario Teachers' board continues to ensure the right elements are in place to manage this complex environment for the plan's future success."

FUNDED STATUS

Maintaining a well-funded plan is an important measure of a pension's success. I am proud to report that as at January 1, 2019, the plan remained fully funded for the sixth straight year.

This funding status was achieved with a nominal discount rate of 4.8%. The board is responsible for setting the discount rate, and we feel it reflects a realistic and prudent outlook.

The plan had a preliminary surplus of $10.0 billion based on an average contribution rate of 11% and 100% inflation protection being provided on all pensions. The plan sponsors, Ontario Teachers' Federation and the Ontario government, will determine how to allocate this surplus if they choose to file this valuation with the regulators, including whether or not to classify the surplus as a contingency reserve.

Recent surpluses are a welcome outcome; however, they should not be taken for granted. Headwinds for investors intensified over the last year. Global trade and cooperation are under strain. Populism and protectionism are on the rise. On top of this, the 10-year bull market for equities is tapering off and the outlook for future returns is uncertain.

Considering the complex global environment in which the plan operates, it is prudent to be cautious. Today's difficult and volatile markets demonstrate the value of a buffer that enables the partners to keep benefits and contribution rates stable.

BOARD AREAS OF FOCUS

Part of the board's role is to ensure that management has the appropriate strategies in place to manage the numerous risks it faces today and tomorrow, and we regularly evaluate the implementation of these strategies.

To provide effective governance and oversight for the plan, the board monitors many different global risks, including geopolitical and market developments, and economic, environmental, social and technological change. It must also understand risks specific to Ontario Teachers', including demographics, plan maturity, operations, technology, the regulatory environment and security.

Ontario Teachers' is a large, complex organization with many moving parts. The board tries to anticipate where the future could take us, and help guide management in where it should spend its time, resources and energy.

Some important areas that we focused on in the last year, among others, are global diversification, talent recruitment and development, technological capabilities, and the risks and opportunities presented by climate change and the transition to a low-carbon economy. Board members also completed an in-depth review on board effectiveness and participated in a crisis management simulation.

BOARD COMPOSITION

My predecessor as board chair, Jean Turmel, served with great dedication for 12 years. His tenure with the board was eventful, including the 2008 financial crisis and the sustained economic expansion witnessed in recent years. On behalf of my colleagues, I thank Jean for his calm and principled leadership during a time of significant change and turbulence.

We also said farewell to David Smith, who joined the board in 2009, and has been a tremendous contributor over the past decade.

We welcomed new board members Cathy Cranston, former Treasurer at BMO Financial Group, and George Lewis, a former senior executive at RBC. Our thanks go to all of these talented individuals for contributing their time and expertise on behalf of Ontario's teachers.

Steve McGirr
Chair

REPORT FROM THE CEO

"In a year of major market swings, Ontario Teachers' delivered stability for our members. We are looking ahead and abroad to find the best talent, partners and opportunities as we strive for excellence while representing the interests of our members on the world stage."

We had a solid year in 2018. Our plan remains fully funded for a sixth consecutive year. Despite challenges in the global economy, the pension plan earned a 2.5% total-fund net return. The fund delivered net investment income of $5.2 billion and finished the year $3.5 billion above our benchmark. During a year that saw major market swings, the fund's volatility remained comparatively mild. Our Member Services division once again earned very high satisfaction scores from plan members. All of these accomplishments were by design, not accident.

A true measure of performance for our pension fund is financial returns over time. It is here where Ontario Teachers' has excelled. We have had an annual total-fund net return of 10.1% over the last 10 years, and 9.7% since inception in 1990.

We have a history as leaders in the pension industry; however, our future success will not be built on past results. To continue to fulfill our mission, we need to look ahead and abroad. We must continue to attract and nurture aligned partnerships and world-class talent.

Enhancing our global perspective and capabilities remains a high priority for the organization. Doing this benefits us in many ways. We diversify our portfolio, gaining access to new opportunities and decreasing risk. We gain local knowledge and relationships, which help us navigate complex markets. This approach also helps us source, develop and motivate talent.

Strong, long-lasting partnerships have been a key element of our success. We continue to partner with the best from around the world, establishing new relationships and enhancing existing ones. We put our efforts into a select number of partnerships that are mutually beneficial and long term, and that allow us to learn from one another.

Our business is, at its essence, a people business. The people who work at Ontario Teachers' are the engine of this organization. They generate the insights that shape and sharpen our thinking. They foster the trusted relationships that drive our success.

A case in point are the new appointments to our executive team this year. Ziad Hindo was named Chief Investment Officer and Jo Taylor was named Executive Managing Director, Global Development. Ziad and Jo have been strong contributors for many years. They have brought their insights and a greater international perspective to the executive team.

In 2018, we announced that we would be moving our headquarters to downtown Toronto. After much thought and analysis, it was clear that this move will help us attract and retain top talent.

We are not content with yesterday's performance. We balance learning with action to stay one step ahead and deliver on our commitments over the long term.

We are fortunate enough to represent the people who manage that balance every day – teachers. Good teachers impart knowledge, challenge our expectations of our own capabilities and nurture the progress of the next generation – no small feat.

We are proud to serve our members and continue to strive for excellence as we represent their interests on the world stage.

We are navigating a new world where the rules of success have yet to be written. Despite this uncertainty, I am heartened in knowing that we have all the right elements in place for success: a global and forward-looking strategy, outstanding talent, and aligned partners who make us better.

Ron Mock
President and Chief Executive Officer

ABOUT THE PLAN

Mission – Outstanding service and retirement security for our members – today and tomorrow.

The Ontario Teachers' Pension Plan (Ontario Teachers') was founded in 1990, with a mandate which includes an investment program designed to deliver funding sustainability for the life of the plan and every member it serves. At inception, it had $18.5 billion in net assets.

The plan has since grown by approximately 10 times, with $191.1 billion in net assets diversified across sectors and geographies. We manage investments and administer pension benefits on behalf of 185,000 Ontario school teachers and 142,000 pensioners.

Ontario Teachers' has approximately 1,200 employees in Toronto, London and Hong Kong.

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

SPONSORS' ROLE

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, including whether or not to classify an existing surplus as a contingency reserve.

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.

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.

MANAGEMENT’S DISCUSSION & ANALYSIS

Management’s Discussion & 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.

PREPARING FOR THE FUTURE

Fulfilling our mission means we must continually look ahead and with a global mindset for investment opportunities and the people to make them happen. We do so while operating in a rapidly changing, competitive business environment with the guidance of our three-year enterprise plan focused on the priorities of total fund, governance and risk management, member services evolution, talent evolution and technology evolution. Some key initiatives are:

WE CONTINUE TO ESTABLISH STRONG GLOBAL PARTNERSHIPS because they have created significant value for the fund. Strong, mutually beneficial relationships with select partners are a key component of our success because they widen our pipeline of opportunities, offer insights and access to networks, and help us make smart decisions globally.

WE ARE INVESTING IN MARKET-LEADING MEMBER SERVICES TECHNOLOGY because our members' preferences and needs are changing. We continue to face expanded service expectations in the wake of instantaneous online services and technological advances. The demand for enhanced digital capabilities and communications is pushing us to continually redefine our service model.

WE CONTINUE TO PRIORITIZE THE CONSIDERATION OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) FACTORS WHILE MAKING INVESTMENT DECISIONS because they are changing the investing landscape. ESG factors, including the important systemic issue of climate change, present serious risks and opportunities for investors. They will imperil the sustainability of some business models while opening up attractive opportunities in new or evolving sectors.

WE ARE IMPLEMENTING A FORWARD-LOOKING PEOPLE AND CULTURE STRATEGY because attracting and retaining the right talent in Toronto, London and Hong Kong is crucial to achieving our mission. Our ability to build a sustainable competitive advantage and deliver against core strategies depends on the capabilities and strength of our people. As part of our strategy to attract top talent, we announced that we would relocate our headquarters from North York to a state-of-the-art and environmentally conscious building in downtown Toronto in 2023.

WE ARE ADVANCING OUR ENTERPRISE TECHNOLOGY STRATEGY because we need to leverage new and emerging technology to deliver more reliable and efficient functionality. A key success factor to our strategy is our data analytics program, which will enable advanced data-informed decision capabilities.

WE CONTINUE TO STRENGTHEN OUR COMPLIANCE CAPABILITIES because domestic and international markets, laws and regulations are constantly evolving. Growth into new markets brings new legal and compliance challenges and heightens operational complexity. As the Financial Services Regulatory Authority of Ontario progresses toward assuming functions currently delivered by the Financial Services Commission of Ontario, we are focused on building a constructive and open relationship with our new regulator.

To excel in such a complex business landscape, we will continue to execute against our complementary and evolving strategies for investing, pension administration, talent, technology and brand. Our strategies are integrated and working together to enable our strategic road map. When implemented collectively, they will position us for success over the long term.

EXECUTIVE TEAM: (l–r) **Ron Mock**, President and Chief Executive Officer; **Ziad Hindo**, Executive Managing Director and Chief Investment Officer; **Jo Taylor**, Executive Managing Director, Global Development; **Tracy Abel**, Chief Pension Officer; **David McGraw**, Chief Financial Officer; **Rosemarie McClean**, Chief Operating Officer; **Barbara Zvan**, Chief Risk & Strategy Officer; **Jeff Davis**, Chief Legal & Corporate Affairs Officer; **Beth Tyndall**, Chief People Officer

PLAN FUNDING REPORT

This section provides information on recent funding valuations, assumptions and related demographic and economic considerations that play a role in plan funding discussions. 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. A preliminary funding valuation is one that is not finalized or filed with the regulators.

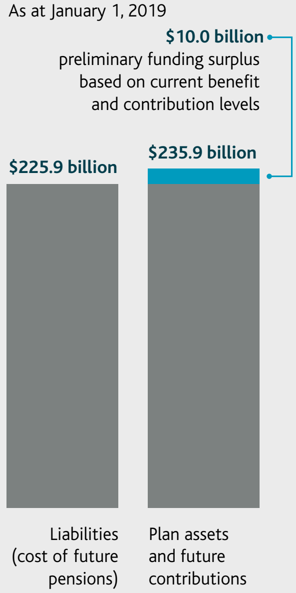
FUNDING STATUS AS AT JANUARY 1, 2019

As at January 1, 2019, the plan had a preliminary surplus of $10.0 billion based on an average contribution rate of 11% and 100% inflation protection being provided on all pensions. This surplus is in part due to the asset smoothing adjustment methodology described on page 9. The January 1, 2019, valuation is not required to be filed with the regulatory authorities; however, the sponsors may choose to do so, in which case the report would be filed prior to the end of September 2019. If the partners choose to file this valuation, they will decide how to allocate the surplus, including whether or not to classify the surplus as a contingency reserve.

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

Funding valuation

As at January 1, 2019



Pension funding sources since 1990

10% MEMBER CONTRIBUTIONS

12% GOVERNMENT/ DESIGNATED EMPLOYER CONTRIBUTIONS*

78% NET INVESTMENT INCOME

* Additional 2% above the 10% member contributions is related to provincial funding of the original plan deficit as well as additional contributions the province and designated employers are required to make whenever inflation protection provided to retirees is less than 100% of the Consumer Price Index.

Ontario Teachers' funding valuation

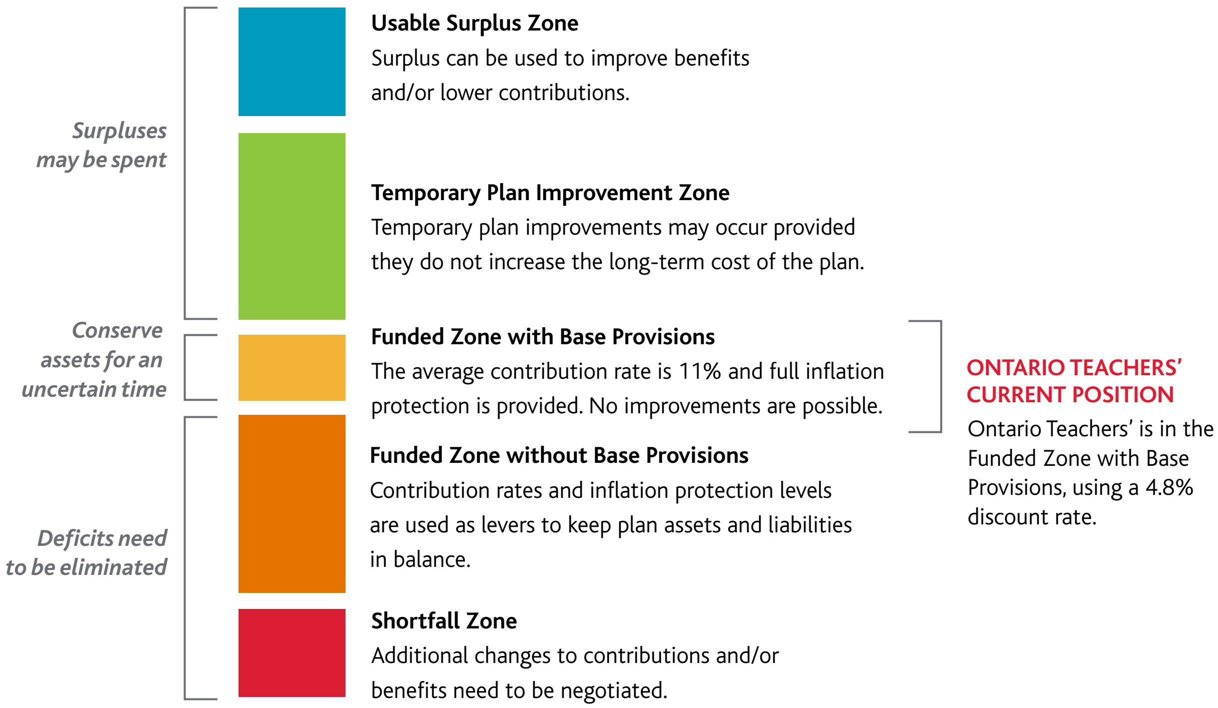
- projects members' future contributions, benefits and their cost;
- makes assumptions about the expected lifetime of plan members;
- is prepared by an independent actuary;
- is filed with regulatory authorities at least every three years;
- cannot be in a deficit position when filed.

Funding Management Policy

In 2003, the sponsors adopted the Funding Management Policy (FMP). The FMP is an important document that provides the sponsors with a guidance framework for decision making when there is a funding surplus or shortfall. A key component in the FMP is the concept of funding zones, each defined by a range. The funding zones provide a point of reference for whether action is required by the sponsors, and if so, guidance is provided on how to use any surplus funds or resolve any shortfall – specifically, answering the question of when it is prudent to increase or decrease benefits, raise or lower contribution rates, or simply conserve assets for an uncertain time. While the FMP outlines preferred mechanisms associated with its various funding zones, it is ultimately the sponsors' responsibility to decide what actions to take.

The FMP has important implications from an investment perspective, adding clarity to our strategic asset allocation decisions with a key focus being on the plan's ability to absorb risk. In the absence of the FMP, this level of clarity would be difficult to achieve.

FUNDING MANAGEMENT POLICY ZONES



2018 filed valuation

In 2018, OTF and the Ontario government decided to file the funding valuation with the regulators, which is detailed in the Funding Valuation Summary table on page 9. The $10.3 billion funding surplus as of January 1, 2018, was classified as a contingency reserve – a concept that is outlined in the Partners' Agreement. The use of the contingency reserve is intended to reduce volatility in the funded position of the plan and facilitate stability in members' contributions and benefits.

In recent years, the focus of the sponsors has been to gradually return the plan to being fully funded with Base Provisions – meaning contribution rates at an average of 11% (10.4% of earnings below the Canada Pension Plan (CPP) limit plus 12% of earnings above the CPP limit), and full inflation protection. As of January 1, 2018, the plan was providing Base Provisions to all members and the plan was in the "Conserve assets for an uncertain time" funding zone within the FMP. Considering the plan's funding zone position, the sponsors' decision to classify the surplus funds as a contingency reserve at that time was consistent with guidance provided in the FMP.

A contingency reserve is a way of "saving for a rainy day." Having surplus funds in reserve helps stabilize contribution rates and benefit levels over the long term.

FUNDING VALUATION SUMMARY
As at January 1 (Canadian $ billions)

	2019	2018
Net assets available for benefits	$ 191.1	$ 189.5
Smoothing adjustment	0.2	(4.9)
Value of assets	**$ 191.3**	**$ 184.6**
Future basic contributions	44.6	42.9
Future special contributions[1]	0.0	0.0
Total assets	**$ 235.9**	**$ 227.5**
Liabilities (cost of future pensions)	(225.9)	(217.2)
Surplus[2, 3]	10.0	10.3
Assumptions (percent)		
Inflation rate	2.00	2.00
Real discount rate[4]	2.75	2.75
Discount rate	4.80	4.80

1 Special contributions were introduced in 2011 and were scheduled to end in December 2026. With the decision to file the January 1, 2017, valuation, the sponsors chose to eliminate the special contributions effective January 1, 2018.

2 Given the plan was in the "Conserve assets for an uncertain time" zone within the FMP, the $10.3 billion funding surplus as at January 1, 2018, was classified as a contingency reserve.

3 If the partners choose to file a valuation as at January 1, 2019, they will decide how to allocate the surplus, including whether or not to classify the surplus as a contingency reserve.

4 Real rate shown as the geometric difference between the discount rate and the inflation rate.

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, with one-third of gains and losses being recognized immediately and the remaining two-thirds being recognized in equal installments over the following two years. Gains and losses are determined by comparing the fund's actual total-fund return against the discount rate used for valuation purposes. 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 may have to change contributions and benefits more frequently to achieve funding stability.

As noted in the Funding Valuation Summary, the plan's asset smoothing adjustment has gone from being a negative number of $4.9 billion to a positive number of $0.2 billion. As at January 1, 2018, some prior asset gains were "held back" as a result of them being gradually recognized over time rather than all at once. The result was that the value of assets including the smoothing adjustment was lower than the market value of assets. As at January 1, 2019, we have the opposite situation in that we have prior losses being held back and therefore the value of smoothed assets marginally exceeds the market value.

This is the first time that the smoothing adjustment has been positive since 2011, meaning that the margin or buffer in the assets we've had over the last several years has been eliminated.

For a full view of how smoothing has affected earnings in recent years, please see the Funding Valuation History on page 104.

Setting assumptions – a rigorous process

A funding valuation uses a number of actuarial assumptions to project the value of future pension plan liabilities and contributions. Assumptions using professional judgment 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 lower 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 plan maturity as well as major adverse events, such as the 2008 financial crisis.

At Ontario Teachers', the assumption setting process is extremely robust and includes detailed stochastic analysis to support the board in setting the discount rate as well as an annual in-depth analysis of plan experience by the plan's external actuary. If assumptions show a pattern of deviating from actual experience, they are reviewed and may be adjusted. 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 on page 9.

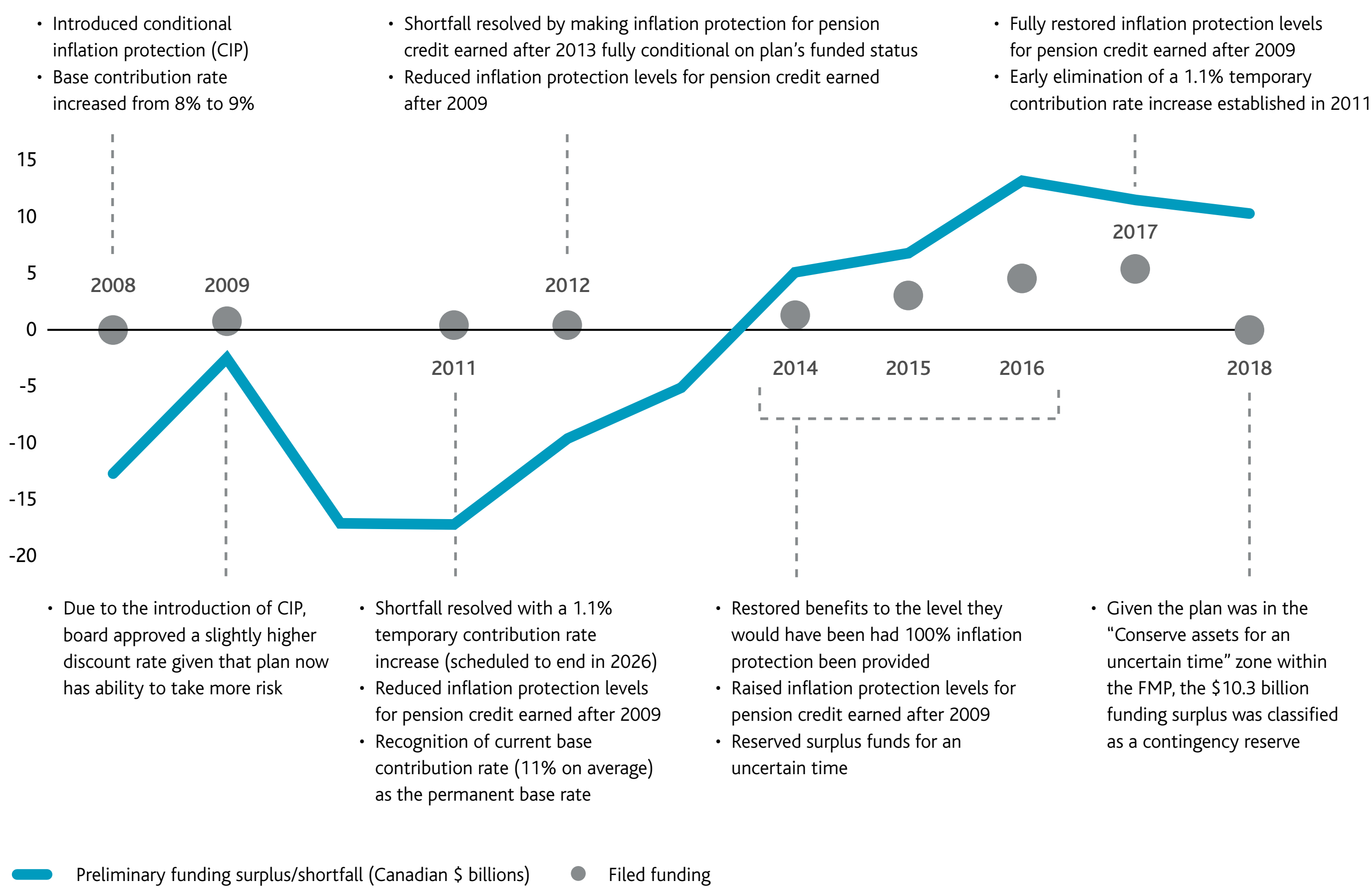
Key funding decisions since 2008

OTF and the Ontario government, which jointly sponsor the Ontario Teachers' Pension Plan, must file a funding valuation with the provincial pension regulator at least every three years. A valuation must be filed with assets and liabilities (the cost of future pensions) in balance.

The sponsors can file a valuation earlier than required to help manage the plan's funding status.

The following chart shows how the sponsors have used surplus funds or resolved funding shortfalls for each valuation filed with the regulator since 2008. The partners have used levers available to them and prescribed by the FMP to effectively address shortfalls and surpluses. A detailed history of funding valuations filed with the regulator can be found on page 104.

KEY FUNDING DECISIONS SINCE 2008



PLAN FUNDING CONSIDERATIONS

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

The Funding Variables table on the following page shows how some important variables have changed since the pension plan's inception in 1990. 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

	2018	1990
Average retirement age	**59**	58
Average starting pension	**$47,300**	$29,000
Average contributory years at retirement	**26**	29
Expected years on pension	**32**	25
Number of pensioners aged 100 or more	**133**	13
Ratio of active teachers to pensioners	**1.3 to 1**	4 to 1
Average contribution rate	**11.0%**	8.0%

Longevity risk

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. Given the longevity of the plan members, Ontario Teachers' uses plan-specific mortality tables and custom two-dimensional mortality improvement scales which are regularly reviewed and updated as warranted.

Interest rate risk

As the Canadian economy has recovered from the downturn following the Global Financial Crisis, interest rates have edged gradually higher in recent years, driven in part by the normalization in the Bank of Canada's policy rate. Even so, rates remain well below their historic levels.

Interest rates affect both assets and liabilities. An increase in rates could reduce the value of the plan's 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, reduced for a provision for risk. Plan liabilities are very sensitive to changes in the discount rate. Assuming a lower discount rate in funding valuations would increase plan liabilities. The investment program maintains an allocation to a Liability Driven Investment (LDI) program to help mitigate the risk of changes in the discount rate as a result of long-term interest rates.

Inflation risk

The plan seeks to provide retired members with annual pension increases to offset the impact of an increased cost of living (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 retirees on the portion of their pensions earned after 2009 is conditional on the plan's funded status.

Inflation in Canada has been relatively stable since 1991, generally remaining within one percentage point of the Bank of Canada's 2% target.

Asset volatility risk

After witnessing generally positive markets over the past 10 years, there are some indications that asset valuations may be fully priced. A material drop in asset prices would negatively impact asset values. In 2018, management took further steps to diversify the plan's assets in a manner that optimizes its risk profile for the current environment.

Currency volatility also has an impact on the plan's assets. Economic trends, commodity prices, market sentiment and other factors affect the value of the Canadian dollar against other currencies. The plan derives income from assets around the world, so global currency movements can materially affect investment returns positively or negatively.

Volatile asset markets can present opportunities for long-term investors such as Ontario Teachers', but they can also lead to investment losses that affect the plan's funded status.

Intergenerational equity

The design and implementation of an innovative funding risk mitigant, conditional inflation protection (CIP), adds flexibility to the plan and promotes intergenerational equity. It recognizes and virtually neutralizes the impact of the changing ratio of active to retired plan members on the plan's funded status.

The plan sponsors prudently and proactively introduced CIP in 2008, recognizing that if significant investment losses or a funding shortfall occurred, an increase in contribution rates alone was unlikely to be sufficient, and increases would be borne solely by active plan members.

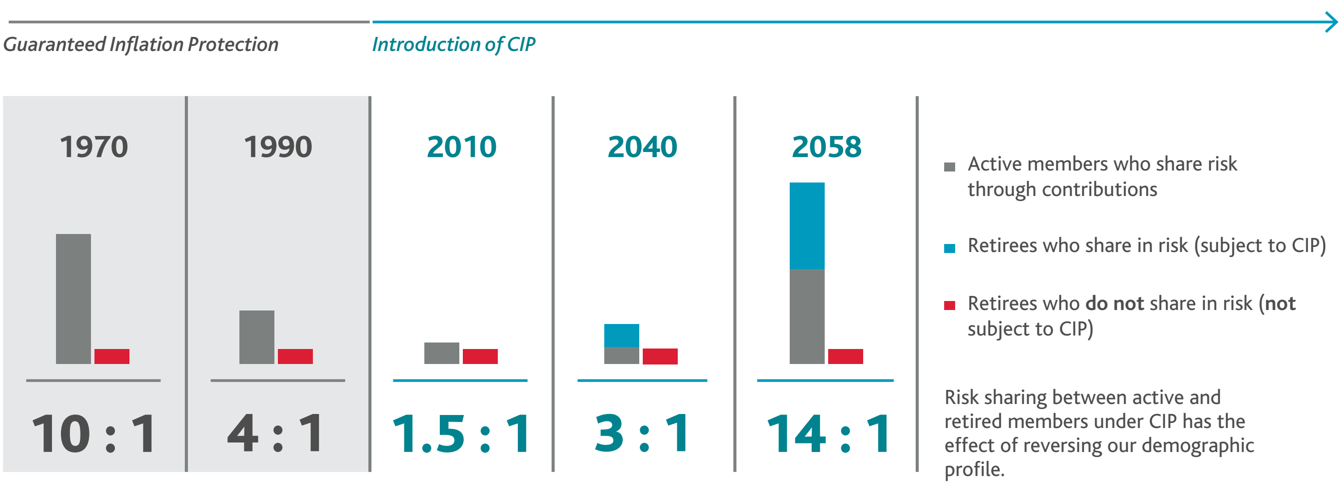
CIP allows flexibility in the amount of inflation increase provided to pensioners for benefits earned after 2009. The level of increase is a sponsor decision and is conditional based on the funded status of the plan. Pension credit that members earned before 2010 remains fully indexed to inflation. There are three levels of inflation protection for members, which are based on when pension credit was earned: before 2010, during 2010 to 2013, and after 2013.

When pension credit was earned	Inflation protection level	What this means for members
Before 2010	100%	This portion of a member's pension will keep pace with annual increases in the Consumer Price Index (CPI).
During 2010–2013	50% to 100%	This portion of a member's pension will receive at least 50% and up to 100% of the annual increase in the CPI, depending on the plan's funded status.
After 2013	0% to 100%	This portion of a member's pension will receive from 0% to 100% of the annual increase in the CPI, depending on the plan's funded status.

CIP is an effective lever for mitigating funding risks while also promoting intergenerational equity because, over time, as more active members retire, the risk of significant investment losses or a funding shortfall is distributed more broadly among the membership – that is, risk is shared by more retired members.

CIP is becoming more powerful over time. The proportion 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 both share the risk of a loss.

In effect, this has the impact of reversing the plan's demographic profile by improving the ratio of members who share in the plan's risk to those who don't share in risk. When CIP became a feature of the plan in 2008, there were 1.5 active members sharing in the plan's risk for every retiree, who at the time did not share in the plan's risk. By 2058, as the impact of CIP grows, there will be 14 members (both active and retired) sharing in the plan's risk for each retiree who does not.



Stress resistant

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

	1990	2018	2028
Increase in contributions required for 10% loss in assets	1.9%	5.0%	5.4%
Decrease in level of CIP required for 10% loss in assets	n/a	32%	23%
Asset loss capable of being absorbed by fully invoked CIP (Canadian $ billions)	n/a	$37	$75

As an example, a 10% asset loss in 2028 could be absorbed by lowering inflation protection increases for benefits earned after 2009 from 100% to 77%. As another example, in the most extreme case, if CIP levels were lowered to 50% on benefits earned during 2010–2013 and to 0% on benefits earned after 2013, this funding lever would be powerful enough to absorb a 2028 asset loss of $75 billion.

ENTERPRISE RISK MANAGEMENT

Ontario Teachers' is designed to provide pension benefits to its members for life. To deliver on our pension promise to members, we must effectively manage risks and be adequately compensated for taking them.

Risk management is a core capability at Ontario Teachers' and plays an important role in all activities. The organization has a strong, disciplined risk culture where managing risk is a responsibility shared by all of the plan's employees.

Ontario Teachers' operates an enterprise risk management (ERM) system that allows us to identify, assess and manage risks in a controlled manner. ERM is embedded into all of our strategic and operational planning decisions.

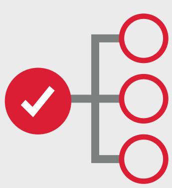
Key goals of ERM provide management with the tools to:

- understand and establish our appetite for risk, including determining how much risk the organization is willing to accept to achieve our strategic objectives, and which risks require management attention to mitigate to an acceptable level;
- establish a consistent framework to better understand and assess the broad range of enterprise risks we face across the organization;
- create a competitive advantage through a strong risk-conscious culture and proactive management of enterprise risk where risk management activities are incorporated into the enterprise planning process with a clear allocation of resources.

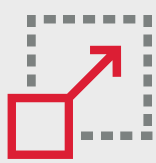
We consider risks in four categories: governance, strategic, investment and operational. We also consider reputational risk, which is seen as a second order impact or consequence of one of the four risk categories occurring.

ONTARIO TEACHERS' ENTERPRISE RISK CATEGORIES

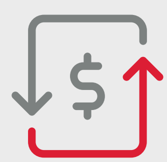
GOVERNANCE RISK Associated with the structure and functioning of Ontario Teachers', including the policies, laws and regulations affecting the plan.



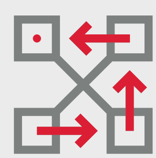
STRATEGIC RISK Associated with decision making for the long-term strategic direction of Ontario Teachers'.



INVESTMENT RISK Risk associated with effective management of the plan's assets, including market, credit and liquidity risk.



OPERATIONAL RISK The risk of direct or indirect loss resulting from inadequate or failed internal processes, people or systems, or from external events.



REPUTATIONAL RISK The risk associated with a change in perception of Ontario Teachers' or its public image. It is typically a second order impact or consequence of a failure to manage the risks above.

Below you will find examples of key risk areas tied to enterprise strategy that management made significant progress on in 2018 to better position us for long-term success.

CYBERSECURITY RISK

Cybersecurity risk threatens our ability to implement our business strategy, and is therefore considered an enterprise risk. A dedicated team of cybersecurity professionals manages a comprehensive program to help protect the organization against cybersecurity breaches and other incidents by ensuring appropriate security controls are in place. The program is regularly assessed, and includes around-the-clock monitoring and alerting of potentially suspicious security events and incidents.

In 2018, Ontario Teachers' continued to implement its comprehensive cybersecurity program, ran table-top exercises to simulate a cyber-attack and response, and advanced its data loss prevention capabilities.

GLOBAL TAX ENVIRONMENT

Ontario Teachers' appetite for tax risk is aligned with and integrated into our overall approach to investment risk management. Changes to tax legislation and enforcement are identified as an enterprise risk because they could impact the value of existing and proposed investments.

As the global tax landscape continues to evolve, the plan has implemented an approach to monitor foreign tax laws and administrative positions through a number of avenues. However, given the breadth and complexity of tax legislation and the number of countries where Ontario Teachers' invests, the information collected and reviewed is voluminous. In 2018, we enhanced our approach by engaging external advisors to provide tailored information to meet our specific needs. The monitoring and analysis provided by internal and external sources enable the organization to be agile when pursuing global opportunities.

LIQUIDITY RISK

Sufficient liquidity is essential to our mission and ability to implement our business strategy. It is crucial in ensuring that the plan can meet current liabilities, maintain a buffer in the event of disruptive markets, and opportunistically pursue investments in private and public markets. Liquidity risk management remains a priority for the plan, with mitigation strategies in place to reduce the probability of the risk from occurring.

We have adopted the liquidity coverage ratio, a commonly used measure within the banking sector, but tailored it to reflect the unique characteristics of our fund, our investment horizon and our balance sheet. We have continued to focus on the sustainability of our debt program, including maintaining investor relationships. We have also developed two levels of stress testing (set against historical and real-time disruptive events). Finally, we are in the process of redrafting our contingency funding planning processes.

REPORT FROM THE CIO

"We continue to focus on building a portfolio that will allow us to deliver the pension promise to our members over the long term. Our results show that we have the right strategy, team and global partnerships in place to drive future performance."

It would be hard to find two years that were more different for investors than 2017 and 2018. While 2017 was remarkably stable and saw positive returns in most asset classes, 2018 was volatile and most asset classes stumbled.

Against this backdrop, Ontario Teachers' total-fund net return for 2018 was 2.5%. Results were largely driven by the performance of private assets and the appreciation of the U.S. dollar relative to the Canadian dollar.

Continuing to rebalance the portfolio for stability is paying off, as the plan's volatility was subdued compared to what would have been experienced by a more traditional asset allocation. Portfolio diversification – across asset class, geography and other factors – helped us outperform our benchmark result by 1.8% or $3.5 billion, demonstrating the value our members realize with active management.

Despite a more difficult environment, we were able to conclude a number of significant, complex transactions during the year, showing that Ontario Teachers' is a partner of choice for institutional investors and businesses in Canada and around the world.

ONETEACHERS' STRATEGY

As a pension plan created to provide retirement security for generations, sustainability is at the heart of everything we do. In 2018, we continued to implement our OneTeachers' strategy but also dedicated significant thought to evolving for the future to address the challenges of the investment landscape, enhance our total-fund approach and expand our focus on investing globally.

We updated our investment team structure. We formed the Total Fund Management department to build on the work of the pre-existing Portfolio Construction Group and Treasury & Integration teams. We also announced the creation of the Equities department, comprising Private Capital and the newly formed High Conviction Equities team, to better position us to compete globally for investment opportunities in both private and publicly listed equity.

Ontario Teachers' has a long history of investing outside of our home market, and we will continue to scour the world for the best investment opportunities. To better achieve this, we plan to bolster our investment resources in Europe and Asia.

NEW APPOINTMENTS

This year testified to the deep talent that exists in our organization, as internal candidates moved into a number of senior investment roles during the year. Gillian Brown was promoted to the role of Senior Managing Director, Capital Markets, Dale Burgess to Senior Managing Director, Infrastructure & Natural Resources, and Stephen McLennan to the new role of Senior Managing Director, Total Fund Management.

We also welcomed Ben Chan to Ontario Teachers' as the new Regional Managing Director, Asia Pacific, with a mandate to lead our investment activities in the region.

LOOKING AHEAD

We are 10 years into the current business cycle, a long period of continuous expansion by historical standards. There are headwinds on multiple fronts for investors, from the rise of populism to heightened trade tensions and valuations. Volatility is expected to remain intense in the coming years. Even though we are firmly focused on the long term, we are not immune from these trends.

Given the elevated risk, we are focused on building a resilient portfolio that will maintain pensions over the long term. We believe that diversification, a global mindset, relationships with aligned strategic partners, and creating enduring value as an asset owner remain key for the fund's long-term sustainability.

It is a privilege to have been named Ontario Teachers' fourth Chief Investment Officer. The investment team is strong and experienced, and I am optimistic we have the right talent in place to drive future performance.

Ziad Hindo
Executive Managing Director and Chief Investment Officer

INVESTMENTS

ONTARIO TEACHERS' 2018 RESULTS HIGHLIGHTS

$191.1B NET ASSETS	2.5% TOTAL-FUND NET RETURN	$5.2B NET INVESTMENT INCOME
$3.5B VALUE-ADD ABOVE BENCHMARK	1.3% TOTAL-FUND LOCAL RETURN	78% PERCENTAGE OF THE PLAN'S PENSION FUNDING SOURCES THAT HAVE COME FROM INVESTMENT RETURNS

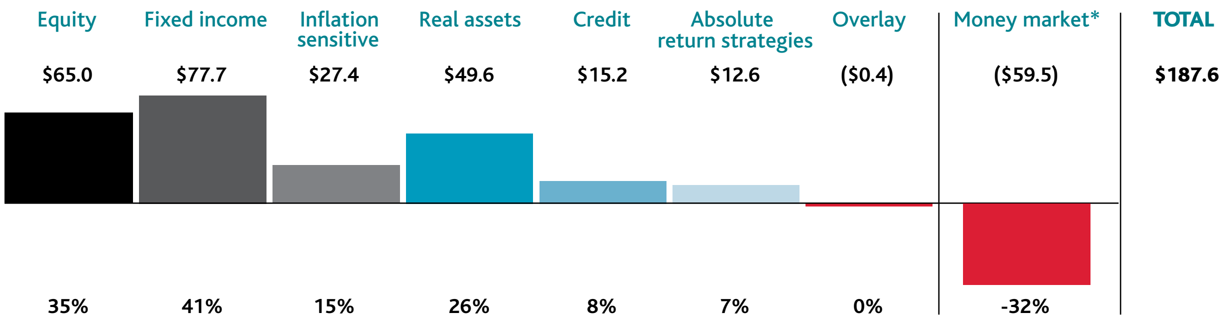
Ontario Teachers' investment program exists to pay members' pensions at stable benefit levels and contribution rates over generations. Since inception in 1990, almost 80% of the plan's pension funding sources have come from investment returns, with the remainder from member and government/designated employer contributions.

Ontario Teachers' is a globally active investor with holdings in more than 50 countries. Our investment departments invest across six different asset classes that provide diversification and volatility management, and help us focus on both total-fund returns and generating value above our performance benchmarks.

Ontario Teachers' investment portfolio earned a 2.5% total-fund net return in 2018, compared to the fund's benchmark return of 0.7%.

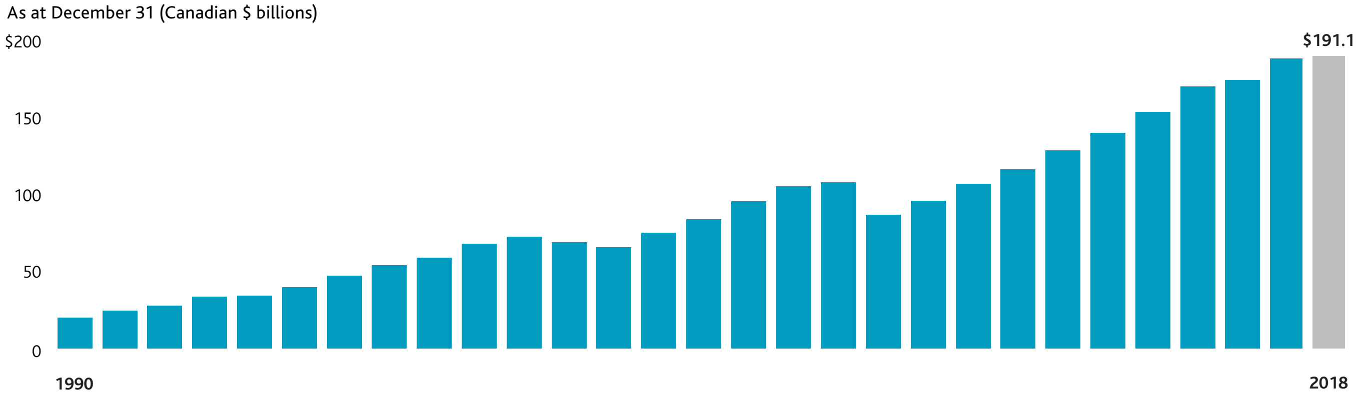
(l–r) **Gillian Brown**, Senior Managing Director, Capital Markets; **Dale Burgess**, Senior Managing Director, Infrastructure & Natural Resources; **Jonathan Hausman**, Managing Director, Head of Global Strategic Relationships; **Stephen McLennan**, Senior Managing Director, Total Fund Management; **John Sullivan**, President and Chief Executive Officer, Cadillac Fairview; **Jane Rowe**, Executive Managing Director, Equities

NET INVESTMENTS
As at December 31, 2018 (Canadian $ billions)



* Money market provides funding for investments in other asset classes, including the LDI program.

NET ASSETS[1]
As at December 31 (Canadian $ billions)



[1] 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 STRATEGY

Our investment strategy considers our risk profile, our plan assets and our liabilities. Our long investment time horizon supports our primary goal of generating the returns required to fund our members' current and future pensions. We combine our expertise in bottom-up asset selection with a top-down approach to risk and portfolio construction.

In doing so, we aim to deliver on the three objectives of our strategy:

1. stable total-fund returns;
2. value-add above our benchmarks;
3. volatility management of the funding status.

Proactive risk management underpins our investment strategies, including our asset-mix selection, active management of our portfolio to add value, diversification and balance, and our approach to liquidity management including our investment funding strategy. The investment strategy includes a Liability Driven Investment (LDI) program, which is designed to help manage funding ratio volatility by mitigating risk associated with changes to the discount rate of the plan's pension liabilities.

In 2015, we developed our OneTeachers' strategy to continue our evolution to a more unified, total-fund approach. We are nearing completion of our original OneTeachers' goals, and are now starting to define what the next wave of innovation looks like.

Over the next three years, this strategy evolution will address the challenges in the current investment landscape, enhance our total-fund investment strategy and develop our global mindset strategy, with a focus on talent development and innovation.

This evolution includes the establishment of the Total Fund Management department, horizontal collaboration, and combining our top-down and bottom-up investing strategies to maximize our full portfolio potential and help drive resource allocation to existing and new strategies. It will also include a focus on determining geographical areas of focus and how we can succeed in those select markets. Core objectives will be to increase the diversification of our assets, developing on-the-ground talent and enhancing regional capabilities.

Proactive risk management

Ontario Teachers' actively manages plan funding and investment risk together. Our Strategy & Risk department, which reports to the CEO, provides guidance on appropriate risk levels and sets an overall total asset risk budget that is appropriate for the plan to meet its investment objectives. The Total Fund Management department uses risk budgeting to spread risk across investment teams and regions.

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 investments that result in significant risk exposure.

Management oversees investment and risk decisions through various committees. The CEO-Led Risk Committee (Investments) oversees the alignment of the investment program with the board's Enterprise Risk Appetite Statement and the Ontario Teachers' Mission, Vision and Values. Management's Investment Committee is composed of senior investment professionals who oversee investment, risk and oversight decisions across the whole investment portfolio.

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 company, all asset classes and departments, as well as within each portfolio.

The proprietary Asset Liability Model is a key, robust system that enables longer-term analysis of both the plan assets and plan liabilities, which allows us to assess risk in terms of the impact on contribution rates and benefit levels.

Asset-mix selection

Recognizing that asset-mix selection is an important driver of long-term performance, we devote considerable attention to choosing our asset mix and the emphasis we place on each asset class and geography.

With board oversight, the management team manages the asset mix under our OneTeachers' total-fund strategy. Management determines exposure to each asset class within ranges approved by the board.

As our investment departments overlap with several asset classes, we have provided a matrix illustrating their relationship in 2018 followed by a chart showing our detailed asset mix.

MAPPING DEPARTMENTS TO ASSET CLASSES[1]

Asset Classes / Investing Departments	Equity	Fixed Income	Inflation Sensitive	Real Assets	Credit	Absolute Return Strategies
Public Equities	●					●
Private Capital	●				●	
Capital Markets	●	●	●	●	●	●
Infrastructure & Natural Resources			●	●		
Real Estate				●		

[1] Effective January 1, 2019, Public Equities and Private Capital became the Equities investment department.

DETAILED ASSET MIX

As at December 31

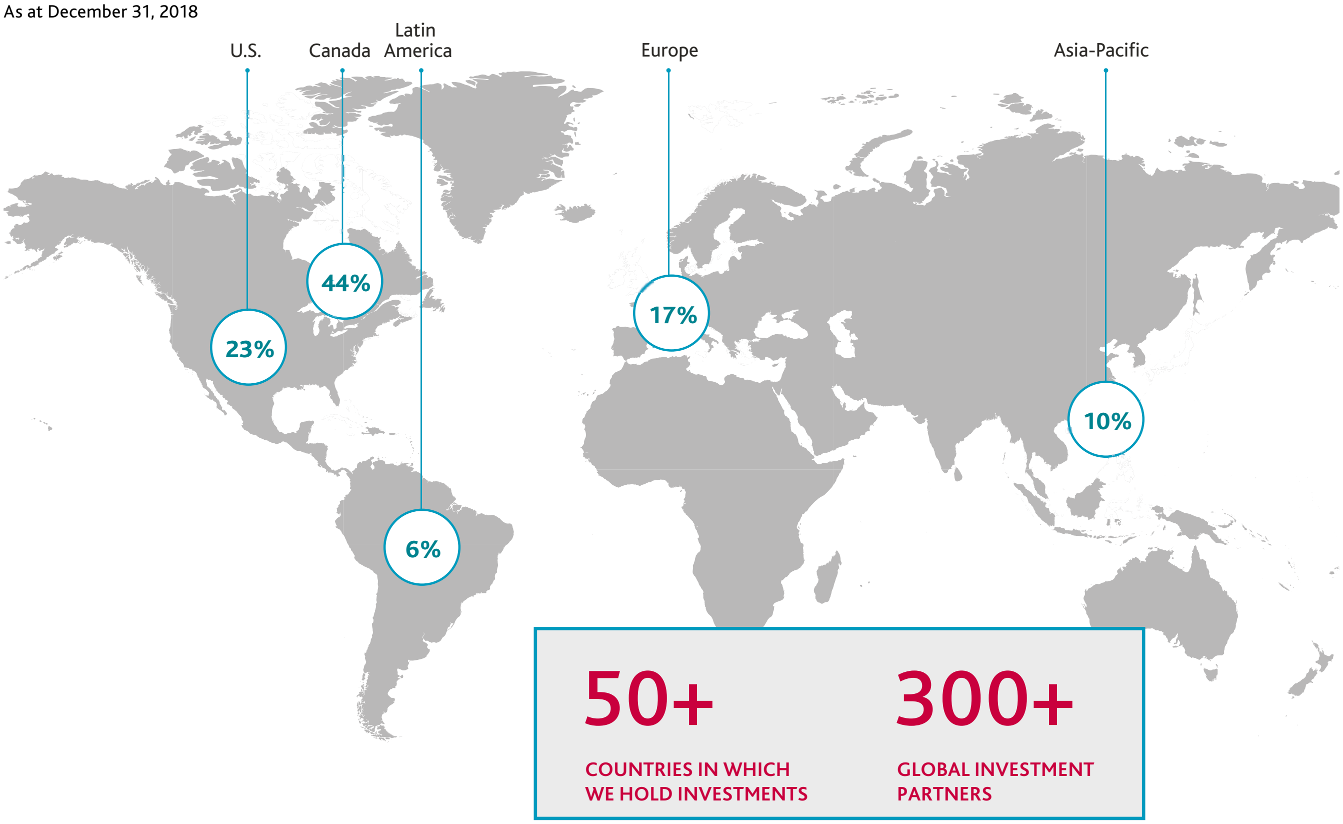
	2018		2017	
	Effective Net Investments at Fair Value (Canadian $ billions)	**Asset Mix %**	Effective Net Investments at Fair Value (Canadian $ billions)	Asset Mix %
Equity				
Publicly traded	**$ 31.6**	**17%**	$ 35.2	19%
Non-publicly traded	**33.4**	**18**	31.9	17
	65.0	**35**	67.1	36
Fixed income				
Bonds	**58.2**	**31**	41.4	22
Real-rate products	**19.5**	**10**	20.0	11
	77.7	**41**	61.4	33
Inflation sensitive				
Commodities	**10.6**	**6**	11.1	6
Natural resources	**8.1**	**4**	6.6	3
Inflation hedge	**8.7**	**5**	8.9	5
	27.4	**15**	26.6	14
Real assets				
Real estate	**27.5**	**15**	25.5	14
Infrastructure	**17.8**	**9**	18.7	10
Real-rate products	**4.3**	**2**	1.5	1
	49.6	**26**	45.7	25
Credit	**15.2**	**8**	13.6	7
Absolute return strategies	**12.6**	**7**	10.7	6
Overlay	**(0.4)**	**–**	(0.3)	–
Money market	**(59.5)**	**(32)**	(39.4)	(21)
Net investments[1]	**$ 187.6**	**100%**	$ 185.4	100%

[1] Net investments, which comprise investments less investment-related liabilities per the December 31, 2018, Consolidated Statements of Financial Position, exclude all other assets and liabilities.

Diversification

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, asset classes, geography and economic outcomes, which reduces volatility and the adverse impact of any one investment loss on the fund overall.

GEOGRAPHIC EXPOSURE[1]
As at December 31, 2018

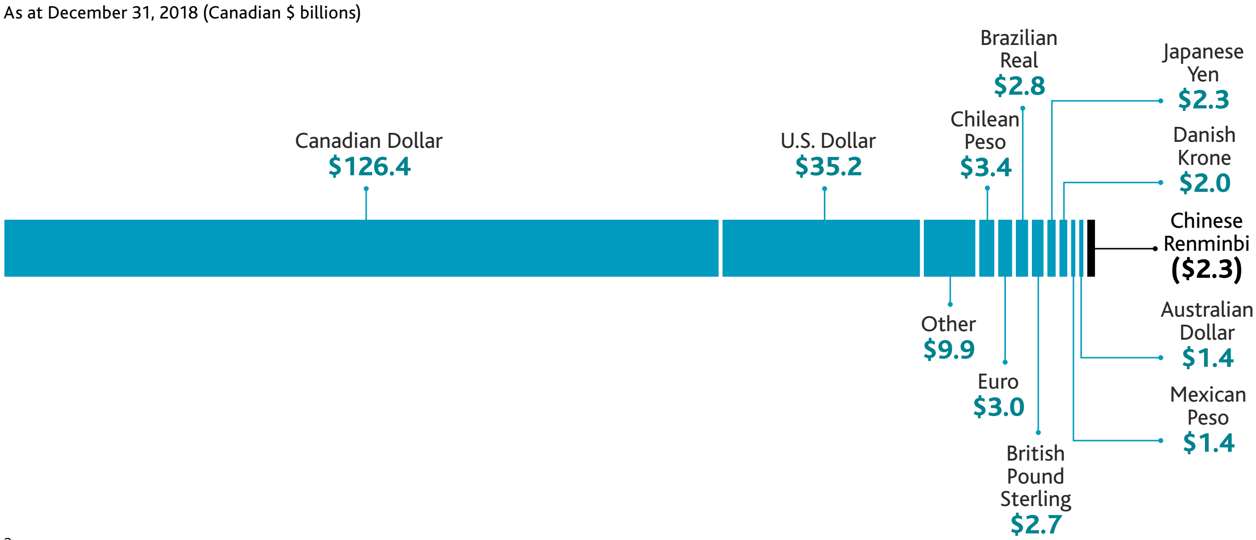


[1] Based on country of primary listing, location of head office, or location of the property.

Currency

As a diversified global investor, we manage currency from a total-fund perspective. We consider the risk associated with currency as part of our overall portfolio construction. In certain circumstances, we will take hedging measures to reduce our exposure to the currency risk that comes from investing globally.

CURRENCY EXPOSURE[2]
As at December 31, 2018 (Canadian $ billions)



[2] Includes foreign currency exposure from investments, net receivable from brokers, and investment-related cash.

2018 PERFORMANCE

NET INVESTMENTS AND RATES OF RETURN BY ASSET CLASS

As at December 31

	Net Investments (Canadian $ billions)	Rates of Return (percent)					
		1-Year		4-Year		5-Year	
	2018	Actual	Benchmark	Actual	Benchmark	Actual	Benchmark
Equity	$ **65.0**	7.2%	(0.4)%	11.7%	8.4%	12.0%	9.4%
Publicly traded	**31.6**	(3.6)	(3.9)	6.8	7.1	7.4	8.1
Non-publicly traded	**33.4**	19.5	3.5	18.4	10.3	19.2	11.5
Fixed income	**77.7**	2.8	2.8	3.0	3.1	4.7	4.8
Bonds	**58.2**	3.5	3.5	3.0	3.1	3.9	4.0
Real-rate products	**19.5**	0.0	0.0	2.4	2.4	5.1	5.1
Inflation sensitive	**27.4**	2.6	1.0	1.5	(0.7)	(3.1)	(4.9)
Commodities	**10.6**	(2.2)	(2.2)	(4.3)	(4.4)	(9.8)	(9.9)
Natural resources	**8.1**	7.7	1.4	7.7	3.2	10.3	6.0
Inflation hedge	**8.7**	5.4	5.4	–	–	–	–
Real assets	**49.6**	7.0	8.1	9.7	7.2	9.9	7.1
Real estate	**27.5**	5.8	8.1	8.3	7.7	8.8	7.6
Infrastructure	**17.8**	8.8	8.2	12.2	6.9	11.7	6.7
Real-rate products	**4.3**	6.9	6.9	–	–	–	–
Credit	**15.2**	6.3	4.7	–	–	–	–
Absolute return strategies	**12.6**						
Overlay	**(0.4)**						
Money market	**(59.5)**						
Total	$ **187.6**	2.5%	0.7%	7.1%	5.6%	8.0%	6.5%

The total-fund net return is after deducting transaction costs, management fees, and investment administrative costs, and is reported in Canadian dollars for five periods: one, four, five and 10 years, and since the current investment program began in 1990. Asset-class and local returns are before deducting investment administrative costs. Local returns are also before the translation to Canadian currency.

The plan produced a one-year total-fund net return of 2.5%, which was largely driven by the performance of our private assets and the appreciation of the U.S. dollar relative to the Canadian dollar. Returns above our benchmark were driven by private equity, inflation sensitive and credit assets.

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.

INVESTMENT PERFORMANCE

(percent)

	2018	2017	4-Year	5-Year	10-Year	Since Inception
Total-fund net return	**2.5**	9.7	7.1	8.0	10.1	9.7
Benchmark return	**0.7**	8.2	5.6	6.5	8.1	7.7
Return above benchmark	**1.8**	1.5	1.5	1.5	2.0	2.0

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.

The plan seeks to outperform its respective benchmark rates of return on a total-fund and asset-class basis. This outperformance is described as value-add. A complete list of benchmarks is available at otpp.com/benchmarks.

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 appropriate and well managed. Costs are evaluated in the assessment related 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.

Managing assets in-house, combined with our strategic partnership model with external managers, 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. The plan also incurs costs to maintain our offices around the world as part of its commitment to identify and participate in investment opportunities globally.

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.

DEMYSTIFYING INVESTMENT COST MANAGEMENT

In 2018, investment costs, including administrative expenses, management fees and transaction costs, were 67 cents per $100 of average net assets, compared with 63 cents per $100 in 2017.

What is included in 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 $555 million or 30 cents per $100 of average net assets in 2018, compared to $467 million or 26 cents per $100 in 2017. Administrative expenses increased by 18.8% due to higher salaries, incentives and benefits, professional and consulting services, and premises and equipment.

Can you explain 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 were $301 million in 2018, compared to $299 million in 2017.

Can you define 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 predetermined threshold and can vary significantly from year to year. Management fees also include incremental costs incurred with external parties that are directly attributable to existing investments and are not related to acquisition or disposal. 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. All such fees are reflected in the plan's net investment income. 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.

In 2018, management fees were $405 million, up from $356 million in 2017.

INVESTMENT STRENGTHS

Ontario Teachers' focuses on total-fund performance to grow and sustain assets and meet the pension promise for generations to come. Our relationship-centric approach is focused on true partnerships enduring beyond events or transactions. Our portfolio is globally diversified and designed to withstand volatile times. We are innovation driven, adapting today to shape tomorrow. First and foremost, our success rests on being talent rich, both regarding our existing employees and anticipating our needs for the future.

Global presence

To develop insight into global markets – and help build strong relationships wherever we operate – Ontario Teachers' has offices in financial centres in North America, Europe and Asia-Pacific. The Toronto office was established at the plan's inception in 1990 and is the North American hub for investment staff. We opened offices in London in 2007 and Hong Kong in 2013 to build even stronger relationships with key players in business and finance throughout those regions.

While Ontario Teachers' has long looked globally for the best investment opportunities, our international offices and professional investment and support talent enable us to think globally while executing locally. This means partnering with carefully chosen global and regional businesses and asset managers, who deliver value-added returns and provide local expertise in key global markets.

In-house talent

The investment portfolio is managed in-house by highly skilled, specialized teams. 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. This is crucial to an active management strategy that leverages our expertise as well as our capital. We work closely with our partners, including leadership at the companies in which we invest, with the goal of creating sustainable value.

Strategic relationships

Managing strategic relationships around the world is fundamental to our success. The Global Strategic Relationships department connects our investment professionals across asset classes and regions, enabling our teams to work more closely together to cultivate key relationships with institutional investors, major investment banks, prominent families, companies and other organizations for the benefit of the entire fund. Our relationships with high-quality organizations are important: they widen and differentiate our pipeline of opportunities, offer insights and access to networks, and help us make smart decisions globally.

Total-fund approach

We use several strategies to maximize returns within our risk limits and to outperform the markets in which we invest, and chief among these is our total-fund management approach. A total-fund approach involves the development of a top-down portfolio with a view to generating stable and sufficient returns to deliver on the pension promise. The Total Fund Management team works to create synergies, combining both sides of our balance sheet, to effectively and efficiently allocate resources (both capital and risk) across various asset classes and investing departments. It also encourages innovation, working closely with investing departments from the bottom up to develop and enhance active management strategies that align with our total-fund portfolio objectives.

ASSET-CLASS REVIEW

The board approves ranges for allocations to various 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.

There are six asset classes: Equity (which includes both public and private equity investments), Fixed Income, Credit (includes corporate and emerging market debt), Inflation Sensitive (includes natural resources, commodities, and inflation hedge), Real Assets (includes real estate and infrastructure), and Absolute Return Strategies (seeks returns with low correlation to markets; includes hedge funds).

A DIVERSE ASSET MIX

Equity
Public and private equities aim to deliver long-term investment growth and value-added performance

Fixed Income
Provides security and steady income, hedges against interest rate risks inherent in the plan's liabilities and stabilizes total returns

Credit
Corporate and emerging market debt investments capture a set of risk premiums

Inflation Sensitive
Contributes to both diversification and protection against unexpectedly high inflation

Real Assets
Real estate and infrastructure investments provide a hedge against paying inflation-adjusted pensions

Absolute Return Strategies
Internal and external strategies that seek to capitalize on market inefficiencies and have a low correlation to markets

Equity

In 2018, this asset class comprised public and private equities, managed by the Public Equities and Private Capital investment departments, respectively. Any investments not in an active program are managed passively by the Capital Markets investment department to maintain exposure to the equity markets at the weighting outlined in our asset mix. As detailed on page 35, the Public Equities department has been restructured and as of January 1, 2019, its investment activities will be carried out by Capital Markets or the newly formed Equities investment department.

This year, most global equity markets were down after posting strong returns in 2017. The Canadian S&P TSX 60 was down 7.6% in 2018, while the U.S. S&P 500 was down 4.4%. Many major stock market indices in developed and emerging economies were also down for the year.

The Equity asset class, which includes public equity and private equity, had a total return of 7.2% (0.9% local return), compared to its benchmark of -0.4% (local benchmark -6.2%). The total value of the Equity asset class decreased to $65.0 billion at the end of 2018 from $67.1 billion a year earlier. The four-year annualized rate of return is 11.7%, exceeding the benchmark of 8.4%.

Returns for our public equity and private equity are separated and described below.

PUBLIC EQUITY PORTFOLIO

As at December 31, 2018
(based on total assets)

Highlights

$31.6B NET INVESTMENTS

-3.6% RETURN

-9.1% LOCAL RETURN

-3.9% BENCHMARK

-9.6% LOCAL RETURN BENCHMARK

Portfolio split by sector

- 19% Financials
- 14% Consumer Discretionary
- 14% Industrials
- 11% Information Technology
- 10% Consumer Staples
- 8% Healthcare
- 8% Telecommunication Services
- 6% Materials
- 4% Energy
- 3% Utilities
- 3% Real Estate

The Public Equities department focuses on fundamental investing in equities primarily traded on Canadian and international exchanges. In 2018, the department comprised four teams: Global Active Equities, Global Equity Managers, Relationship Investing and Corporate Governance.

Public equity net investments totalled $31.6 billion at December 31, 2018, compared to $35.2 billion at the end of 2017. The portfolio produced a return of -3.6% (local return -9.1%), largely in line with its benchmark return of -3.9% (-9.6% local benchmark). The four-year annualized rate of return is 6.8%, compared to a benchmark of 7.1%.

In 2018, the Public Equities team acquired 3.4% of Paris-based Ubisoft, a leading creator, publisher and distributor of interactive entertainment and services, for approximately €250 million. Ontario Teachers' partnered with Tencent – a driver of disruptive technology and Internet investing in China – for this transaction, becoming long-term investors in Ubisoft.

PRIVATE EQUITY PORTFOLIO

As at December 31, 2018
(based on total assets)

Highlights

$33.4B
NET INVESTMENTS

19.5%
RETURN

3.5%
BENCHMARK

12.5%
LOCAL RETURN

-2.4%
LOCAL RETURN BENCHMARK

Portfolio split by sector

- 27% Consumer and Retail
- 24% Industrials
- 15% Financial Services
- 13% Telecom, Media and Technology
- 10% Healthcare
- 8% Energy and Power
- 3% Venture Capital and Growth Equity

The Private Capital department 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.

Private equity net investments totalled $33.4 billion at December 31, 2018, compared to $31.9 billion at the end of 2017. Assets increased primarily because of acquisitions, higher asset valuations, and strong performance from direct investments and the long-term equity program, which were partially offset by several dispositions during the year.

In 2018, private equity investments generated a return of 19.5% (local return 12.5%) and outperformed the benchmark return of 3.5% (local benchmark -2.4%). The four-year annualized rate of return of 18.4% exceeds the benchmark return of 10.3%.

Private Capital made several investments in Canada during the year. Ontario Teachers' participated with a group of investors, led by BC Partners, in the recapitalization of Toronto-based GFL Environmental Inc., one of the largest environmental services providers in North America. Ontario Teachers' also entered an investment partnership with Fleet Complete, one of the fastest growing technology companies in the connected vehicle space.

The group also expanded its presence in Europe with several acquisitions in 2018. Ontario Teachers' joined partners to acquire Techem GmbH, a global market leader in the provision of heat and water sub-metering services to real estate operators and private homeowners in more than 20 countries. It also acquired a 40% minority stake in France-based European Camping Group, joining with management and other investors as the provider of mobile homes holiday rentals targets further global growth.

Private Capital negotiated the sale or partial sale of several assets in 2018 after successful ownerships. In addition to the sale of Helly Hansen (see below), Ontario Teachers' and other existing shareholders agreed to sell a majority stake in U.S.-based Heartland Dental, the largest dental support organization in the United States, to KKR. Ontario Teachers' retained a sizeable ownership stake and continues to be a significant partner to Heartland.

A CASE OF VALUE CREATION

After a successful six-year partnership, we sold our majority stake in Helly Hansen, the iconic high-performance and outdoor apparel retailer. Helly Hansen was a significant, early investment for our London office.

The sale to Canadian Tire aligns with our investment strategy to grow the companies we invest in and make them even more successful – a win-win partnership. Prior to its sale, Helly Hansen reported its third consecutive year of rising profits, a direct outcome of our efforts to revamp management, refocus product lines and expand the company's international presence.

Fixed income

Ontario Teachers' uses fixed income investments to provide security and steady income, hedge against interest rate risks and stabilize total returns. The plan owns a diversified portfolio of Canadian and international government bonds, provincial 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 $77.7 billion at the end of 2018, compared to $61.4 billion a year earlier. The diversified bond portfolio had a return of 2.8%, matching the benchmark return. The local return for fixed income was 1.0% (local benchmark 1.1%). The four-year annualized rate of return of 3.0% compares to a benchmark of 3.1%.

In 2018, Ontario Teachers' worked with BMO Capital Markets to pilot a fixed income issuance transaction using blockchain technology. The transaction – booked as a traditional Canadian Depository for Securities issuance and successfully paralleled through the blockchain – was conducted to demonstrate how smart contracts and blockchain could be used for fixed income markets. The transaction included Bank of Montreal as the issuer and Ontario Teachers' as the buyer of a $250 million one-year floating rate Deposit Note, making it the first Canadian dollar fixed income issuance demonstrating the viability of blockchain platforms.

Liability Driven Investment program

Ontario Teachers' employs a Liability Driven Investment (LDI) program to mitigate the risk of changes in the real discount rate. As long-term real interest rates are an important input in the discount rate decision, an allocation to real-rate products is maintained, and reviewed annually, with the purpose of hedging against changes to the discount rate. This funded program is risk-reducing and supports the OneTeachers' investment objective of managing the plan's funding ratio volatility through a reduction in the plan's exposure to changes in interest rates inherent in the plan's pension liabilities.

The LDI program is mainly funded through the use of bond repurchase agreements. This allows Ontario Teachers' to retain economic exposure to the underlying real-rate bonds in a cost-effective manner.

FIXED INCOME

As at December 31, 2018
(based on total assets)

Highlights

$77.7B
NET INVESTMENTS

2.8%
RETURN

1.0%
LOCAL RETURN

2.8%
BENCHMARK

1.1%
LOCAL RETURN BENCHMARK

Portfolio split by sector

37% Canadian Government

27% Foreign Developed Sovereign

25% Real-Rate Products

11% Provincial Bonds

Credit

This asset class includes corporate and emerging market debt. Credit is a component of a company's capital structure which contains characteristics of both equities and fixed income. Investing in credit allows the plan to capture default, liquidity and funding risk premiums.

At December 31, 2018, the total value of credit assets was $15.2 billion, compared to $13.6 billion a year earlier. Total return for 2018 was 6.3% (local return 1.0%), compared to a return of 1.7% for the same period last year. The return for 2018 exceeded the benchmark of 4.7% (local benchmark -0.6%). As the asset class was established in 2017, return data is unavailable on a four-year basis.

CREDIT

As at December 31, 2018
(based on total assets)

Highlights

$15.2B
NET INVESTMENTS

6.3%
RETURN

1.0%
LOCAL RETURN

4.7%
BENCHMARK

-0.6%
LOCAL RETURN BENCHMARK

Portfolio split by sector

37% Emerging Market Sovereign
29% Investment Grade
22% High Yield
12% Levered Loans

Inflation sensitive

The inflation sensitive asset class includes natural resources (oil and gas, timberland, agriculture and aquaculture, and mining), commodities and inflation hedge. These types of assets have been grouped together due to the positive relationship they exhibit with inflation fluctuations: they can provide stable risk-adjusted returns, diversification and protection against unexpectedly high inflation. This is important because, when the plan is fully funded, members' pension benefits increase with inflation.

Inflation sensitive net assets totalled $27.4 billion at the end of 2018, compared to $26.6 billion a year earlier. The return of 2.6% (-4.6% local return) was ahead of the benchmark of 1.0% (local benchmark -7.1%). The four-year annualized rate of return of 1.5% exceeds the benchmark return of -0.7%.

In 2018, Ontario Teachers' expanded its agricultural portfolio with the acquisition of Broetje Orchards, which was renamed and operates under the brand of FirstFruits Farms. The company is one of the largest apple growers in the U.S., growing 17 different varieties over 6,800 acres, and became the largest agriculture holding within the portfolio.

INFLATION SENSITIVE PORTFOLIO

As at December 31, 2018
(based on total assets)

Highlights

$27.4B
NET INVESTMENTS

2.6%
RETURN

1.0%
BENCHMARK

-4.6%
LOCAL RETURN

-7.1%
LOCAL RETURN BENCHMARK

Portfolio split by sector

39% Commodities

32% Inflation Hedge

Natural Resources:

15% Oil and Gas

9% Timberland

4% Agriculture and Aquaculture

1% Mining

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, 2018, the total value of real assets was $49.6 billion, compared to $45.7 billion at year-end 2017. Total returns for 2018 were 7.0% (local return 5.9%), compared to a benchmark of 8.1% (local benchmark 7.1%). The four-year annualized rate of return is 9.7%, above the benchmark of 7.2%.

Returns for our real estate and infrastructure are separated and described below.

REAL ESTATE PORTFOLIO

As at December 31, 2018
(based on total assets)

Highlights

$27.5B NET INVESTMENTS

5.8% RETURN

6.1% LOCAL RETURN

8.1% BENCHMARK

8.5% LOCAL RETURN BENCHMARK

Portfolio split by sector

61% Canadian Retail
24% Canadian Office
7% Emerging Markets
5% U.S. Investments
3% Other

The real estate portfolio is managed by the plan's wholly owned subsidiary, The Cadillac Fairview Corporation Limited, which maintains a diversified portfolio of high-quality retail and office properties designed to provide dependable cash flows.

Net asset value of real estate holdings was $27.5 billion at year-end 2018, compared to $25.5 billion the previous year. The increase in net assets resulted from valuation growth in Canadian properties partially offset by losses in U.S. and emerging market investments and the repayment of maturing third-party debt.

The real estate portfolio returned 5.8% (local return 6.1%) compared to a benchmark return of 8.1% (local benchmark 8.5%) for the year ended December 31, 2018. Underperformance versus the benchmark was due to declines in the value of U.S. and emerging market investments, partially offset by increased valuation of the Canadian portfolio. The four-year annualized rate of return for the real estate portfolio was 8.3% compared to the four-year average benchmark of 7.7%, with the outperformance largely due to valuation gains in Canada.

Net real estate income of $1.4 billion for 2018 was $0.3 billion lower than the prior year due to the valuation losses on the U.S. investment and foreign currency losses from weaker emerging market currencies.

At year end, the retail occupancy rate (spaces less than 15,000 square feet) was 92% (91% in 2017), while the office occupancy rate was 94% (93% in 2017).

INFRA-STRUCTURE PORTFOLIO

As at December 31, 2018
(based on total assets)

Highlights

$17.8B
NET INVESTMENTS

8.8%
RETURN

8.2%
BENCHMARK

7.0%
LOCAL RETURN

6.5%
LOCAL RETURN BENCHMARK

Portfolio split by sector

55% Transportation and Logistics

28% Energy

15% Water and Wastewater Treatment

2% Other

Ontario Teachers' seeks to build an infrastructure portfolio that will steadily increase in value, provide predictable cash flow and correlate to inflation. The plan's infrastructure assets include investments in toll roads, airports, seaports, conventional and renewable energy, water distribution and wastewater plants. Ontario Teachers' infrastructure assets are global in nature, and are principally located in the U.K., Europe, Chile, the U.S., Canada and Australia.

The net value of the infrastructure portfolio decreased to $17.8 billion at the end of 2018, compared to $18.7 billion a year earlier. Infrastructure assets delivered a one-year return of 8.8% (local return 7.0%), outperforming the benchmark return of 8.2% (local benchmark 6.5%). The four-year annualized rate of return is 12.2%, exceeding the benchmark of 6.9%.

The Infrastructure team also embraced new partnerships with an agreement to sell partial stakes in Global Container Terminals, a leading container operator in North America, to two leading institutional investors.

BUILDING ON SUCCESSFUL PARTNERSHIPS

Ontario Teachers' invested in Pacifico Sur, a 309-kilometre toll road in Mexico. The toll road is managed by the Slim Group through its infrastructure arm, IDEAL, which continues to hold a 51% interest in the investment.

The agreement enhances our existing relationship with IDEAL, with which we partnered on the Arco Norte toll road in Mexico in 2016. Strategic relationships such as these are fundamental to our success and are a cornerstone of our OneTeachers' strategy.

Absolute return strategies

Ontario Teachers' uses absolute return strategies to generate positive returns that have low correlation to other asset returns. 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 2018, assets employed in absolute return strategies totalled $12.6 billion at year end, compared to $10.7 billion in 2017.

Overlay

Overlay includes strategies to overweight or underweight certain foreign currency positions.

Money market

The money market allocation represents the net funding for the overall asset-mix program. Money market includes exposures such as bond repurchase agreements used for managing day-to-day liquidity, implied funding from derivatives used to efficiently gain passive exposure to global equity and commodity indices, short-dated and term unsecured funding guaranteed by Ontario Teachers', and liquidity reserves. These activities result in a negative net money market exposure in the overall asset mix, and the amount is expected to vary from year to year based on the plan's needs.

The funding of the investment program allows Ontario Teachers' to:

- hedge the interest rate risk associated with our pension liabilities;
- achieve the optimal overall risk-return profile for the investment portfolio;
- obtain exposure to certain markets more efficiently;
- increase our holdings of lower-risk asset classes that generate attractive risk-adjusted returns;
- maintain sufficient liquidity.

Liquidity management and investment funding strategy

Liquidity and funding management is overseen by the Total Fund Management investment department. With a holistic view of the overall portfolio, Total Fund Management is able to take a perspective for how plan resources can be effectively utilized to support the investment portfolio.

This includes having sufficient cash on hand to meet current liabilities and liquidity in place in the event of disruptive markets. This also seeks to take advantage of investment opportunities. The liquidity position and funding risk is therefore managed carefully. Ontario Teachers' has an established liquidity governance framework and reporting requirements. We test the plan's liquidity position regularly through simulations of major market events, and the board's Investment Committee receives regular updates on the plan's liquidity position.

Changing rules and regulations affecting banks may indirectly impact Ontario Teachers', so we continue to adapt and enhance the way that we manage, oversee, measure and report on liquidity and funding risks.

Ontario Teachers' investment funding strategy is focused on diversifying the sources of investment funding, managing the cost and maturity profile, maintaining a presence in key funding markets, and supporting the overall management of the currency exposure of our global investment program.

The investment funding strategy contains both short- and long-term funding sources, which collectively diversify and mitigate risk. Examples of short-term funding include bond repurchase agreements, commercial paper and securities lending agreements, while long-term funding includes unsecured term-debt issuance (as described below).

Ontario Teachers' Finance Trust (OTFT), an independent entity, plays an important role in our overall strategy. OTFT issues commercial paper and term debt that is fully, unconditionally and irrevocably guaranteed by Ontario Teachers'.

In addition to OTFT, Ontario Teachers' Cadillac Fairview Properties Trust (OT-CFPT) provides further investment funding diversity through its issuance of term debt. OT-CFPT is backed by high-quality Canadian retail and office properties in the real estate portfolio and is non-recourse to Ontario Teachers'.

More information on Ontario Teachers' investment funding strategy is available in note 2h to the financial statements and on the Investor Relations section of otpp.com.

Investment department changes

Effective January 1, 2019, in alignment with our evolving strategy, we created the Equities department comprising our existing Private Capital group and a newly formed High Conviction Equities (HCE) group. The Capital Markets department will be responsible for external managers' public equity and all equity quantitative activities on top of their existing investment programs.

HCE will include investment professionals from the former Relationship Investing and Global Active Equities teams, and will invest across the equity capital structure, from pre-IPO to public companies.

The new Equities department positions us to better compete globally for investment opportunities across the equity capital structure in both private and publicly listed equity, with the goal of generating higher risk-adjusted returns. They will also increase our sector specialization and coordination across geographic regions. In doing so, they will equip us to fuel innovation, better optimize our balance sheet and maximize the potential of our people while giving them broader and deeper opportunities.

As part of these changes, the Corporate Governance team, which leads our voting and corporate governance activities in public markets, was moved and now reports into our Strategy & Risk department. This strategic shift brings the Responsible Investing and Corporate Governance teams under the same department.

List of major investments

The plan publishes an annual list of individual investments that exceeded $150 million. The list as at December 31, 2018, begins on page 100. A list of deal highlights from 2018 can be found on page 105. News releases on notable transactions are also available on otpp.com.

RESPONSIBLE INVESTING

Responsible investing means having a systematic process to identify, assess and manage the environmental, social and governance (ESG) factors in our investments. Companies that manage these well are more likely to be profitable and sustainable over the long term.

Below we have outlined Ontario Teachers' approach and some of the past year's highlights. To learn more, see our 2018 Responsible Investing Report at otpp.com.

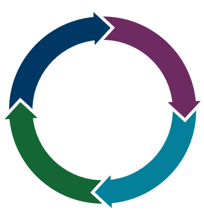
OUR APPROACH

Our responsible investing approach starts with the board, and reaches through every level of the plan. The board oversees responsible investing practices, approves ESG-related policies, and is accountable for setting the Enterprise Risk Appetite, among other functions. Our Chief Executive Officer approves and oversees our responsible investing strategy, and management's integration of ESG in the investment process.

Our Investments Leadership Team sets frameworks and oversees the integration of ESG in the investment process. Our investment professionals analyze the implications of ESG factors on a case-by-case basis, across all stages of the investment process (when we're looking for investment opportunities, making our initial investment in a company and managing our investments once we are owners).

Our Responsible Investing team leads, coordinates, and supports ESG integration across the plan, while our Corporate Governance team leads our voting and corporate governance activities in public markets.

Responsible investing at Ontario Teachers' has four pillars:



Integrate: We integrate ESG considerations into our investment process to manage risk and add value.

Engage: We build relationships with the companies we invest in to improve our understanding of the company, influence change and nurture success.

Influence: We use our influence as a global investor to improve the investing landscape and clarify expectations of companies.

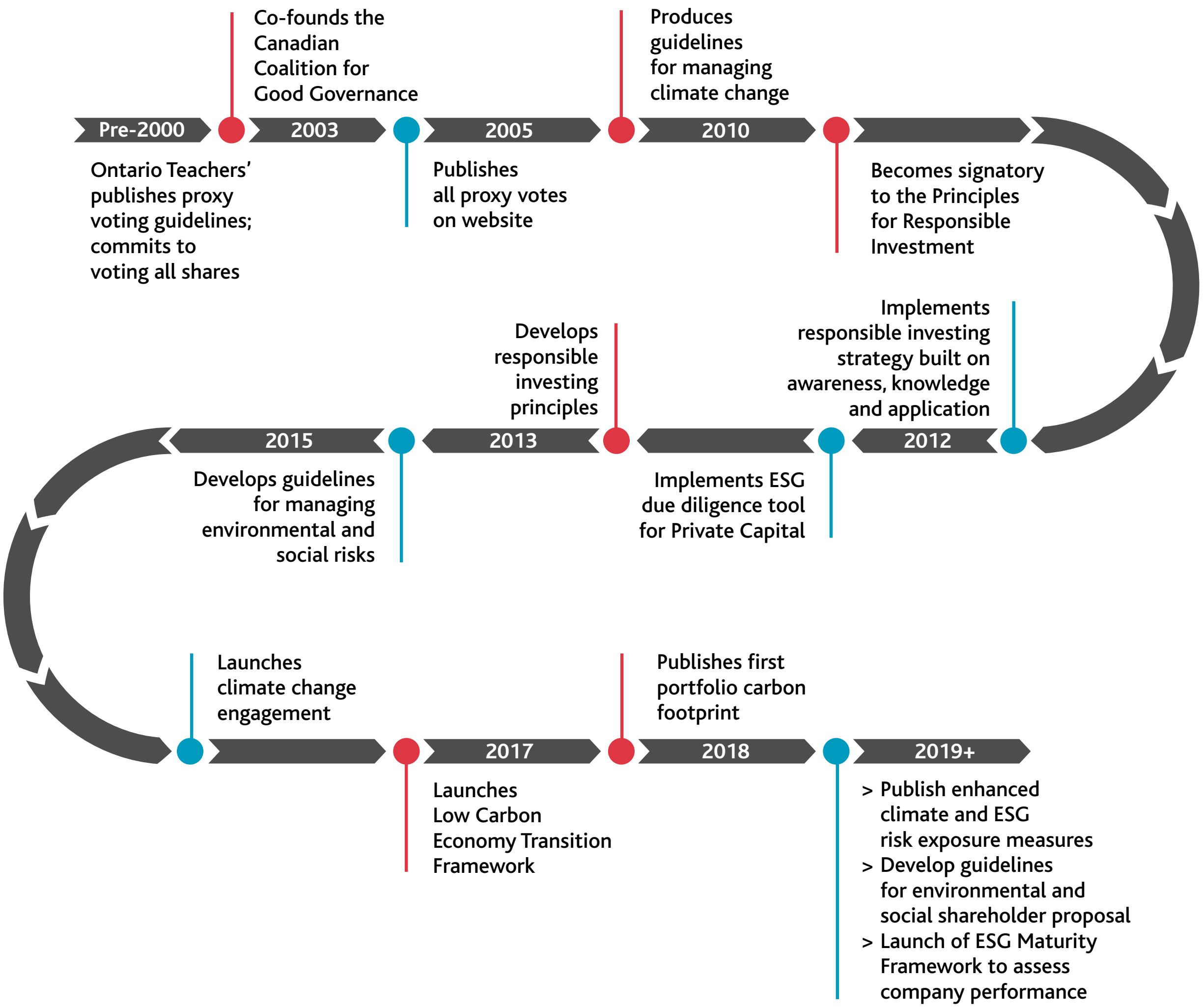
Evolve: We adapt and improve our own processes as the world evolves and new risks and opportunities arise.

2018 HIGHLIGHTS

- Achieved a grade of A+ for "Strategy and Governance" in the 2018 Assessment Report for Ontario Teachers' from the Principles for Responsible Investment[1].
- Ranked among the world's 25 most responsible asset allocators in a 2017 study released by the Bretton Woods II program at New America[2].
- Is a founding member of the Investor Leadership Network, a platform for leading investors working together to help address the dependencies, gaps and barriers to improved disclosure on climate change risks; push for more diversity among those employed in the financial sector; and help increase the capacity of developing countries to build and finance sustainable infrastructure projects that are critical to green economic growth.
- Our Chief Financial Officer, David McGraw, joined the Accounting for Sustainability CFO Leadership Network, which works to advance understanding and enhance discussion about sustainability, commercially viable business models and the contribution of the finance industry.
- Our Chief Risk & Strategy Officer, Barbara Zvan, was named to the Expert Panel on Sustainable Finance to develop recommendations to the federal government on measures that need to be taken to increase private sector capital flows into sustainable finance in Canada.
- Our Head of Responsible Investing, Deborah Ng, was nominated to Global Real Estate Sustainability Benchmark's (GRESB) board, following her chairmanship of GRESB's Infrastructure Advisory Board. GRESB assesses and benchmarks the sustainability performance of real estate and infrastructure portfolios and assets worldwide.

1 2018 Assessment Report available at https://www.otpp.com/investments/responsible-investing
2 https://www.newamerica.org/in-depth/bwii-responsible-asset-allocator/bretton-woods-ii-leaders-list/

EVOLUTION OF RESPONSIBLE INVESTING AT ONTARIO TEACHERS'



ADDING VALUE THROUGH SUSTAINABLE AGRICULTURAL PRACTICES

Aroona Farms is one of the largest almond growers in Australia. It has close to 2,600 hectares of planted almond orchards, producing approximately six million kilograms of almonds per year.

Our investment in Aroona is one of six agricultural investments we have made since 2014. Our goal is to build a diversified food basket portfolio that delivers stable inflation-linked returns over the long term.

Some of the major agricultural trends affecting these investments include water, climate and availability of arable land. For example, fresh water is becoming scarcer, and more valuable, so we prefer to invest in jurisdictions like Australia which have a robust water allocation framework that is fairly priced. This helps to ensure sustainability of water resources by putting it to highest and best use.

Since investing in Aroona, we have upgraded the irrigation system to improve the efficiency of water usage, leading to stronger yields and lower greenhouse gas emissions. In 2019, we will be upgrading the Occupational Health and Safety system to improve efficiency, accountability, reporting and overall management of health and safety at the orchard.

MEMBER SERVICES

At Ontario Teachers', providing members with outstanding service is at the heart of everything we do. This means we work hard to keep pace with new technology, shifting demographics and changing expectations in order to deliver value-added, personalized service at every stage of a member's pension journey.

Our members-first approach ensures that services and communications are designed and delivered in a way that benefits members for the long term. We're listening to what members say. We're analyzing how they interact with us. And we're acting on these insights to provide the right service at the right place at the right time.

Looking forward, we remain focused on improving our ability to deliver on the Clarity strategy in an increasingly complex operating environment. We understand that we need to do more than just keep up with the changes. We need to leverage our strengths and develop new thinking.

Our goal is simple: to provide members with outstanding service, every day.

MEMBER PROFILE

185,000 ACTIVE MEMBERS	+	**142,000** PENSIONERS	=	**327,000** TOTAL NUMBER OF ACTIVE MEMBERS AND PENSIONERS

7,200 NEW MEMBERS IN 2018	**5,030** NEW PENSIONERS IN 2018	**43** AVERAGE AGE OF ACTIVE MEMBER	**72** AVERAGE AGE OF PENSIONER	**1–111** AGE RANGE OF PENSIONERS
15 PENSIONERS IN PAY FOR MORE THAN 50 YEARS	**26** TYPICAL YEARS OF CREDIT AT RETIREMENT	**32** AVERAGE YEARS RETIREES ARE EXPECTED TO COLLECT A PENSION	**59** AVERAGE RETIREMENT AGE	**133** PENSIONERS OVER 100

PROACTIVE SERVICE

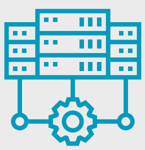
Our service philosophy continued to focus on three guiding principles: simplicity, personal and insightful.

We strive to make everything related to members' pensions as easy as possible. So we simplify complex information with personalized service and leverage insights to anticipate and meet their needs across multiple channels. We provide everything members need to make informed decisions at every stage of their lives.

In 2018, continuous improvements in day-to-day operations also remained a priority. This enabled us to avoid costs and service disruptions, while also ensuring our administration was compliant – all critical components of maintaining a sustainable service model.

SERVICE HIGHLIGHTS

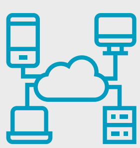
OUR SERVICE PHILOSOPHY IN ACTION



SIMPLICITY

TRANSFORMED PENSION SYSTEM AND TECHNOLOGY

We successfully completed the replacement of our legacy pension payroll system and technology with no disruption to members. This transformation enabled us to reduce risk, improve our payroll operation, increase data security and provide more efficient administration services.



PERSONAL

EXPANDED SERVICE CHANNELS

We expanded our service channels, added more self-serve functionality and delivered more targeted communications to offer members greater flexibility, choice and efficiency.

We launched an interactive email campaign that enabled members to notify us of their intent to pay for their leave with minimal effort. By streamlining the process and simplifying the information, we were able to make it easier for members to make an informed decision at the right time – with fewer clicks.

Ending a marriage or a spousal relationship is never easy, and the division of assets, such as a pension, can be a complicated process. We found that members were often unclear of the Family Law Value process due to information overload during a difficult time. By streamlining the internal process, we were able to reduce member effort and provide easy access via email to key information, tips and forms – when they need it most. Member satisfaction ratings also increased as a result of this process change.

We made it even easier for members to securely upload documents to their online account. That's why the number of documents uploaded online increased by 30%. By expanding our accepted file types to include images in JPEG format, we've provided members the ability to take a snapshot of their document with their mobile device and quickly upload it online.

Guided by insight, we shortened our retirement planning videos and moved them off social media and onto our site. These changes resulted in higher engagement rates and an improved member experience.

INSIGHTFUL

LAUNCHED STEWARDSHIP REPORT

The Employer Information Services team launched the Stewardship Report to help school boards be more efficient and accurate in their pension reporting. The report provides boards with their individual results, as well as an overall comparison to their peers. The report is a great tool for the boards to share continuous improvement opportunities and leverage best practices to drive a better member experience.

Through small, incremental changes implemented throughout the year, we were able to continuously improve the quality of service we provide to members. Moving forward, we will strive to create more meaningful experiences, one continuous improvement at a time.

DIGITAL TRENDS

Each year, more and more members opt for the convenience and security of Ontario Teachers' online account. That's why we will continue to focus on expanding our digital offerings in order to serve members in ways that are useful, timely and meaningful to them.

8%
INCREASE IN SECURE WEB LOG-INS

6%
INCREASE IN MEMBER ENGAGEMENT THROUGH EMAIL

9%
INCREASE IN PENSION ESTIMATES GENERATED USING ONTARIO TEACHERS' PENSION CALCULATOR

1,086
HOURS VIEWED ON ONTARIO TEACHERS' YOUTUBE CHANNEL

SERVICE EXCELLENCE

We strive to give our best to each and every member, and success means that our members are satisfied with our service. We are proud that they continued to give us high marks for member satisfaction.

The Quality Service Index (QSI), our primary performance measurement, evaluates the quality of our member experience, service and communications. It involves an independent company surveying a sample of members throughout the year by email and telephone, whether or not they have had a recent service experience.

QUALITY SERVICE INDEX

	2018	2017	2016
Total QSI (on a scale of 0 to 10)	**8.8**	8.8	8.8
Percentage satisfied	**94**	93	93

Ontario Teachers' service is measured against leading pension plans worldwide through surveys conducted by CEM Benchmarking Inc., an independent research company that ranks plan performance in various categories.

For 2017, the plan was ranked second for pension service in its peer group and internationally, and has been ranked first or second internationally for the past eight years.

BENCHMARKING RESULTS – SERVICE LEVEL SCORE COMPARISON

	2017	2016	2015	2014
Ontario Teachers' Pension Plan	**93**	94	92	93
CEM world average	**79**	78	77	76
Peer group average	**84**	83	82	81
Canadian participants – average	**80**	78	76	74

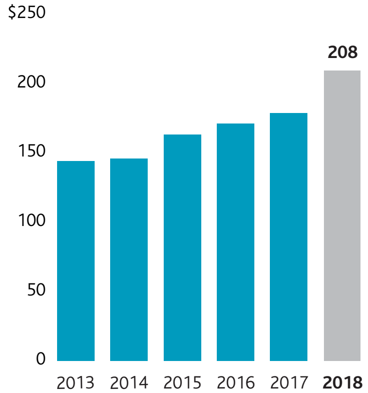
Administering one of Canada's largest payrolls, with pension and benefit payments of $6.1 billion in 2018, we pride ourselves on providing pensioners with timely, reliable payments.

Our Pension Obligation and Performance Index (POPI) result for 2018 was 98.3. This means that more than 98% of our pension payments were made accurately and on time.

SERVICE COST

The cost per member was $208 in 2018, compared to $177 in 2017.

SERVICE COST PER MEMBER
For the years ended December 31 (Canadian $)



The cost of administering the pension plan has been rising over the past six years. This is in part due to ongoing investments in talent and technology, which have been fundamental in creating value, reducing risk and providing an excellent experience for members. Looking ahead, we will continue to turn to our employees – our most valuable asset – to spot opportunities to improve how we do things.

Technology will increasingly shape what we do at Ontario Teachers' because our members are changing and so are their needs. Leveraging new and emerging technology, we will continually redefine our service model to meet the increasing demand for enhanced digital capabilities and communications. We are also in the process of replacing legacy systems and technologies to ensure that our 327,000 members continue to receive outstanding service.

Ontario Teachers' remains committed to cost effectiveness in pension administration and constantly seeks to balance necessary investments with a focus on effective processes and continuous improvements in process and technology. The board and management employ various tools to ensure that costs are appropriate and well managed.

PEOPLE & CULTURE

We know that our employees are our greatest strength – every innovation, every idea and every win has been powered by our people. Attracting and retaining the right employees is crucial to achieving our mission of providing outstanding service and retirement security for our members. Our employees make our success as a world-class pension plan possible. We have spent the last year reimagining our approach to talent and have put a team and strategy in place that will Activate Our Talent, Amplify Our Culture and Accelerate Our Performance.

ACTIVATE OUR TALENT

We are developing a **Talent Hub**, where we will partner with our people to generate deeper people-insights and map our talent to the future.

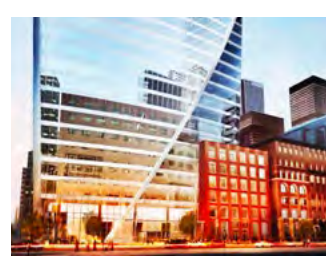
"I joined Ontario Teachers' in 2008 and was given the mandate to build the tax function. Over the years, I have had amazing opportunities – from leading the taxation team in the tax risk oversight of a number of global transactions to managing tax risks that could affect the plan. Most recently, in an out-of-the-box approach presented by our Chief Financial Officer and supported by our new Talent Hub, I accepted an 18-month acting assignment to expand my responsibilities to include leading the Financial & Management Reporting team.

Career aspirations are taken seriously and can translate into unique opportunities. I am an example that shows that Ontario Teachers' really believes that its most valuable assets are its people and is willing to invest in retaining and growing talent."

– Hersh Joshi, Managing Director, Taxation, and Acting Managing Director, Financial & Management Reporting

160 FRONT STREET WEST

In 2018, Cadillac Fairview announced the construction of a new 46-storey office tower at 160 Front Street West. The building's inaugural client is Ontario Teachers', which will relocate its head office from North York to downtown Toronto in approximately 2023.



Substantial thought and cost-benefit analysis went into the decision to relocate. In the end, the decision was made because the move will allow us to meet the evolving needs and expectations of our employees while continuing to attract top talent.

The building is being designed with the environment and employee health in mind. It will achieve the LEED Platinum (the highest level) certification for green buildings, as well as WELL building certification for healthy workspaces.

AMPLIFY OUR CULTURE

We are delivering an exceptional **People Experience** to create the global workplace of tomorrow to propel our organization forward.

"Ontario Teachers' is a truly global organization. I started working in our Hong Kong office in 2015 as a Senior Associate on our Private Capital team. At that time, the office had only 12 employees – today we've more than doubled in size!

Last summer, I accepted an opportunity to participate in a one-year international rotation program. The rotation has been a great way to see first-hand how our other offices operate, build more diverse networks, and gain valuable exposure to different geographies and sectors. The one thing that strikes me the most about this experience is our global perspective. Our teams take a broad view when approaching issues and are very skilled at working in different countries and across cultural differences."

– Paul Lee, Principal, Private Capital, Equities

ACCELERATE OUR PERFORMANCE

We are homing in on our **Leadership Advantage**, where we will build leadership strengths that make a difference and inspire – today and tomorrow.

"I joined Ontario Teachers' more than 23 years ago as an analyst. Looking back, I never could have imagined how many opportunities I'd be given to grow my career here. I've held several different roles within our Capital Markets team over the years, and I was recently promoted to lead the department. My job is to help build on the momentum of our total-fund investment approach to public markets to ensure we're delivering on our strategic priorities.

I feel fortunate to have had so many great mentors at Ontario Teachers'. That's one of the reasons why I'm passionate about developing our talent and building the next generation of leaders. If I can inspire others and share some of the advice I've learned along the way, I'll feel that I've been very successful."

– Gillian Brown, Senior Managing Director, Capital Markets

PLAN GOVERNANCE

Ontario Teachers' believes good governance is good business because it helps companies deliver long-term value. As a plan administrator, we measure ourselves against best practices for governance, internal controls, risk management and stewardship because this helps us deliver long-term value to members.

Since its inception, Ontario Teachers' has been overseen by independent, professional board members who are required to make decisions in the best interest of all beneficiaries of the plan. The plan 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 THE BOARD

The board is independent and oversees management of the pension fund and administration of the pension 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, information technology and investment management.

The board is responsible for administering the pension plan and managing pension funds in accordance with the *Teachers' Pension Act* (Ontario), the *Pension Benefits Act* (Ontario) and the *Income Tax Act* (Canada) as well as all other matters set out in the Partners' Agreements (e.g., setting key actuarial valuation assumptions such as the discount rate). 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 seven 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, Succession, Operational Risk, and Benefits Adjudication. The Investment Committee includes all board members.

In 2018, the board created the Succession Committee. The board is responsible for ensuring that a robust CEO and senior management succession plan is in place. The committee considers and makes recommendations to the board with respect to leadership candidates. The purpose of the committee is to review the process and long-term succession planning to identify the skills, experiences and competencies for leadership candidates.

Board members approve strategic plans, budgets, risk appetite, the acceptable range of risk, investment policies, benchmarks, performance, compensation planning and succession plans recommended by management. They monitor investment, operational, strategic and governance risks and ensure appropriate mitigation plans are in place. They review and approve the unaudited, mid-year consolidated financial statements and the audited consolidated financial statements.

In addition, the board oversees annual investment objectives and reviews transactions above pre-set limits. The board and management are responsible for investment decisions; the plan sponsors are not involved in such decisions.

The board conducts regular preliminary funding valuations to assess the pension plan's long-term financial health. The results of the preliminary funding valuations are reported to the plan sponsors. The board works closely with the independent actuary in setting actuarial assumptions for these valuations, including the discount rate, with input from management. The Canadian Institute of Actuaries Standards of Practice require that each assumption is independently reasonable and that assumptions are appropriate in aggregate.

2018 BOARD HIGHLIGHTS

In 2018, board governance and effectiveness were key areas of focus. Board members completed an in-depth review on board effectiveness and participated in a crisis management simulation. It also focused extensively on talent, global diversification and technology.

Board members met 10 times in 2018 for board meetings and eight times for Investment Committee meetings. In addition, the Governance Committee met four times, the Human Resources & Compensation Committee met four times, the Audit & Actuarial Committee met five times, the Operational Risk Committee met three times and the Benefits Adjudication Committee held two general meetings and three member appeal hearings.

BOARD MEMBERS

Board and committee meeting attendance was 99% in 2018. Please visit otpp.com for full biographies of board members and committee mandates.

STEVE McGIRR
CHAIR
Appointed 2015
Chair since 2019
Attendance 100%

Former Senior Executive Vice-President and Chief Risk Officer, CIBC; Senior Advisor, Lazard Canada Inc.; Member, Queen's University Cabinet; Former director and Investment Committee chair of Wellspring Cancer Support Network

BILL CHINERY
Appointed 2015
Attendance 100%

Former CEO, BlackRock Asset Management; Chair, the Independent Review Committee for the Sun Life Investment Management Institutional Pooled Funds; Advisory Committee of GreenSky Capital Inc.

Chair, Human Resources & Compensation Committee and Succession Committee
Vice-Chair, Investment Committee
Member, Audit & Actuarial Committee

CATHY CRANSTON
Appointed 2019
Attendance N/A

Former Treasurer, BMO Financial Group; Director, Toromont Industries Ltd.; Former director, Bank of Montreal Mortgage Corporation, BMO Trust Company, BMO InvestorLine and BMO Harris Investment Management Inc.

Member, Audit & Actuarial and Operational Risk Committees

PATTI CROFT
Appointed 2016
Attendance 100%

Former Chief Economist with RBC Global Asset Management; Phillips, Hager and North; Sceptre Investment Counsel; and TD Canada Trust. Vice-Chair, Ontario Pension Board; Past director and founding member, Women in Capital Markets; Past director, International Foundation for Employee Benefit Plans, Canadian Medical Association Holdings Inc. and the Boilermakers' National Pension Plan Canada

Chair, Benefits Adjudication and Governance Committees
Member, Audit & Actuarial, Human Resources & Compensation and Succession Committees

LISE FOURNEL
Appointed 2016
Attendance 97%

Former Senior Vice-President and Chief Information Officer, Air Canada; Board member, Desjardins Financial Security; Member of the Technology Committee on the board of l'Université de Montréal; Former board member, l'Université de Montréal, Tourisme Montréal, CIREM and Musée Pointe-à-Callière

Chair, Operational Risk Committee
Member, Governance Committee

GENE LEWIS
Appointed 2018
Attendance 100%

Former General Secretary, Elementary Teachers' Federation of Ontario; Former President, Ontario Public School Teachers' Federation; Former member, Ontario Teachers' Sustainability Workgroup and Partners' Consultative Committee

Vice-Chair, Benefits Adjudication Committee
Member, Audit & Actuarial and Operational Risk Committees

JOHN MURRAY
Appointed 2014
Attendance 100%

Former Deputy Governor, Bank of Canada; Adjunct professor, Queen's University; Former assistant professor, University of British Columbia; Visiting assistant professor, University of North Carolina; Former lecturer, Princeton University; Member, Investment Committee, Canadian Medical Protective Association

Member, Audit & Actuarial and Human Resources & Compensation Committees

KATHLEEN O'NEILL
Appointed 2016
Attendance 100%

Former Executive Vice-President, Personal & Commercial Development, and Head of Small Business Banking at BMO Bank of Montreal; Former partner at PriceWaterhouse Coopers; Board member of ARC Resources Inc. and Finning International Inc; Former board member, Cadillac Fairview; Past chair, St. Joseph's Health Centre Foundation and St. Joseph's Health Centre, Toronto

Chair, Audit & Actuarial Committee
Member, Operational Risk and Succession Committees

BARBARA PALK
Appointed 2012
Attendance 100%

Former President, TD Asset Management Inc.; Board member, TD Asset Management USA Funds Inc.; Director, First National Financial; Member, board of trustees, Crombie REIT; Former chair, Board of Trustees, Queen's University; Former Governance chair, Canadian Coalition for Good Governance

Chair, Investment Committee
Member, Human Resources & Compensation, Governance and Succession Committees

DAVID SMITH
Appointed 2009
Attendance 100%

Former Chair and Senior Partner, PricewaterhouseCoopers; Former President & CEO, Canadian Institute of Chartered Accountants; Chair, Government of Canada's Small Departments Audit Committee; Former chair, Government of Canada's Audit Committee

Member, Governance and Operational Risk Committees

DANIEL SULLIVAN
Appointed 2010
Attendance 90%

Former Consul General of Canada in New York; Former deputy chair, Scotia Capital; Former chair and director, Toronto Stock Exchange; Former board member, Cadillac Fairview

Member, Human Resources & Compensation and Governance Committees

LEGISLATIVE AND REGULATORY UPDATE

Regulatory oversight

In 2018, Ontario appointed additional directors to the first board of directors for the new Financial Services Regulatory Authority (FSRA) and also appointed FSRA's first CEO. FSRA is intended to have regulatory authority across multiple financial sectors and to modernize the current regulatory structure and approach. Unlike the Financial Services Commission of Ontario (FSCO), which currently regulates Ontario Teachers' and other pension plans, FSRA is intended to have authority to publish binding rules.

In spring 2018, the Ontario government announced that FSRA is targeted to assume regulatory responsibilities from FSCO in April 2019. To this end, in fall 2018, FSRA published for stakeholder consultation a proposed rule governing the assessment and levying of fees payable by FSRA's regulated sectors, including pension plans and Ontario Teachers'.

Ontario Teachers' continues to proactively engage with FSRA's board of directors and new CEO, including on matters related to FSRA's proposed fee rule and the ongoing transition from FSCO to FSRA.

Compliance and advocacy

We interact with regulatory and government officials on a variety of investment and pension administrative matters, advocating for clear and consistent rules and sharing our expertise on public policy issues that are relevant to our mission of providing outstanding service and retirement security for plan members.

Taxation

The global tax landscape is constantly evolving: tax policies shift and scrutiny by tax authorities is increasing. In response, Ontario Teachers' has adopted a conservative approach to tax risk and planning. We comply with all applicable tax laws and regulations in the countries where we invest, and monitor emerging trends and changes in tax laws to confirm that our investments remain in compliance.

As a global investor, we believe it is important for governments to pursue clarity and predictability in tax laws, and we welcome the opportunity to engage in consultations on tax policy matters with authorities and policy-makers worldwide.

More detail on our approach to taxation is available on our website. Please see "Tax Strategy" in the Investment Performance section of otpp.com.

REPORT FROM THE HUMAN RESOURCES & COMPENSATION COMMITTEE

The Human Resources & Compensation Committee (HRCC) is pleased to share with you an overview of our approach to assessing performance and how it aligns with the pay of our employees. Our compensation framework is designed to reward, over the long term, outstanding performance within the bounds of our risk budget. It is primarily focused on:

- paying for performance;
- attracting and retaining top investment, corporate, and member services talent;
- delivering on our pension promise;
- living Ontario Teachers' mission, vision and values.

ONTARIO TEACHERS' 2018 PERFORMANCE

Under our compensation framework, the overarching driver is the performance of the total-fund. The one-year total-fund return was $3.5 billion above our benchmark, and our four-year cumulative value add was $11.1 billion. The one-year total-fund net return was 2.5%.

FISCAL 2018 PAY DECISIONS

Over the past four years, Ontario Teachers' total-fund performance relative to our compensation thresholds has been very strong resulting in combined total-fund performance exceeding the performance multiplier of 2.0x target. Management and the Board assessed Ontario Teachers' overall performance relative to a corporate scorecard and deemed based on the metrics that this was also very strong resulting in a multiplier of 1.86x target. The Board assessed Mr. Mock against his individual objectives and determined a multiplier of 2.3x target for 2018. The weighted average of factors resulted in an overall incentive multiplier for Mr. Mock of 2.04x target.

Overall, the HRCC believes the compensation paid for fiscal 2018 is appropriate and aligned with the objectives of Ontario Teachers'.

COMPENSATION DISCUSSION & ANALYSIS

The Compensation Discussion & Analysis explains Ontario Teachers' approach to compensation, the various elements of our pay programs and the remuneration paid to our named executive officers (NEOs). In fiscal 2018, our NEOs were:

- Ron Mock, President and Chief Executive Officer (CEO);
- David McGraw, Chief Financial Officer (CFO);
- Ziad Hindo, Executive Managing Director (EMD) and Chief Investment Officer (CIO);
- Jane Rowe, Senior Managing Director (SMD), Private Capital;
- Jo Taylor, EMD, Global Development.

OUR COMPENSATION FRAMEWORK

Our compensation philosophy and objectives

Ontario Teachers' compensation framework has been developed on a foundation of pay-for-performance ensuring differentiated pay to attract, reward, and retain top performing talent. At Ontario Teachers' we are committed to developing talent with a focus on creating an organization that is diverse and inclusive globally.

Our compensation programs consist of base salary, annual incentive, and long-term incentive and are structured to ensure that there is direct alignment between the long-term performance of the fund and the compensation paid to senior management.

Our compensation framework is designed to:

Align the enterprise	All employees are part of the same compensation framework, with a focus on total-fund returns and risk, driven by collaboration and innovation across groups and asset classes, as well as service to our members, efficiency, and managing costs.
Motivate and reward top performance over the long-term	Incentive compensation makes up a significant portion of total compensation, particularly for more senior employees, to align with Ontario Teachers' pay-for-performance culture. Further, to emphasize performance over the long-term, senior employees generally receive more of their incentive compensation in the form of long-term incentives relative to the market.
Ensure market competitive pay levels and mix to attract and retain high calibre employees	The compensation framework is aligned with the market, considering the various skill sets required to achieve the organization's collective goals. At expected levels of performance, the framework aims to pay around market median, with the opportunity for employees to earn top quartile pay in years of exceptional performance.
Enhance the link between pay and employee behaviours	In measuring employees' individual performance, there is explicit focus on not only what was accomplished, but how employees' behaviours aligned with Ontario Teachers' mission, vision, and values – working in the best interest of the enterprise.
Balance multiple time horizons	Investment performance is measured historically over four years to ensure a longer-term focus aligned with plan beneficiaries. On balance, individual performance, member satisfaction, and the operational and strategic initiatives required to ensure the continuous improvement and success of the organization are measured on an annual basis.
Align pay with employees' level of accountability	The compensation framework takes into account employees' potential to impact performance by ensuring evaluations emphasize the areas over which they have most control (e.g., for junior employees, the focus is on individual performance; for senior employees, more emphasis is placed on the performance of Ontario Teachers' as a whole).

Our compensation framework is designed to:

Provide managers with flexibility to make the "right" pay decision	Structured discretion is embedded in the framework to ensure pay decisions are more than just formulaic outcomes. Managers have the necessary tools to ensure a holistic assessment of performance drives the ultimate pay package for each employee. Senior officers review pay decisions to ensure equity through multiple lenses (i.e., by level, by gender, etc.).
Align with good governance and ensure our compensation programs do not encourage excessive risk taking	The framework is embedded with a number of risk mitigating features (as outlined below) and ensures employees' interests are aligned with those of the members of the Ontario Teachers' Pension Plan. Further, the Long-Term Incentive Plan (LTIP) was enhanced to include an explicit measure of total-fund risk, to ensure sufficient focus on this important area.

Independent benchmarking process

Given the varied employment opportunities at Ontario Teachers', executive and non-executive positions are compared against relevant job groups in like markets. Our objective is to be competitive with those organizations with which we compete directly for talent, including Canadian pension funds, banks, insurance companies, and investment managers, depending on role function and responsibilities.

For certain positions in international markets, we also compare to investment management organizations in the U.K. and Hong Kong regions.

We generally target our total direct compensation at the median of our peers for expected levels of performance, and at top quartile of our peers for exceptional performance.

Key risk mitigating features

The key design principle impacting each employee's incentive pay, to varying degrees, is our risk budget. At the beginning of each year, board members approve the active risk allocations for the total-fund and each investment department, which in turn establish expected annual dollar value add performance goals (i.e., dollars earned versus benchmark dollars earned) for the year. Actual investment performance at the total-fund and departmental levels (measured in dollars of value add) is compared against the expected performance goals. Additional measures used to monitor, assess, and mitigate risk in our incentive programs include:

- setting an upper limit on individual annual incentive payments;
- modelling and testing our annual and long-term incentives under multiple performance scenarios in order to ensure that the payouts align with expected performance outcomes;
- comprehensive balanced scorecards that measure progress against strategic objectives at the enterprise level and division/department level, including risk management initiatives;
- clawback provisions stating that employees committing willful acts of dishonesty, fraud or theft, or otherwise terminated with cause shall be required to pay back all amounts paid to the participant under the annual and/or long-term incentive plans in the preceding 12 months.

Our compensation framework meets or exceeds the Principles for Sound Compensation Practices established by the Financial Stability Board and endorsed by the G20 nations.

INDEPENDENT ADVISORS

In 2018, Ontario Teachers' management engaged Willis Towers Watson to assist with a review of the compensation framework.

ELEMENTS OF OUR COMPENSATION PROGRAM – OVERVIEW

Our compensation program comprises base salary, annual incentives, and long-term incentives for non-bargaining unit employees.

Compensation structures for bargaining unit staff have been negotiated into the collective agreement. The four-year agreement runs through to December 31, 2021.

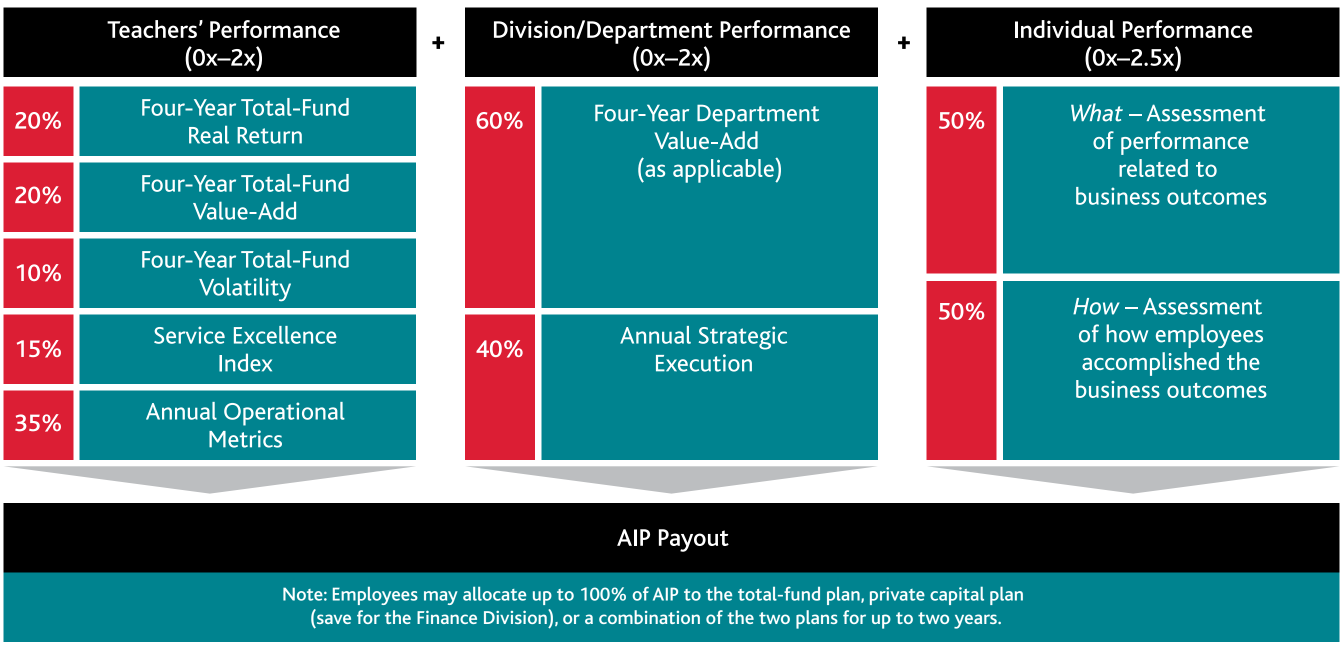
Base salary

Base salaries compensate employees for fulfilling their day-to-day responsibilities and are reviewed annually. Each employee at Ontario Teachers' is assigned a job level with a corresponding salary grade that is designed to provide market-competitive pay commensurate with the employee's responsibilities, demonstrated skills, knowledge, and track record of performance.

Annual Incentive Plan (AIP)

Our AIP rewards employees with cash awards based on business and individual performance results relative to goals.

Weightings for each element vary by level for Investment, Corporate, and Member Services employees.

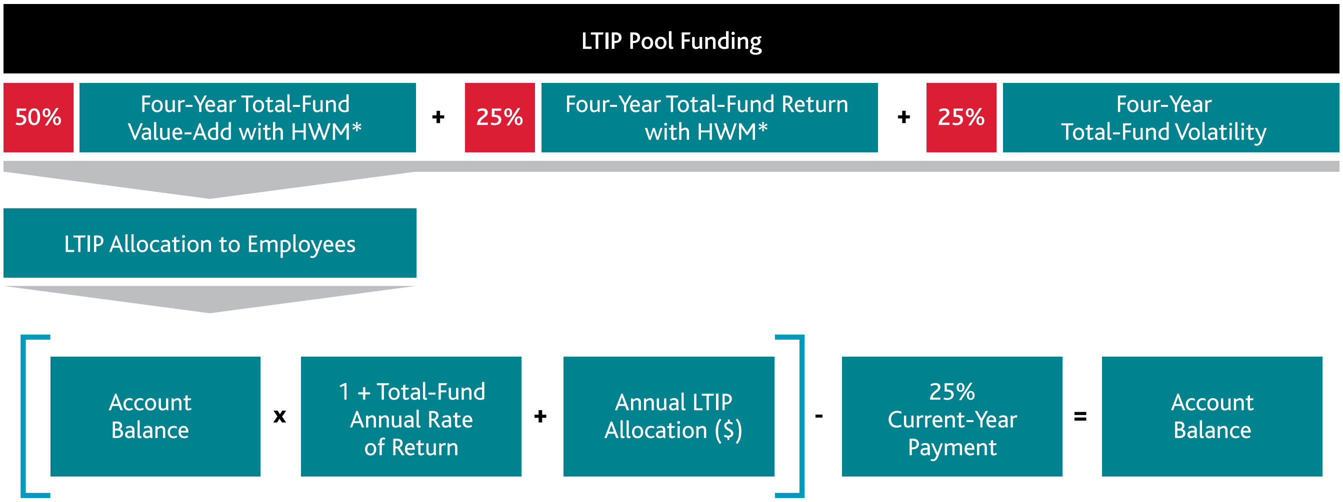


Note: Value add is after deducting management fees, transaction costs and administrative costs allocated to the Active programs (includes annual incentives, but does not include long-term incentives).

Long-Term Incentive Plan (LTIP)

Our LTIP rewards employees with cash awards on the basis of total-fund performance and in consideration of their personal performance and potential. The cash awards are allocated at year end to a notional account which is drawn down at a rate of 25% per year.

LTIP eligible employees include Investment employees at the principal level and above; and Corporate and Member Services employees at the director level and above.



*HWM = high water mark: positive performance required to offset any negative performance.

Mix of pay

Investment, Corporate, and Member Services employees have different percentages of their compensation tied to our variable pay programs. Recognizing their direct influence on investment results, investment professionals, including our CEO, have a greater percentage of their total direct compensation (base salary, annual incentive, and long-term incentive) tied to our variable pay programs. Detailed below is the target total direct compensation mix for our NEOs. The actual pay mix realized may be different depending upon Ontario Teachers', divisional, and investment performance and the NEOs' individual performance.

TARGET PAY MIX

PRESIDENT AND CEO

25.0% Salary
37.5% AIP
37.5% LTIP

EMD AND CIO

25.0% Salary
37.5% AIP
37.5% LTIP

CHIEF FINANCIAL OFFICER

45.4% Salary
27.3% AIP
27.3% LTIP

SMD, INVESTMENTS

26.7% Salary
33.3% AIP
40.0% LTIP

Benefits and other compensation

Ontario Teachers' provides a competitive benefit program that includes life insurance, disability, health and dental benefits, vacation and other leave policies and an Employee Assistance Program. Ontario Teachers' retirement benefit for employees is a defined benefit pension plan described on page 56. Employees based outside of Canada are eligible to participate in local contributory pension plans based on local regulations and market practices.

Executive employment contracts

There are no executive employment contracts or severance guarantees in place.

COMPENSATION DECISIONS MADE IN 2019 REFLECTING 2018

How decisions are made

Annually, the board members and the CEO agree on the key objectives comprising the CEO's individual performance measures. At the end of the year, the board members evaluate the CEO's performance relative to the annual objectives and responsibilities and assign an overall performance rating. The CEO's individual performance rating, Ontario Teachers' performance and total-fund performance are all considered when the board determines the CEO's total direct compensation.

Similar to the CEO, senior officers establish individual performance goals annually and at year-end they are evaluated relative to these goals. The outcome of individual goals and other performance measures, as previously noted, informs the total direct compensation recommendations for senior officers which are presented to board members for approval.

2018 PERFORMANCE RESULTS

Ontario Teachers' performance

To ensure we stay focused on our mission to provide outstanding service and retirement security to our members today and tomorrow, we prepare an enterprise scorecard comprising goals and measures for four categories (total-fund performance, service excellence, operational performance, and employee engagement). The scorecard ensures a balanced view of key areas that will drive employees to achieve our short, medium, and long-term goals.

At the end of the year, the scorecard is evaluated and the results are presented to board members for approval. In 2018, employees delivered exceptional performance with a multiplier of 1.86 out of 2.0.

Total-fund performance

The table below summarizes at the total-fund level, the performance for 2015 through to 2018 relative to the targets as approved by the board. Over the four-year cumulative period, staff outperformed target total-fund value add resulting in the maximum performance multiplier of 2.0x target.

Year	Total-Fund Value Add	Total-Fund Real Return	Total-Fund Volatility
2015 to 2018	Above target	Above target	Exceptional

Division/department performance

The table below summarizes performance in terms of value add earned relative to the return required on the four-year risk allocation for each of the respective investment departments listed below:

Year	Public Equities	Private Capital	Infrastructure & Natural Resources	Capital Markets
2015 to 2018	Below target	Significantly exceeded targets	Significantly exceeded targets	At target

We also assess the strategic execution of each of our divisions and departments across the organization against their respective annual objectives. Overall, employees delivered performance above target, with an average divisional multiplier of 1.7 out of 2.0.

EXECUTIVE COMPENSATION

The compensation table represents disclosure of base salary, annual incentive, long-term incentive and other compensation earned in 2016, 2017 and 2018 by the CEO, the CFO and the three other most highly compensated executives, excluding subsidiary companies.

Name and Principal Position	Year	Base Salary A	Annual Incentive B	Long-Term Incentive Allocation C	Total Direct Compensation[1] A+B+C	Long-Term Incentive Paid D	Other[2] E	Change in Pension Value F	Total Compensation[3] A+B+D+E
Ron Mock President and CEO	2018	$550,000	$1,679,700	$2,970,000	$5,199,700	$2,661,800	$1,161	$418,900	$4,892,661
	2017	543,077	1,575,800	2,722,500	4,841,377	2,496,400	1,177		4,616,454
	2016	514,615	1,364,200	1,287,000	3,165,815	2,208,000	1,159		4,087,974
David McGraw CFO	2018	382,692	422,300	800,000	1,604,992	767,800	809	272,900	1,573,601
	2017	374,894	436,700	800,000	1,611,594	738,500	810		1,550,904
	2016	367,615	374,200	345,000	1,086,815	654,800	828		1,397,443
Ziad Hindo EMD and CIO[4]	2018	381,538	1,101,600	2,300,000	3,783,138	1,892,200	805	500,700	3,376,143
	2017	329,510	755,300	1,732,500	2,817,310	1,446,500	713		2,532,023
	2016	301,942	774,800	544,900	1,621,642	1,232,300	680		2,309,722
Jane Rowe SMD, Private Capital	2018	370,077	947,600	2,300,000	3,617,677	1,838,300	782	323,000	3,156,759
	2017	364,635	849,100	1,780,000	2,993,735	1,643,200	788		2,857,723
	2016	342,769	793,900	490,400	1,627,069	1,456,900	772		2,594,341
Jo Taylor EMD, Global Development[4]	2018	326,308	901,700	1,600,000	2,828,008	1,240,100		26,105[5]	2,468,108
	2017	313,539	801,100	1,884,000	2,998,639	942,600			2,057,239
All amounts are reported in GBP	2016	290,000	549,300	326,900	1,166,200	531,900			1,371,200

[1] When making compensation decisions, the board and management focus on Total Direct Compensation (TDC) which reflects base salary, annual incentive and long-term incentive allocation.

[2] Other compensation includes group term life insurance and accidental death & dismemberment.

[3] Change in pension value and long-term incentive allocation are not included in total compensation.

[4] Effective June 25, 2018 Ziad Hindo was appointed to EMD and CIO and effective September 10, 2018 Jo Taylor was appointed to EMD, Global Development.

[5] Received employer pension contributions as cash-in-lieu.

Notional account balances

The table below outlines the notional account balances for each NEO.

Name and Principal Position	Opening Balance	2018 Rate of Return	January 1, 2019 Allocation	2019 Payment	Balance
Ron Mock President and CEO	$7,489,155	2.51%	$2,970,000	$2,661,800	$7,985,333
David McGraw CFO	2,215,651	2.51%	800,000	767,800	2,303,464
Ziad Hindo EMD and CIO	5,139,660	2.51%	2,300,000	1,892,200	5,676,466
Jane Rowe SMD, Private Capital	4,929,513	2.51%	2,300,000	1,838,300	5,514,944
Jo Taylor EMD, Global Development All amounts are reported in GBP	3,277,956	2.51%	1,600,000	1,240,100	3,720,133

Retirement benefits

Ontario Teachers' employees participate in the Public Service Pension Plan (PSPP) and Public Service Supplementary Plan (PSSP), or the OPSEU Pension Plan, all of which are defined benefit plans. Employees based outside of Canada are eligible to participate in local contributory pension plans based on local regulations and market practices.

Employees with pensionable earnings in excess of Income Tax Act (ITA) regulations also participate in a non-registered, unfunded Supplemental Employee Retirement Plan (SERP).

The table below outlines the estimated present value of the total pension from all sources (PSPP, PSSP and SERP) and estimated annual pension benefits at age 65 for the CEO, the CFO and the two other most highly compensated executives, excluding subsidiary companies.

Name and Principal Position	Projected Years of Service at Age 65	Estimated Total Annual Pension Benefit at Age 65	Present Value of Total Pension January 1, 2018	2018 Compensatory[1] Annual Change in Pension Value	2018 Non-Compensatory[2] Annual Change in Pension Value	Present Value of Total Pension December 31, 2018
Ron Mock[3] President and CEO	18	$ 455,700	$7,270,700	$ 1,082,200	$ (663,300)	$ 7,689,600
David McGraw CFO	17	186,800	2,406,400	391,300	(118,400)	2,679,300
Ziad Hindo EMD and CIO	38	596,600	2,061,900	578,800	(78,100)	2,562,600
Jane Rowe SMD, Private Capital	13	172,800	1,387,200	425,100	(102,100)	1,710,200

[1] Includes the impact of the elimination of annual incentive from pensionable earnings effective January 1, 2019.

[2] Includes interest on liabilities and the impact of any assumption changes.

[3] Mr. Mock's service with Ontario Teachers' is projected beyond age 65 to December 31, 2018.

The values shown above are estimated based on assumptions and represent entitlements that may change over time.

BOARD AND COMMITTEE MEMBER REMUNERATION

The Governance Committee of the board is responsible for making recommendations with respect to Board and committee member remuneration.

Annual Retainer – Chair of the Board	$190,000
Annual Retainer – Board Member	$90,000
Additional Committee Chair Retainer	$15,000
Committee Member Retainer *(if on more than three Committees)*	$5,000

Board members are reimbursed for normal expenses for travel, meals and accommodation, as required. For 2018, these expenses totalled $86,800.

Board Member		Board Meetings	Committee Meetings	2018 Total Remuneration
Jean Turmel	Chair of the Board	10	24	190,000
Bill Chinery	Chair, Human Resources & Compensation Committee	10	17	105,000
Patti Croft	Chair, Benefits Adjudication Committee	10	22	110,000
Lise Fournel	Chair, Operational Risk Committee	9	15	105,000
Gene Lewis		10	16	95,000
Steve McGirr	Chair, Governance Committee and Vice-Chair, Investment Committee	10	16	105,000
John Murray		10	17	90,000
Kathleen O'Neill	Vice-Chair, Audit & Actuarial Committee	10	16	90,000
Barbara Palk	Chair, Investment Committee	10	16	105,000
David Smith	Chair, Audit & Actuarial Committee	10	16	105,000
Daniel Sullivan	Vice-Chair, Benefits Adjudication Committee	10	18	110,000

FINANCIAL REPORTING

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

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

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

FINANCIAL STATEMENT VALUATION

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

Methods and assumptions used for the financial statement valuation

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

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

The discount rate for the financial statements is based on market rates, as at the valuation date, of bonds issued by the Province of Ontario, which have characteristics similar to the plan's liabilities. The discount rate is determined by using a cash flow-based estimation methodology which applies a weighted average discount rate that reflects the estimated timing and amount of benefit payments. The discount rate used is 3.2% (2.95% in 2017). 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, 2018

The plan ended 2018 with a financial statement deficit of $1.2 billion, down from the deficit of $14.8 billion at the end of 2017. The deficit represents the difference between net assets available for benefits of $191.1 billion and accrued pension benefits of $192.3 billion at year end.

YEAR-END FINANCIAL POSITION
As at December 31 (Canadian $ millions)

	2018	2017
Net assets available for benefits	**$ 191,112**	$ 189,478
Accrued pension benefits	**192,281**	204,322
Deficit	**$ (1,169)**	$ (14,844)

During 2018, net assets available for benefits increased by $1.6 billion. Net investment income of $5.2 billion and contributions of $3.2 billion increased net assets available for benefits, while benefits paid of $6.1 billion and administrative expenses of $0.6 billion decreased the net assets available. Net investment income of $5.2 billion was driven by gains from private equity and real assets (investment returns are discussed in the Investments section of the MD&A).

NET ASSETS AVAILABLE FOR BENEFITS
As at December 31 (Canadian $ millions)

	2018	2017
Net assets available for benefits, beginning of year	**$ 189,478**	$ 175,570
Net investment income	**5,233**	16,980
Contributions	**3,166**	3,385
Benefits	**(6,141)**	(5,932)
Administrative expenses	**(624)**	(525)
Increase in net assets available for benefits	**1,634**	13,908
Net assets available for benefits, end of year	**$ 191,112**	$ 189,478

Accrued pension benefits decreased by $12.0 billion during the year to $192.3 billion. Changes in actuarial assumptions decreased the accrued pension benefits amount by $19.8 billion. Benefits paid during 2018 of $6.1 billion include the addition of 5,034 retirement and disability pensions and 1,083 survivor pensions during 2018, as well as a 1.6% cost-of-living increase.

ACCRUED PENSION BENEFITS
As at December 31 (Canadian $ millions)

	2018	2017
Accrued pension benefits, beginning of year	**$ 204,322**	$ 189,397
Interest on accrued pension benefits	**6,043**	6,156
Benefits accrued	**7,157**	6,268
Benefits paid	**(6,138)**	(5,927)
Changes in actuarial assumptions and methods	**(19,812)**	6,653
Changes in level of conditional indexing	**–**	1,207
Experience losses	**709**	568
Net (decrease)/increase in accrued pension benefits	**(12,041)**	14,925
Accrued pension benefits, end of year	**$ 192,281**	$ 204,322

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 securities that are sold but not yet purchased, which are valued using quoted prices. Examples of Level 2 net investments include marketable corporate bonds that are valued using quoted prices from less actively traded markets and securities purchased under agreements to resell and securities sold under agreements to repurchase, which are valued using discounted cash flows and observable market yields. Examples of Level 3 investments include real assets such as real estate and infrastructure, non-publicly traded equities, and natural resource investments, which are valued using appropriate techniques that involve the use of significant unobservable inputs such as forecasted cash flows or other information that is specific to the entity.

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

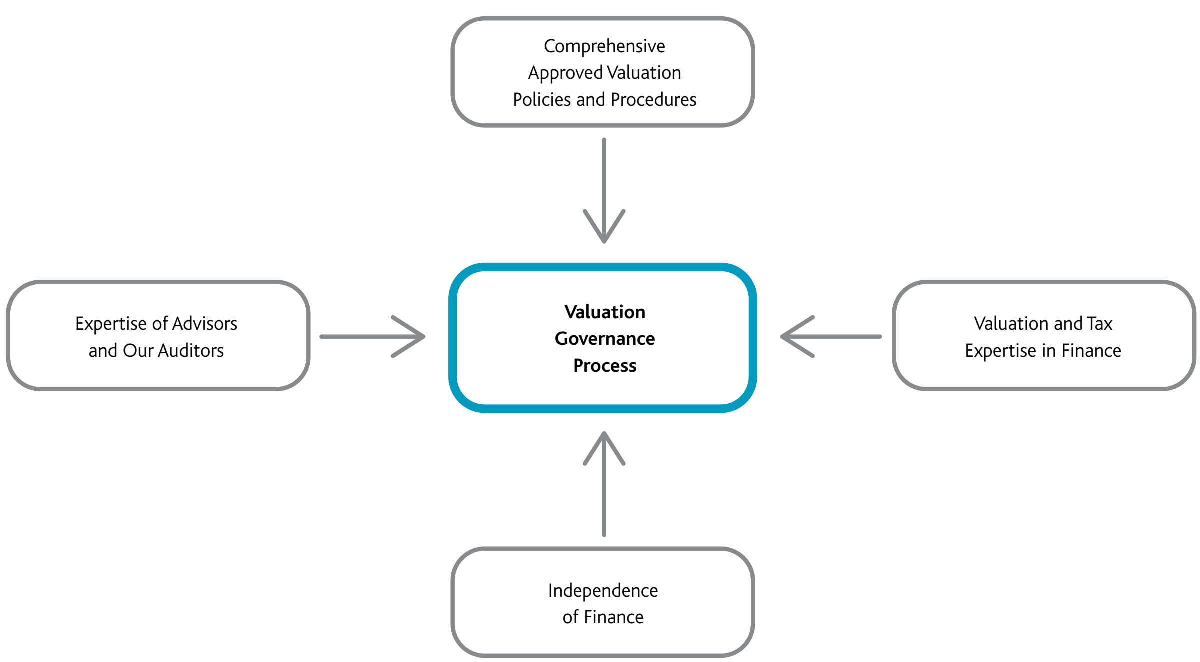
As at December 31 (Canadian $ millions)	Level 1	Level 2	Level 3	**Total**
Equity	$ 21,757	$ 162	$ 37,884	**$ 59,803**
Fixed income	85,455	12,084	15,926	**113,465**
Inflation sensitive	875	–	8,117	**8,992**
Real assets	2,485	309	46,349	**49,143**
Investment-related receivables	2,830	22,469	189	**25,488**
Investment-related liabilities	(16,095)	(51,138)	(2,076)	**(69,309)**
Net investments	$ 97,307	$ (16,114)	$ 106,389	**$ 187,582**

Valuation of Level 3 investments

The valuation of our investments is guided by IFRS 13: Fair Value Measurement. This standard provides guidance on fair value measurements including the definition of fair value. The fair value of Ontario Teachers' Level 3 investments (i.e., where we must rely on significant unobservable inputs to determine fair value) are subject to a tremendous level of scrutiny. This high level of scrutiny is the result of our strong governance around the valuation process related to Level 3 investments. This includes:

- Comprehensive approved valuation policies and procedures for all asset classes
- Deep in-house valuation and tax expertise within our Finance team
- Independence of our Finance team from the Investments team. We also maintain appropriate segregation of duties, with most Level 3 valuations requiring three levels of Finance sign off
- Use of independent external valuation experts and real estate appraisers enabling us to benefit from their expertise, knowledge and familiarity with local market conditions, market transactions and industry trends
- Annual and semi-annual reporting to the Audit & Actuarial Committee on Level 3 investment valuations
- Valuations are subject to audit by Deloitte
- Additionally the valuations of Level 3 investments are also subject to periodic internal audits.

Valuation Governance Process



Please see note 1c of the financial statements for further details regarding the valuation of investments.

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, 2018, 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 2018.

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 2018, fees paid to Deloitte Touche Tohmatsu Limited (of which the Canadian firm is the plan's auditor) totalled $14.4 million ($14.2 million in 2017), of which $13.1 million was for audit activities and $1.3 million was for non-audit services. Of the $1,300,000 paid for non-audit services, approximately $265,000 was related to the plan, $100,000 was related to subsidiaries audited by Deloitte and the balance of $935,000 was for subsidiaries not audited by Deloitte. Of the $100,000 paid by the subsidiaries, $95,000 was paid to Deloitte (Canada) and $5,000 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.

R Mock.

Ron Mock
President and Chief Executive Officer
February 28, 2019

David McGraw

David McGraw
Chief Financial Officer

INDEPENDENT AUDITOR'S REPORT

To the Administrator of

Ontario Teachers' Pension Plan Board:

OPINION

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

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

BASIS FOR OPINION

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

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

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

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

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

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

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

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

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

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

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

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

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

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

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

Deloitte LLP.

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

ACTUARIES' OPINION

Mercer (Canada) Limited was retained by the Ontario Teachers' Pension Plan Board (the Board) to perform an actuarial valuation of the going concern liabilities of the Ontario Teachers' Pension Plan (the Plan) as at December 31, 2018, for inclusion in the Plan's consolidated financial statements. As part of the valuation, we examined the Plan's recent experience with respect to the non-economic assumptions and presented our findings to the Board.

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

- membership data provided by the Ontario Teachers' Pension Plan Board as at August 31, 2018;
- methods prescribed by Section 4600 of the Chartered Professional Accountants Canada Handbook for pension plan financial statements;
- real and nominal interest rates on long-term bonds at the end of 2018;
- assumptions about future events (for example, future rates of inflation and future retirement rates) which have been communicated to us as the Board's best estimate of these events; and
- information obtained from the Ontario Ministry of Labour and other published data, where applicable, on wage rate changes.

The objective of the consolidated financial statements is to fairly present the financial position of the Plan on December 31, 2018, as a going concern. This is different from the funding valuation (the actuarial valuation required by the Pension Benefits Act (Ontario)), which establishes a prudent level for future contributions.

While the actuarial assumptions used to estimate liabilities for the Plan's consolidated financial statements represent the Board's best estimate of future events and market conditions at the end of 2018, and while in our opinion these assumptions are reasonable, the Plan's future experience will inevitably differ, perhaps significantly, from the actuarial assumptions. Any differences between the actuarial assumptions and future experience will emerge as gains or losses in future valuations, and will affect the financial position of the Plan at that time.

We have tested the data for reasonableness and consistency, and we believe it to be sufficient and reliable for the purposes of the valuation. We also believe that the methods employed in the valuation are appropriate for the purposes of the valuation, and that the assumptions used in the valuation are in accordance with accepted actuarial practice. Our opinions have been given, and our valuation has been performed, in accordance with accepted actuarial practice in Canada.

Scott Clausen, F.C.I.A., F.S.A.
February 28, 2019

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

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

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

On behalf of the Plan administrator:

Chair

Board Member

CONSOLIDATED STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

For the year ended December 31 (Canadian $ millions)	2018	2017
Net assets available for benefits, beginning of year	**$ 189,478**	$ 175,570
Investment operations		
Net investment income (note 6)	**5,233**	16,980
Administrative expenses (note 11a)	**(555)**	(467)
Net investment operations	**4,678**	16,513
Member service operations		
Contributions (note 9)	**3,166**	3,385
Benefits (note 10)	**(6,141)**	(5,932)
Administrative expenses (note 11b)	**(69)**	(58)
Net member service operations	**(3,044)**	(2,605)
Increase in net assets available for benefits	**1,634**	13,908
Net assets available for benefits, end of year	**$ 191,112**	$ 189,478

CONSOLIDATED STATEMENTS OF CHANGES IN ACCRUED PENSION BENEFITS

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

CONSOLIDATED STATEMENTS OF CHANGES IN DEFICIT

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 2018

DESCRIPTION OF PLAN

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

(a) General

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

The Plan is registered with the Financial Services Commission of Ontario (FSCO) and under the *Income Tax Act* (Canada) (the ITA) (registration number 0345785) as a Registered Pension Plan (RPP) which is exempt from income taxes in Canada. The Plan may be liable for taxes on income earned in other jurisdictions.

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

(b) Funding

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

(c) Retirement pensions

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

(d) Disability pensions

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

(e) Death benefits

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

(f) Escalation of benefits

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

(g) Retirement Compensation Arrangement

Restrictions in the ITA and its regulations on the payment of certain benefits from the RPP for periods of service after 1991 may impact some Plan members. To address affected members, the Retirement Compensation Arrangement (the RCA) was established by agreement between the co-sponsors as a supplementary plan to provide for these benefits. Examples of these benefits include: (1) members of the Plan who retired with average earnings above $159,471 (CPP-exempt members $147,222) in 2018 and $157,755 (CPP-exempt members $145,722) in 2017; and (2) members whose pensions would require a larger reduction for early retirement to comply with the ITA limitations than the Plan would impose. Because the RCA is a separate trust, the net assets available for benefits and accrued benefits and deficit of the RCA are not included in these consolidated financial statements.

NOTE 1.
SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(a) Basis of presentation

These consolidated financial statements are prepared in Canadian dollars, the Plan's functional currency, in accordance with the accounting standards for pension plans in Part IV of the Chartered Professional Accountants (CPA) Canada Handbook (Section 4600). Section 4600 provides specific accounting guidance on investments and pension obligations. For accounting policies that do not relate to either investments or pension obligations, the Plan must consistently comply with either International Financial Reporting Standards (IFRS) in Part I or accounting for private enterprises in Part II of the CPA Canada Handbook. The Plan has elected to comply with IFRS in Part I of the CPA Canada Handbook. To the extent that IFRS in Part I is inconsistent with Section 4600, Section 4600 takes precedence.

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

The consolidated financial statements for the year ended December 31, 2018 were authorized for issue through a resolution of the Board on February 28, 2019.

(b) Future changes in accounting policies

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

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

Management has determined that there will not be a significant impact on either the Plan’s financial position or its investment income upon adoption of the new standard.

(c) Investments

Valuation of investments

Investments are either directly or indirectly owned by the Plan. Investment-related liabilities are incurred by the Plan directly. Details of investments and investment-related liabilities are presented in note 2a and are stated at fair value. Fair value is the price that would either be received to sell an asset or be paid to transfer a liability in an orderly transaction (i.e., an exit price) between market participants at the measurement date. In an active market, fair value is best evidenced by an independent quoted market price. In the absence of an active market, fair value is determined by valuation techniques that make maximum use of inputs observed from markets.

Fair values of investments are determined as follows:

a. Short-term investments and commercial paper are valued using either quoted closing mid-market prices or discounted cash flows based on current market yields, when quoted closing mid-market prices are unavailable.
b. Bonds, including both nominal and real return, are valued on the basis of quoted closing mid-market prices. If quoted closing mid-market prices are not available, estimated values are calculated using discounted cash flows based on current market yields and comparable securities, as appropriate.
c. Securities sold under agreements to repurchase and securities purchased under agreements to resell are valued using discounted cash flows based on current market yields.

d. Public equities are valued at quoted closing mid-market prices. When the market for a public equity is not active, management assesses whether the quoted prices represent fair value. If not, management adjusts the quoted prices or estimates the fair value by using appropriate techniques including valuation models.

e. Real estate, private equities, infrastructure, timberland, and natural resources are valued based on estimated fair values determined by using appropriate techniques and best estimates by either management, appraisers, or both. Where external appraisers are engaged to perform the valuation, management ensures the appraisers are independent and compares the assumptions used by the appraisers with management's expectations based on current market conditions and industry practice to ensure the valuation captures the business and economic conditions specific to the investment.

   At least 70% of the value of the rental property portfolio covering all product types and geographic regions is independently appraised annually. Real estate properties with a value of over $250 million will be valued independently every year. Private equity funds are recorded at fair value based on net asset values obtained from each of the funds' administrators. These net asset values are reviewed by management.

f. Derivative financial instruments are recorded at fair value using market prices where available. Where quoted market values are not readily available, appropriate alternative valuation techniques are used to determine fair value. In determining fair value, consideration is also given to the credit risk of the counterparty through the calculation of a credit valuation adjustment.

g. Alternative investments, comprised primarily of hedge funds and managed futures accounts, are recorded at fair value based on net asset values obtained from each of the funds' administrators. These net asset values are reviewed by management.

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

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

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

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

Fair value hierarchy

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

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

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

Trade-date reporting

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

Net investment income

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

Transaction costs

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

Management fees

Management and performance fees for external investment managers and administrators are expensed as incurred when directly invoiced or information is otherwise available from capital notices or other manager communications. Fees related to other externally managed investments are offset against investment income. Management fees include incremental costs incurred with external parties that are directly attributable to existing investments and are not related to acquisition or disposal.

(d) Foreign currency translation

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

(e) Accrued pension benefits

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

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

(f) Contributions

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

(g) Benefits

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

(h) Premises and equipment

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

(i) Use of estimates

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

(j) Contingencies

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

NOTE 2.
INVESTMENTS

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

(a) Investments[1] before allocating the effect of derivative contracts

The schedule below summarizes the Plan's investments and investment-related liabilities, including net accrued interest and dividends of $714 million (2017 – $626 million), before allocating the effect of derivative contracts:

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

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

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

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

(b) Fair value hierarchy

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

				December 31, 2018
(Canadian $ millions)	**Level 1**	**Level 2**	**Level 3**	**Total**
Equity	**$ 21,757**	**$ 162**	**$ 37,884**	**$ 59,803**
Fixed income	**85,455**	**12,084**	**15,926**	**113,465**
Inflation sensitive	**875**	**—**	**8,117**	**8,992**
Real assets	**2,485**	**309**	**46,349**	**49,143**
Investment-related receivables	**2,830**	**22,469**	**189**	**25,488**
Investment-related liabilities	**(16,095)**	**(51,138)**	**(2,076)**	**(69,309)**
Net investments	**$ 97,307**	**$ (16,114)**	**$ 106,389**	**$ 187,582**

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

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

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

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

[3] Transfers in and transfers out of Level 3 are due to the change in the availability of observable inputs used for fair value measurement of investment assets or related liabilities. There were no transfers between Level 2 and Level 1 in 2018 and 2017. See note 1c Fair Value Hierarchy.

(c) Derivative contracts

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

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

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

Swaps

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

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

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

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

Forwards and futures

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

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

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

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

Options

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

Credit derivatives

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

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

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

Other derivative products

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

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

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

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

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

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

(d) Investment asset mix

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

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

(e) Risk management

Objectives

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

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

Policies

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

- Statement of Investment Policies and Procedures – The statement addresses the manner in which the fund shall be invested. The statement is subject to the Board's review at least annually. The Plan's investments are selected and held in accordance with the criteria and limitations set forth in the statement and in accordance with all relevant legislation. The statement effective for the year ended December 31, 2018 was last amended May 1, 2018 and includes the following asset allocation ranges:

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

[7] The money market asset class provides funding for investments in other asset classes.

- Board Investment Policy – This policy applies to the total-fund and aggregate asset classes. The policy addresses the risks that are relevant and material at the total-fund level. The policy sets ranges for allocations to the asset classes and foreign currency. Management determines exposure within these approved ranges. The policy also specifies the risk budget allocation and lists investment constraints such as maximum exposures permitted for different types of investments and liquidity requirements. The Board approves this policy and reviews it regularly.
- Investment Division Policy – This policy addresses the manner in which the Investment Division is organized for the purpose of undertaking the investment and risk management of the fund and for day-to-day operations management. This policy specifies the oversight role of the CEO, CIO and senior management committees within the Investment Division.
- Portfolio policies for each investment department – These policies are developed to apply to the individual portfolios within each asset class managed by the Investment Division. Portfolio policies include the departments' investment strategies, operating procedures, investment constraints, key risks and a description of how the risks will be managed and reporting requirements for each investment department.
- Trade Authorization and Execution Operation Policy – This policy specifies operational requirements to be followed within the Investment Division to trade on regulated exchanges and in OTC markets.
- Investment Division Counterparty Credit Policy – This policy applies to investments with credit risk exposure that arises from entering into certain counterparty agreements. The policy provides constraints on counterparty credit exposure and procedures for obtaining authorization to trade with a new counterparty.

- Pre-Investment Approval Policy – This policy formalizes the procedures to ensure the data needed for trade capture, pricing, risk management, and accounting is accurate, complete, and can be entered into the Plan's systems of record on a timely basis prior to commencement of trading.

Processes

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

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

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

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

(f) Credit risk

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

Credit risk management

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

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

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

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

Maximum exposure to credit risk before collateral held

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

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

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

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

					2018
Credit rating (Canadian $ millions)	**Bonds and Short-term investments**	**Real-rate products**	**Securities purchased under agreements to resell**	**Loans and Private debt**	**OTC Derivatives**
AAA/R-1 (high)	$ 37,520	$ 31,377	$ —	$ —	$ —
AA/R-1 (mid)	2,267	77	5,277	—	82
A/R-1 (low)	12,575	2,901	7,945	—	1,124
BBB/R-2	5,742	—	248	—	66
Below BBB/R-2	3,016	—	—	—	—
Unrated[8]	2,552	63	2,356	12,958	—
	$ 63,672	$ 34,418	$ 15,826	$ 12,958	$ 1,272

Credit rating (Canadian $ millions)	Bonds and Short-term investments	Real-rate products	Securities purchased under agreements to resell	Loans and Private debt	OTC Derivatives
					2017
AAA/R-1 (high)	$ 39,290	$ 31,068	$ —	$ —	$ —
AA/R-1 (mid)	2,360	75	2,331	—	39
A/R-1 (low)	12,687	2,983	15,876	—	633
BBB/R-2	5,630	—	352	—	—
Below BBB/R-2	2,573	—	—	—	—
Unrated[8]	2,460	79	6,074	12,356	—
	$ 65,000	$ 34,205	$ 24,633	$ 12,356	$ 672

[8] Unrated comprises securities that are either privately held, managed externally, or not rated by the rating agencies.

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

As at December 31 (Canadian $ millions)	2018	2017
Guarantees	**$ 280**	$ 359
Loan commitments	**18**	63
Notional amount of written credit derivatives	**38,108**	17,308
Total off balance sheet credit risk exposure	**$ 38,406**	$ 17,730

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

Credit risk concentrations

As at December 31, 2018, the Plan has a significant concentration of credit risk with the Government of Canada, the Province of Ontario and the U.S Treasury. This concentration relates primarily to holding Government of Canada issued securities of $42.5 billion (2017 – $45.4 billion), U.S. Treasury issued securities of $10.8 billion (2017 – $13.0 billion), Province of Ontario bonds of $6.5 billion (2017 – $6.7 billion), receivable from the Province of Ontario (see note 3) of $3.2 billion (2017 – $3.3 billion) and future provincial funding requirements of the Plan.

(g) Market risk

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

Market risk management

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

Market and credit risk measurement

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

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

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

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

The Plan continuously monitors and enhances the risk calculation methodology, striving for better estimation of risk exposure.

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

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

9 Rounded to the nearest $0.5 billion.

10 Total Asset Risk ETL Exposure does not equal the sum of ETL exposure for each asset class because diversification reduces total risk exposure.

Interest rate risk

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

The Plan measures interest rate risk of relevant asset classes in its asset mix (note 2d). The Plan measures the sensitivity to changes in nominal interest rates of bonds and derivative contracts included in its Fixed Income and Credit asset classes - a 1% increase in nominal interest rates would result in a decline in the value of these investments of $7.6 billion (2017 – $6.5 billion). Similarly, the Plan measures the sensitivity to changes in real interest rates of real-rate products and derivative contracts included in its Fixed Income and Real Assets asset classes - a 1% increase in real interest rates would result in a decline in the value of these investments of $3.1 billion (2017 – $3.1 billion).

The Plan also measures the sensitivity of nominal and real-rate securities and derivative contracts that are included in the Inflation hedge category of the Plan's Inflation sensitive asset class to changes in market-implied inflation. A 1% increase in the market-implied rate of inflation would result in an increase in the value of these investments of $2.0 billion (2017 - $1.6 billion).

As at December 31, 2018, holding the inflation and salary escalation assumptions constant, a 1% decrease in the assumed long-term real rates of return would result in an increase in the pension liabilities of approximately 21% or $40.1 billion (2017 – 22% or $45.3 billion).

Foreign currency risk

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

As at December 31, the Plan has investments exposed to foreign currency. In Canadian dollars this exposure is as follows:

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

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

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

(h) Liquidity risk

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

Liquidity risk management

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

Liquid assets

The Plan maintains a portfolio of highly marketable assets including Canadian and U.S. government bonds that can be sold or funded on a secured basis as protection against any unforeseen interruption to cash flow. The fair value of the Canadian and U.S. government bonds is $53,216 million as at December 31, 2018 (2017 – $58,435 million). The Plan also has publicly traded equities of $20,156 million net of short positions (2017 – $23,852 million) which are listed on major recognized stock exchanges. These securities are readily realizable and convertible to cash.

Contractual maturity

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

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

(Canadian $ millions)				**2018**
	Within One Year	**One to Five Years**	**Over Five Years**	**Total**
Securities sold under agreements to repurchase	**$ (21,040)**	**$ (7,240)**	**$ —**	**$ (28,280)**
Securities sold but not yet purchased				
Equities	**(2,617)**	**—**	**—**	**(2,617)**
Fixed income	**(12,493)**	**—**	**—**	**(12,493)**
Real estate	**(587)**	**(2,257)**	**(1,050)**	**(3,894)**
Commercial Paper	**(8,676)**	**—**	**—**	**(8,676)**
Term debt	**—**	**(5,091)**	**—**	**(5,091)**
Cash collateral received under credit support annexes	**(937)**	**—**	**—**	**(937)**
Derivative-related, net	**(7,321)**	**—**	**—**	**(7,321)**
	$ (53,671)	**$ (14,588)**	**$ (1,050)**	**$ (69,309)**

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

(i) Collateral pledged and received

The Plan pledges and receives cash and security collateral in the ordinary course of managing net investments. Security collateral consists primarily of Canadian and U.S. government securities. Generally, additional collateral is provided if the value of the securities falls below a predetermined level. The securities transferred are recognized as assets when the Plan retains substantially all risks and rewards, including credit risk, settlement risk and market risk. The Plan is not allowed to either pledge the same securities with other financial institutions or to sell them to another entity unless the Plan substitutes such securities with other eligible securities. The Plan holds the collateral received as long as the Plan is not a defaulting party or an affected party in connection with a specified condition listed on the contractual agreements and there is no early termination of the contractual agreement. The Plan is permitted to either sell or repledge the collateral in the absence of default by the owner of the collateral. The fair value of collateral sold or repledged as at December 31, 2018 is $nil (2017 - $nil).

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

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

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

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

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

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

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

(j) Offsetting financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is reported in the Consolidated Statements of Financial Position when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis, or realize the asset and settle the liability simultaneously. Certain repurchase agreement transactions settled through a central clearing counterparty satisfy the offsetting criteria. The Plan enters into agreements with counterparties such as ISDA Master Agreements and Global Master Repurchase Agreements (GMRA's) in order to mitigate its exposure to credit losses (see note 2f). These agreements provide rights to allow the parties to settle obligations on a net basis when certain predetermined events occur. When these rights of offset are conditional, the related amounts are not netted in the Consolidated Statements of Financial Position.

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

(Canadian $ millions)						**2018**
	Gross amounts	**Less: Amounts offset**	**Net amount presented in note 2a**	**Amounts subject to netting agreements**	**Securities and cash collateral[15]**	**Net Exposure**
Financial assets						
Securities purchased under agreements to resell	**$ 16,216**	**$ (390)**	**$ 15,826**	**$ (13,476)**	**$ (2,314)**	**$ 36**
Derivative-related receivables	**7,056**	**—**	**7,056**	**(4,489)**	**(1,284)**	**1,283**
	$ 23,272	**$ (390)**	**$ 22,882**	**$ (17,965)**	**$ (3,598)**	**$ 1,319**
Financial liabilities						
Securities sold under agreements to repurchase	**$ (28,670)**	**$ 390**	**$ (28,280)**	**$ 13,476**	**$ 14,785**	**$ (19)**
Derivative-related liabilities	**(7,321)**	**—**	**(7,321)**	**4,489**	**2,461**	**(371)**
	$ (35,991)	**$ 390**	**$ (35,601)**	**$ 17,965**	**$ 17,246**	**$ (390)**

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

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

NOTE 3.
RECEIVABLE FROM THE PROVINCE OF ONTARIO

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

As at December 31 (Canadian $ millions)	**2018**	2017
Contributions receivable	**$ 3,184**	$ 3,269
Accrued interest receivable	**40**	45
	$ 3,224	$ 3,314

The receivable as at December 31, 2018, from the Province of Ontario consists of $1,675 million, which was received in January 2019, and an estimated $1,549 million to be received with interest in January 2020. The receivable as at December 31, 2017, from the Province consisted of $1,660 million, which was received in January 2018, and an initial estimate of $1,654 million to be received in January 2019. The difference between the initial estimates and the actual amount received was due to interest.

NOTE 4.
ACCRUED PENSION BENEFITS

(a) Actuarial assumptions

The actuarial assumptions used in determining the value of accrued pension benefits of $192,281 million (2017 – $204,322 million) reflect management's best estimate of future economic events and involve both economic and non-economic assumptions. The non-economic assumptions include considerations such as mortality as well as withdrawal and retirement rates. The primary economic assumptions include the discount rate, the salary escalation rate and the inflation rate. The discount rate is based on market rates, as at the valuation date, of bonds issued by the Province of Ontario, which have characteristics similar to the Plan's liabilities. The discount rate was determined by applying a weighted average discount rate that reflects the estimated timing and amount of benefit payments. The inflation rate is the geometric difference between the yield on Government of Canada long-term nominal bonds and Government of Canada real-return bonds. The salary escalation rate incorporates the inflation rate assumption and long-term expectation of growth in real wages.

A summary of the primary economic assumptions is as follows:

As at December 31	**2018**	2017
Discount rate	**3.20%**	2.95%
Salary escalation rate	**2.40%**	2.70%
Inflation rate	**1.40%**	1.70%
Real rate[1]	**1.80%**	1.25%

[1] Real rates shown as the geometric difference between the discount rate and the inflation rate.

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

There were no changes to the non-economic assumptions as at December 31, 2018. There were refinements in 2017 to the ratio of credited service to qualifying service assumed for future pension accruals as well as the retirement assumptions. Both of these changes were as a result of a study performed focused on the longer period of time required for members to reach full-time employment. The change in non-economic assumptions in 2017 increased the accrued pension benefits by $145 million. The changes in economic and non-economic assumptions resulted in a net decrease in the value of accrued pension benefits of $19,812 million (2017 - $6,653 million increase).

(b) Indexation levels

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

For financial statement valuations, future pension payments are indexed at the levels stated in the most recent funding valuation filing. As a result, the December 31, 2018 accrued pension benefits reflect the indexation levels as stated in the January 1, 2018 funding valuation report.

As noted in the filed January 1, 2018 funding valuation, indexation levels will remain at 100% of CPI for pension credit earned after 2009. This level will remain in effect until the next actuarial valuation is filed with the regulatory authorities at which time the level may be reduced depending on the funded status of the Plan.

The filed January 1, 2017 funding valuation increased indexation levels to 100% of CPI for pension credit earned after 2009 effective January 1, 2018. Also, effective January 1, 2018, pensioners with post-2009 pension credit received a one-time increase to their pensions to prospectively restore benefits to the level they would have been had 100% inflation protection been provided on January 1, 2017. The change in the indexation level resulted in an increase in accrued pension benefits of $1,207 million in 2017.

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

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

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

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

(c) Experience gains and losses

Experience losses on the accrued pension benefits of $709 million (2017 – $568 million losses) arose from differences between the actuarial assumptions and actual results.

NOTE 5.
INVESTMENT IN REAL ESTATE

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

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

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

[1] U.S. Dollar, Mexican Pesos and Colombian Pesos net assets have been hedged by way of foreign currency forward contracts for a notional amount of $1,120 million (2017 – $1,463 million) with a combined fair value of $(37) million (2017 – $3 million).

[2] Joint ventures managed by external parties hold real estate properties and have liabilities. The net asset value of these joint ventures is included in investments, representing assets of $1,215 million (2017 – $1,097 million) and liabilities of $548 million (2017 – $383 million).

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

NOTE 6.
NET INVESTMENT INCOME

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

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

Net Investment Income **2018**

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

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

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

[3] Net of certain management and performance fees.

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

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

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

[6] Net of certain management and performance fees.

NOTE 7.
INVESTMENT RETURNS AND RELATED BENCHMARK RETURNS

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

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

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

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

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

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

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

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

NOTE 8.
FUNDING VALUATIONS

Funding valuations are prepared annually and must be filed at least once every three years with the regulatory authorities. These valuations are used to determine the funding requirements of the Plan. When filing the January 1, 2017 funding valuation, the co-sponsors eliminated the special contributions of 1.1% of pay effective January 1, 2018. As a result, contribution rates reduced to 10.40% of earnings below the CPP limit plus 12.00% of earnings above the CPP limit. In 2017, active members were required to contribute 11.50% of earnings below the CPP limit plus 13.10% of earnings above the CPP limit. Member contributions are matched by the Province and designated employers. The Funding Management Policy established by the co-sponsors provides guidance for the co-sponsors in determining contributions and benefit levels.

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

	Contribution Rate	
(percent)	Earnings below the CPP limit	Earnings above the CPP limit
2011	10.40%	12.00%
2012	10.80%	12.40%
2013	11.15%	12.75%
2014 to 2017	11.50%	13.10%
2018 onwards	10.40%	12.00%

The actuarial methods used to prepare funding valuations are different than those used to prepare a financial statement actuarial valuation and the amounts included in these consolidated financial statements. The funding valuations use an actuarial valuation method which takes into account future benefits to be earned and future contributions to be made by members of the Plan as at the valuation date, whereas the accrued pension benefits recognized in the financial statements represent the actuarial present value of pension obligations in respect of service accrued to date for all active and inactive members.

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

NOTE 9.
CONTRIBUTIONS

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

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

NOTE 10.
BENEFITS

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

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

NOTE 11.
ADMINISTRATIVE EXPENSES

(a) Investment expenses

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

(b) Member services expenses

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

(c) Compensation of key management personnel

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

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

The compensation of the key management personnel[1] as at December 31 is summarized below:

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

[1] The table does not include compensation of either officers or directors of The Cadillac Fairview Corporation Limited.

(d) Employees' post-employment benefits

The employees of the Plan are members of the defined benefit plans, of either the Ontario Public Service Employees Union (OPSEU) Pension Plan or Public Service Pension Plan (PSPP). The expected contributions from the Plan in 2019 are approximately $13.4 million. Some employees are also members of the Public Service Supplementary Plan (PSSP). These three pension plans are sponsored by the Province of Ontario and information is available on www.optrust.com and www.opb.ca. As the employer, the Plan matches the employees' contributions to these pension plans. Some senior management employees also participate in a non-registered, unfunded Supplemental Employee Retirement Plan (SERP) managed by the Plan to provide the employees non-indexed retirement benefits equal to 2% of the employee's pensionable earnings times the number of years of service, less the initial annual pension to which the employee is entitled under the PSPP and PSSP, combined. The contributions expensed by the Plan during the year were $12.5 million (2017 – $7.9 million). Contributions are included in the salaries, incentives and benefits expenses.

NOTE 12.
CAPITAL

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

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

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

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

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

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

NOTE 13.
RETIREMENT COMPENSATION ARRANGEMENT (RCA)

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

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

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

The RCA is funded primarily on a pay-as-you-go basis from a portion of the contributions made to the Plan by members, the Province and designated employers. The portion is based on a limit on contributions to the Plan with contributions above the limit being remitted to the RCA. The limit is determined annually by the Board, after consulting the Plan's independent actuary. The Board's objective is to ensure sufficient funds exist within the RCA to pay for several years (but not more than 10 years) of projected benefits following each valuation date. At the beginning of 2018, the limit was set to remain at $14,500. Due to the funding policy adopted by the co-sponsors, the net assets available for benefits will continue to be substantially less than the accrued benefits.

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

As at December 31 (Canadian $ thousands)		2018		2017
Statements of financial position				
NET ASSETS AVAILABLE FOR BENEFITS				
Assets	**$**	**48,766**	$	48,928
Liabilities		**(2,143)**		(3,787)
	$	**46,623**	$	45,141
ACCRUED PENSION BENEFITS AND DEFICIT				
Accrued pension benefits	**$**	**420,807**	$	382,176
Deficit		**(374,184)**		(337,035)
	$	**46,623**	$	45,141
Statements of changes in net assets available for benefits				
Contributions	**$**	**10,756**	$	17,887
Investment income		**346**		107
		11,102		17,994
Benefits paid		**9,476**		8,957
Expenses		**144**		133
		9,620		9,090
Increase in net assets available for benefits	**$**	**1,482**	$	8,904

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

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

NOTE 14.
COMMITMENTS

The Plan has committed to enter into investment and other transactions, which may be funded over the next several years in accordance with the terms and conditions agreed to. As at December 31, 2018, these commitments totalled $15,360 million (2017 – $11,909 million).

NOTE 15.
GUARANTEES AND INDEMNIFICATIONS

Guarantees

The Plan provides guarantees to third parties related to certain companies the Plan invests in and will be called upon to satisfy the guarantees if the companies fail to meet their obligations. The Plan expects most guarantees to expire unused. No payments have been made by the Plan in either 2018 or 2017 under these guarantees.

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

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

The Plan also guarantees the ability of certain investee companies to settle certain financial obligations. The Plan's maximum exposure is $96 million as at December 31, 2018 (2017 - $91 million).

The Cadillac Fairview Corporation Limited manages the real estate investments and has provided guarantees relating to the completion of the construction of certain residential developments. The term of these guarantees spans the lives of the development projects, which will expire by 2021. The maximum exposure cannot be determined because the projects are not yet complete. These guarantees amounted to $11 million as at December 31, 2018 (2017 – $1 million) and have not been recognized in the real estate liabilities.

The Plan guarantees the $0.75 billion 4.31% Series B Debenture issued by a real estate trust it consolidates. No payments have been made by the Plan into the real estate trust or related to the debenture. The debenture, maturing on January 25, 2021 and included in the Plan's real estate investment-related liabilities, may be redeemed by the issuer at any time prior to maturity.

The Plan also guarantees commercial paper and term debt consisting of US$1.75 billion 2.125% senior notes and US$2 billion 2.75% senior notes issued by Ontario Teachers' Finance Trust which the Plan consolidates. The US$1.75 billion 2.125% and US$2 billion 2.75% senior notes, maturing in September 2022 and April 2021 respectively, are not redeemable prior to maturity at the option of the trust or the Plan except as described in their respective Offering Memoranda dated September 12, 2017 and April 10, 2018. The trust and its affiliates may at any time and from time to time purchase the senior notes in the open market or otherwise. The commercial paper is not redeemable prior to maturity or subject to voluntary prepayment, except as described in the U.S. Commercial Paper Private Placement Memorandum dated June 2017. The maturity terms for the commercial paper outstanding as at December 31, 2018 are up to 397 days from the date of issue in the U.S. and up to 364 days in Canada. The maximum aggregate principal amounts of the commercial paper outstanding at any one time do not exceed $10 billion. As at December 31, 2018, commercial paper issued amounted to $8,726 million (December 31, 2017 - $8,968 million). The fair values of these guarantees are included in the Plan's investment-related liabilities.

Indemnifications

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

MAJOR INVESTMENTS

As at December 31, 2018

FIXED INCOME AND SHORT-TERM INVESTMENTS OVER $150 MILLION

Type (Canadian $ millions)	Maturity	Coupon (%)	Fair Value	Cost
Government of Canada bonds	2019–2064	0.50–8.00	$21,124	$19,855
Securities purchased under agreements to resell	2019–2020	-1.00–2.90	15,826	15,577
Provincial bonds	2019–2019	0.00–8.50	11,997	11,803
International corporate bonds	2019–2053	0.00–16.35	6,051	6,073
International sovereign debt	2019–2048	0.00–18.20	5,795	6,057
Canada treasury bills	2019–2019	0.00–0.00	4,396	4,389
Bank notes	2019–2059	0.00–2.25	3,590	3,582
Commercial paper	2019–2019	0.00–2.61	1,125	1,123
Canadian corporate bonds	2019–2040	0.00–14.00	883	875
U.S. treasury bonds	2026–2048	1.75–6.25	(3,544)	(2,689)
Term debt issued	2021–2022	2.13–2.13	(5,091)	(4,669)
Commercial paper issued	2019–2019	2.13–2.75	(8,676)	(8,323)
Securities sold under agreements to repurchase	2019–2021	-0.80–7.75	(28,280)	(27,869)

REAL-RETURN INVESTMENTS OVER $150 MILLION

Type (Canadian $ millions)	Maturity	Coupon (%)	Fair Value	Cost
Real-return Canada bonds	2021–2050	0.50–4.25	$16,941	$13,849
U.S. treasury inflation protection	2019–2047	0.13–3.88	14,300	12,624
Real-return provincial bonds	2021–2036	2.00–4.50	1,889	1,244
Real-return Canada corporate bonds	2021–2039	0.00–5.33	1,011	458

CORPORATE SHARES/UNITS OVER $150 MILLION

As at December 31, 2018 (millions)

Security Name	Shares	Fair Value
Multiplan Empreendimentos Imobiliarios S.A.	54.8	$1,415.1
The Macerich Company	23.3	1,376.5
Ubisoft Entertainment SA	3.8	418.2
Alphabet Inc.	0.2	324.2
Visa Inc.	1.2	212.8
SiteOne Landscape Supply Inc.	2.0	151.0
Intact Financial Corporation	1.5	150.1

REAL ESTATE PROPERTIES OVER $150 MILLION

As at December 31, 2018

Property	Total Square Footage (in thousands)	Effective % Ownership
Canadian Regional Shopping Centres		
Champlain Place, Dieppe	849	100%
Chinook Centre, Calgary	1,421	100%
Fairview Mall, Toronto	879	50%
Fairview Park Mall, Kitchener	838	100%
Fairview Pointe Claire, Montreal	1,173	50%
Le Carrefour Laval, Montreal	1,428	100%
Les Galeries D'Anjou, Montreal	1,320	50%
Les Promenades St. Bruno, Montreal	1,125	100%
Lime Ridge Mall, Hamilton	807	100%
Market Mall, Calgary	1,005	50%
Markville Shopping Centre, Markham	1,016	100%
Masonville Place, London	664	100%
Pacific Centre, Vancouver	1,073	50%
Polo Park Mall, Winnipeg	1,558	100%
Richmond Centre, Richmond	800	50%
Rideau Centre, Ottawa	1,415	100%
Sherway Gardens, Toronto	1,293	100%
Shops at Don Mills, Toronto	466	100%
Toronto-Dominion Centre, Toronto	159	70%
Toronto Eaton Centre, Toronto	2,539	100%

Property	Total Square Footage (in thousands)	Effective % Ownership
Canadian Office Properties		
Calgary City Centre, Calgary	845	100%
Deloitte Tower, Montreal	515	100%
Granville Square, Vancouver	402	50%
Pacific Centre Office Complex, Vancouver	1,819	50%
RBC Centre, Toronto	1,222	50%
Shell Centre, Calgary	695	100%
Toronto-Dominion Centre Office Complex, Toronto	4,409	70%
Toronto Eaton Centre Office Complex, Toronto	2,191	100%
Waterfront Centre, Vancouver	401	50%
Yonge Corporate Centre, Toronto	662	100%
Canadian Hotel Properties		
The Ritz-Carlton, Toronto	335	100%

PRIVATE COMPANIES AND PARTNERSHIPS OVER $150 MILLION

As at December 31, 2018

24 Hour Fitness Worldwide Inc.
24-7 Intouch Inc.
Actera Partners II L.P.
AEA Investors Fund V LP
AEA Investors Fund VI LP
Aethon Energy Management LLC
Apollo Overseas Partners (Delaware 892) VIII, L.P.
Apollo Special Situations Fund, L.P.
Ares Corporate Opportunities Fund III, L.P.
Ares Corporate Opportunities Fund IV, L.P.
Aroona Farms SA Pty Ltd.
Arterra Wines Canada, Inc.
Automobile Protection Corporation
Autopista Arco Norte, S.A. de CV
Baldr Fund Inc.
BaseCore Metals LP
Baybridge Seniors Housing Inc.
BC European Capital – Intelsat Co-Investment-I L.P.
BDCM Offshore Opportunity Fund II, Ltd.
Birmingham International Airport
BluEarth Renewables Inc.
Bristol Airport Limited
Broad Street Loan Partners III Offshore, LP
BroadStreet Capital Partners, Inc.
Busy Bees Benefits Holdings Limited
Camelot Group plc
Canada Guaranty Mortgage Insurance Company
Catterton Partners VII, L.P.
CeramTec GmbH
Chisholm Energy Holdings, LLC
Copenhagen Airport A/S
Coway Holdings, Inc.
CPG International Inc.
CPI Holdco LLC
CSC ServiceWorks Holdings, Inc.
Cubico Sustainable Investments Limited
DaVinciRe Holdings Ltd.
DTZ Jersey Holdings Ltd.
EdgeMarc Energy Holdings, LLC
Empresa de Servicios Sanitarios del Bio-Bio S.A.
Esval S.A.
Euclid Fund
European Camping Group
EWP PA Fund, LTD.
Exal International Limited
FAPS Holdings, Inc.
Fifth Cinven Fund (No.6) Limited Partnership
FirstFruits HoldCo, LLC
Flexera Holdings, L.P.
Flynn Restaurant Group LLC
FMAP ACL Limited
FMAP CIM Limited
FMAP EAM Limited
FMAP HLS Limited
FMAP PCM Limited
FMAP SOC Limited
FMAP WMC Limited
FountainVest China Growth Fund II, L.P.
GCT Global Container Terminals Inc.
GFL Environmental Inc.
Goldcrest Farm Trust REIT LLC
Hancock Timber Resources Group
Hawkwood Energy, LLC
HayFin Topaz LP
Heartland Dental Care, Inc.
Heritage Royalty Limited Partnership
HRG Royalty LLC
HRG Royalty II LLC
Hudson Catastrophe Fund, Ltd.
Imperial Parking Corporation
Infiltrator Systems, Inc.
Intercos S.p.A.
InterGen N.V.
Irish National Lottery
Kedaara Capital I Limited
Koole Tankstorage Zaandam B.V.
Kyobo Life Insurance Co., Ltd.
LMAP 903 Limited
LMAP 904 Limited
LMAP 909
LMAP 910
LMAP Chi Limited
LMAP Epsilon Limited
LMAP Kappa Limited
LMAP Pi Limited
LMAP Zeta Limited
London City Airport
Lowell Group Limited
MBK Partners III, L.P.
Memora Servicios Funerarios, S.L.U.
MR Argent Offshore Fund AB LP
MSB Capital Limited Class A
Nuevosur, S.A.
Oaktree European Principal Fund IV L.P.
OGF SA
OLE Media Management L.P.
Orbis Institutional Global Equity L.P.
Outdoor Holdings, LLC
PAG Asia I LP
PAG Asia II LP
Pershing Square VI International, L.P.
PhyMed Healthcare Group
Phynet Dermatology LLC
Polar Multi-Strategy Fund (Legacy)
Providence Equity Partners VI L.P.
Pure International Holdings (BVI) Limited
RedBird Capital Partners Platform LP
Resource Management Service Inc.
Riverbed Technology, Inc.
SCI PH Inc.
Scotia Gas Networks plc
SeaCube Container Leasing Ltd.
Shearer's Foods, Inc.
Silver Lake Partners III, L.P.
Silver Lake Partners IV, L.P.
Skyway Concession Company LLC
Sociedad Austral de Electricidad S.A.
Solus Offshore Opportunities Fund 5 LP
Spandana Sphoorty Financial Limited
Storapod Holding Company, Inc.
Sydney Desalination Plant Pty Limited
Synlab Limited
Techem GmbH
The Brussels Airport Company
Thoma Bravo Fund XI-A, L.P.
Thoma Bravo Fund XII-A, L.P.
TierPoint, LLC
TP Partners Fund, L.P.
Traeger Pellet Grills Holdings LLC
Trian Partners Co-Investment Opportunities Fund, L.P.
Trian Partners, Ltd.
ValueAct Capital International Fund A, L.P.
ValueAct Capital International III, L.P.
Verily Life Sciences LLC
Warburg Pincus Private Equity XII-B, L.P.
Westerleigh Group Holdings Limited

ELEVEN-YEAR FINANCIAL REVIEW

(Canadian $ billions)	**2018**	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
CHANGE IN NET ASSETS											
Income											
Net investment income	**$5.23**	$16.98	$7.00	$19.67	$16.26	$13.72	$14.75	$11.74	$13.27	$10.89	$(19.03)
Contributions											
Members/transfers	**1.60**	1.71	1.70	1.67	1.63	1.55	1.48	1.41	1.35	1.29	1.13
Province of Ontario	**1.57**	1.68	1.66	1.64	1.59	1.53	1.46	1.41	1.35	1.43	1.18
Total income	**8.40**	20.37	10.36	22.98	19.48	16.80	17.69	14.56	15.97	13.61	(16.72)
Expenditures											
Benefits	**6.14**	5.93	5.72	5.54	5.31	5.15	4.92	4.66	4.50	4.39	4.20
Investment expenses	**0.56**	0.47	0.45	0.43	0.41	0.36	0.30	0.29	0.29	0.21	0.15
Member Services expenses	**0.07**	0.06	0.06	0.05	0.05	0.05	0.04	0.05	0.05	0.04	0.04
Total expenditures	**6.77**	6.46	6.23	6.02	5.77	5.56	5.26	5.00	4.84	4.64	4.39
Increase/(decrease) in net assets	**$1.63**	$13.91	$4.13	$16.96	$13.71	$11.24	$12.43	$9.56	$11.13	$8.97	$(21.11)
NET ASSETS											
Investments											
Equity											
Publicly traded	**$31.60**	$35.13	$38.97	$49.85	$48.27	$47.62	$48.43	$40.35	$36.74	$32.86	$26.74
Non-publicly traded	**33.35**	31.94	26.98	27.69	20.58	14.27	11.08	11.32	10.75	8.32	8.19
Fixed income											
Bonds	**58.25**	41.41	43.53	37.98	35.19	30.53	28.87	26.50	22.73	15.46	14.22
Real-rate products	**19.47**	19.96	31.72	31.13	30.36	26.37	31.14	29.29	23.24	19.88	17.41
Inflation sensitive											
Commodities	**10.61**	11.08	4.18	4.00	9.03	8.21	6.97	5.64	5.22	1.94	1.25
Natural resources	**8.12**	6.55	6.28	6.25	2.87	2.62	2.17	2.17	2.22	2.34	2.80
Inflation hedge	**8.71**	8.92	–	–	–	–	–	–	–	–	–
Real assets											
Real estate	**27.45**	25.51	26.47	24.86	22.09	19.24	16.86	14.96	16.86	14.21	13.48
Infrastructure	**17.80**	18.74	17.83	15.66	12.66	11.68	9.65	8.71	7.07	5.57	7.23
Real-rate products	**4.33**	1.45	–	–	–	–	–	–	–	–	–
Credit	**15.23**	13.58	–	–	–	–	–	–	–	–	–
Absolute return strategies	**12.55**	10.73	13.28	17.76	15.84	12.20	12.27	12.33	11.38	11.67	14.75
Overlay	**(0.38)**	(0.27)	0.51	–	–	–	–	–	–	–	–
Money market	**(59.51)**	(39.38)	(37.67)	(46.93)	(44.50)	(33.84)	(40.18)	(35.01)	(31.49)	(18.74)	(20.97)
Net investments	**187.58**	185.35	172.08	168.25	152.39	138.90	127.26	116.26	104.72	93.51	85.10
Receivable from Province of Ontario	**3.22**	3.31	3.27	3.21	3.10	2.97	2.83	2.72	2.63	2.52	2.19
Other assets	**0.79**	1.59	1.21	0.44	0.22	0.14	0.50	0.51	0.57	0.63	0.40
Other liabilities	**(0.48)**	(0.77)	(0.99)	(0.46)	(1.23)	(1.25)	(1.07)	(2.39)	(0.39)	(0.26)	(0.25)
Net assets	**191.11**	189.48	175.57	171.44	154.48	140.76	129.52	117.10	107.53	96.40	87.44
Accrued pension benefits	**192.28**	204.32	189.40	173.27	172.73	148.57	166.01	162.59	146.89	131.86	118.14
Deficit	**$(1.17)**	$(14.84)	$(13.83)	$(1.83)	$(18.25)	$(7.81)	$(36.49)	$(45.49)	$(39.36)	$(35.46)	$(30.70)
PERFORMANCE (percent)											
Total-fund net return	**2.5**	9.7	4.0	12.7	11.5	10.6	12.7	10.9	14.0	12.7	(18.1)
Benchmark	**0.7**	8.2	3.5	10.1	10.1	9.3	11.0	9.8	9.8	8.8	(9.6)

ASSUMPTIONS USED FOR FINANCIAL STATEMENT VALUATION

As at December 31 (percent)											
Discount rate	**3.20**	2.95	3.25	3.25	3.35	4.20	3.40	3.40	4.05	4.60	4.00
Salary escalation rate	**2.40**	2.70	2.80	2.50	2.70	3.00	3.00	3.05	3.40	3.55	2.35
Inflation rate	**1.40**	1.70	1.80	1.50	1.70	2.00	2.00	2.05	2.40	2.55	1.35
Real rate[1]	**1.80**	1.25	1.40	1.70	1.65	2.20	1.40	1.35	1.65	2.05	2.65

[1] Effective December 31, 2015, real rate shown as the geometric difference between the discount rate and the inflation rate. Previously, the real rate shown was based on the arithmetic difference between the discount rate and the inflation rate.

FUNDING VALUATION HISTORY

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

The sponsors directed that the surplus as at January 1, 2018 be classified as a contingency reserve 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.

FILED FUNDING VALUATIONS[1]

As at January 1 (Canadian $ billions)	**2018**	2017	2016	2015	2014	2012	2011	2009	2008	2005
Net assets available for benefits	**$189.5**	$175.6	$171.4	$154.5	$140.8	$117.1	$107.5	$87.4	$108.5	$84.3
Smoothing adjustment	**(4.9)**	(2.9)	(10.8)	(8.2)	(7.2)	(3.0)	3.3	19.5	(3.6)	(1.5)
Value of assets	**184.6**	172.7	160.6	146.3	133.6	114.1	110.8	106.9	104.9	82.8
Future basic contributions	**42.9**	41.1	41.5	38.8	37.5	35.4	33.8	25.9	23.6	16.7
Future special contributions	**–**	0.3	3.1	3.5	3.5	3.3	3.8	5.5	5.6	6.2
Future matching of CIP benefit reduction	**–**	–	2.3	5.9	7.4	7.3	5.1	–	–	–
Total assets	**227.5**	214.1	207.5	194.5	182.0	160.1	153.5	138.3	134.1	105.7
Cost of future pensions[2]	**(217.2)**	(208.7)	(205.3)	(197.3)	(188.2)	(167.6)	(158.4)	(137.5)	(134.1)	(105.6)
Reduction in cost due to less than 100% indexing	**–**	–	2.3	5.9	7.4	7.7	5.1	–	–	–
Surplus[3]	**$10.3**	$5.4	$4.5	$3.1	$1.2	$0.2	$0.2	$0.8	$0.0	$0.1

ASSUMPTIONS USED FOR FILED VALUATIONS

As at January 1 (percent)	**2018**	2017	2016	2015	2014	2012	2011	2009	2008	2005
Inflation rate	**2.00**	2.00	2.00	2.00	2.10	2.20	2.15	1.35	2.20	2.750
Real discount rate[4]	**2.75**	2.75	2.75	2.85	2.85	3.10	3.25	3.65	3.45	3.725
Discount rate	**4.80**	4.80	4.80	4.85	4.95	5.30	5.40	5.00	5.65	6.475

[1] Valuation filing dates determined by the plan sponsors.

[2] Includes value of 100% inflation protection.

[3] The sponsors chose to classify the January 1, 2018, surplus as a contingency reserve.

[4] Effective January 1, 2016, real rate shown as the geometric difference between the discount rate and the inflation rate. Previously, the real rate shown was based on the arithmetic difference between the discount rate and the inflation rate.

CONTRIBUTION[5] AND INDEXATION LEVELS[6]

Conditional Inflation Protection (CIP) Level	**2018**	2017	2016	2015	2014	2012	2011	2009	2008	2005
Indexation level (Post-2009–Pre-2014 benefits)	**100.0**	100.0	90.0	70.0	60.0	50.0	60.0	100.0	n/a	n/a
Indexation level (Post-2013 benefits)	**100.0**	100.0	90.0	70.0	60.0	45.0	60.0	100.0	n/a	n/a
Contribution level above the YMPE	**12.0**	13.1	13.1	13.1	13.1	12.4	12.0	12.0	11.2	8.9
Contribution level below the YMPE	**10.4**	11.5	11.5	11.5	11.5	10.8	10.4	10.4	9.6	7.3

[5] Contribution levels are those that were in effect in the calendar year of the valuation.

[6] Indexation levels are effective the January 1 following the valuation date.

2018 DEAL HIGHLIGHTS

BAOSTEEL GASES – We extended our global footprint through a direct investment in mainland China with the acquisition of Baosteel Gases, a leading domestic industrial gas company that operates five main business segments. The investment was made alongside long-standing partner PAG.

EUROPEAN CAMPING GROUP – Ontario Teachers' acquired a 40% minority stake in France-based European Camping Group, joining with management and other investors as the provider of mobile homes holiday rentals targets further global growth.

FIRSTFRUITS FARMS – Ontario Teachers' expanded its agricultural portfolio with the acquisition of Broetje Orchards, which was renamed and operates under the brand of FirstFruits Farms. The company is one of the largest apple growers in the U.S., growing 17 different varieties over 6,800 acres in Washington State.

FLEET COMPLETE – We formed a new partnership with Fleet Complete, a Canadian company and one of the fastest growing technology companies in the connected vehicle space.

GFL ENVIRONMENTAL INC. – Ontario Teachers' participated with a group of investors led by BC Partners in the recapitalization of Toronto-based GFL Environmental Inc., one of the largest environmental services providers in North America.

GLOBAL CONTAINER TERMINALS – We embraced new partnerships with the sale of partial stakes in GCT, a leading container operator in North America, to two leading institutional investors.

HEARTLAND DENTAL – Ontario Teachers' and other existing shareholders sold a majority stake in Heartland Dental, the largest dental support organization in the United States, to KKR. Ontario Teachers' retained sizeable ownership and will continue as a significant partner to the company.

HELLY HANSEN – Ontario Teachers' sold its majority stake in Helly Hansen Group AS, the iconic Norwegian designer and marketer of high-performance outdoor and workwear apparel.

KANETIX LTD. – Ontario Teachers' extended its track record of investing in the financial services and technology industries with the acquisition of Kanetix Ltd., Canada's largest digital customer acquisition platform and marketplace that provides quote comparison search tools for insurance and financial products.

PACIFICO SUR – We took a stake in the concessionaire of Pacifico Sur, a 309-kilometre toll road in Mexico. Pacifico Sur connects Mexico's central valley with the country's northwest region.

TECHEM GMBH – Ontario Teachers' joined Partners Group to acquire Techem GmbH, a global market leader in the provision of heat and water sub-metering services to real estate operators and private homeowners in more than 20 countries.

UBISOFT – Ontario Teachers' partnered with Tencent, the founders and management of Ubisoft and other investors in a negotiated purchase of Vivendi's stake in the France-based publicly listed creator, publisher and distributor of interactive entertainment and services.

Concept and Design: THE WORKS DESIGN COMMUNICATIONS worksdesign.com

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ANNUAL MEETING

April 11, 2019, at 5 p.m. ET
The Arcadian Court
401 Bay Street
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