



**2018  
ANNUAL  
REPORT**

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# President & CEO's Message



**Jim Keohane**  
PRESIDENT & CEO

Our net assets grew to approximately \$79 billion last year, representing a rate of return of 2.17%.

At HOOPP, our top priority is to provide the pensions that we know our members depend on as a secure source of income in retirement. Last year was a challenging one for investing in the markets—and HOOPP was not immune—but we can still look back on the year with a strong sense of accomplishment.

A year ago, our analysis showed that market valuations were high, and we could see significant uncertainty on the horizon. As a result, we took steps to be defensively positioned in our investments. This protected the gains the Fund made over the last decade, ensuring that we can continue to deliver on our pension promise. Our net assets grew to approximately \$79 billion last year, representing a rate of return of 2.17%. This is a good result, even though it falls shy of long-term actuarial rates of expected return for the Fund. Our investment team added value to the Fund, navigating difficult markets in a year where missteps could have resulted in significant losses.

Our funded status remains strong at 121%. In other words, for every dollar the Plan owes in pensions now and in the future, we have \$1.21 in assets. Our funded status is the most important way in which we measure the health of our Plan: it gives members confidence that they can count on their pension when they retire.

## Our Long-Term Approach

To deliver on our pension promise, we take an extremely long-term approach that spreads out investment risk and longevity risk across our entire membership. Consider that when a member first starts making contributions to the Plan, they may be in their 20s, perhaps at their first job in the healthcare field.

## Though market volatility can be unsettling for investors, our members should take comfort in not having to worry about their pension.

We invest those contributions knowing that we will begin paying this member's pension when they retire in their 50s or 60s, and we will continue paying it for 30 or even 40 years after that. While an individual investor must manage these risks on their own to avoid outliving their money, our Plan pools these risks, sharply reducing them for members.

Our Liability Driven Investing strategy is designed specifically for long-term investing and to keep the Plan's funded status stable through a broad range of market and economic conditions. It is meant to help the Plan earn a sufficient rate of return without subjecting our members to excessive volatility. For example, in markets where equities do extremely well, we will likely participate in that growth, but may not outpace our peers. But in years such as 2018, where markets were down sharply, we tend to do a good job of preserving value. Over the long term, this is a strategy that has served us very well. Our robust 10-year annualized return of 11.19% has contributed to our strong funded position.

Though market volatility can be unsettling for investors, our members should take comfort in not having to worry about their pension. We have a diversified portfolio of assets. Most importantly, the Plan's strong financial position gives us a cushion that allows us to withstand downturns in the market and find opportunities during those times. Downturns give us the chance to buy quality long-term assets at attractive prices, benefiting our members.

### Strong Funded Status

As a result of our strong funded status, we were able to provide the maximum increase in the cost of living adjustment (COLA) allowed under the Plan, ensuring that pensions won't lose their buying power as prices increase. Our contribution rates also remain unchanged, which helps keep the Plan affordable for members and employers. Our current rates have been in place since 2004 and will remain at this level until at least the end of 2020.

Our surplus made it possible for the Board to take steps to improve benefits, effective January 1, 2018. Members who have yet to retire and have service before 2018 received an increase in their pension. Retired members who have a spouse have a new five-year guarantee on their monthly pension. We also increased the minimum survivor benefit to 66 2/3% from 60%. In addition, all members not yet retired will also benefit from a change in the way we use the year's maximum pensionable earnings to calculate their pension.

These benefit improvements, which mark a significant milestone in HOOPP's history, demonstrate how members can directly benefit from our long track record of prudent risk management and investment success.

### The Value of a Good Pension

In 2018, we continued our ongoing efforts to advocate for high-quality collective pension plans. On this front, we were pleased to



publish our latest report, *The Value of a Good Pension: How to improve the efficiency of retirement savings in Canada*. We commissioned this research to identify and quantify the value drivers that improve the efficiency of retirement savings. The findings clearly show that there are five key drivers that make Canada-model pension plans like HOOPP the most efficient way to save and provide for retirement. We hope that this research helps bring awareness to the merits of Canada-model pension plans, and that it can be used to support policymakers and other stakeholders to explore how these five value drivers can be used to everyone's benefit.

## Ready for the Future

Our highlights for 2018 would not be complete without mentioning the initiatives we took to help position us for the years ahead. This includes the official launch of our enhanced administration system, now available to all our members and employers. We spent the year working through feedback from employers and refining our system, which will help us manage our costs while providing better service going forward.

We are also committed to maintaining a safe and respectful workplace where HOOPP employees can perform their best work to deliver on our pension promise. In 2018, HOOPP held workshops on respect in the workplace for all managers and staff and established both an employee relations council and a culture council. These initiatives should also help us retain and attract high-performing talent so that we can stay innovative and competitive as an employer.

This year marks the start of our 2019–2023 Strategic Plan. This document will serve as a roadmap for HOOPP for the next five years and beyond. It takes stock of potential opportunities and challenges as we lay a foundation on which to grow, generating long-term investment returns while creating value and keeping the Plan affordable for

members and employers. It also recognizes and extends our commitment to addressing the misinformation surrounding defined benefit pension plans and promoting an understanding of the importance of retirement security for all Canadians.

In closing, I would like to acknowledge the dedication and hard work of our staff. I strongly believe that our people are our most valuable asset. I would also like to say thank you to our members and employers. You are the reason we are here. Together, we are ready for the future.



**Jim Keohane**  
PRESIDENT & CEO

# Chairs' Message



**Dan Anderson**  
CHAIR

As the Board of Trustees, it is our responsibility to ensure that HOOPP delivers on the pension promise now and into the future by doing what is best for all 357,268 of our Plan members. We bring skills to the table from a range of backgrounds, including healthcare, human resources, labour relations and investment management. This diversity contributes to the effective governance of our Plan.



**Adrian Foster**  
VICE CHAIR

In spite of difficult financial markets, the Plan remains more than fully funded, ending the year with a funded status of 121%. Even though the markets can be unpredictable, Plan members can rest assured that our Board is carefully monitoring HOOPP's investments and funded status. This oversight ensures we are closely aligned with investment management and its decision-making.

Our Asset-Liability Management (ALM) Committee plays a critical role in the Board's oversight of HOOPP's investments, monitoring the Plan's funded status, asset growth and the results of various stress tests on the investment portfolio. In 2018, the Committee made improvements to our already-robust process, increasing the frequency of reporting on key metrics from quarterly to monthly.

The good health of our Plan allowed us to continue delivering benefits to members that are second to none, with contribution rates for members that continue to be among the lowest in the public sector. In fact, our contribution rates have remained unchanged since 2004 and will stay the same through 2020.

Our retired members received 100% inflation protection in 2018. As a result, pension payments increased by 1.87%, effective April 1. In November, the Board once again approved 100% inflation protection for implementation on April 1, 2019.

Through our Audit & Finance Committee, the Board oversees the business and financial plan for each year. Our financials clearly show our commitment to fiscal responsibility, with our major initiatives coming in on time and within budget.

The Plan benefit improvements that the Board approved in 2017 were successfully implemented on January 1. We also improved service for members and employers with the full rollout of our new pension administration system. Through this process, independent third-party polling on member satisfaction levels shows that our scores remain high. We thank everyone involved in this important project.

We worked closely with the senior management team to develop HOOPP's 2019-2023 Strategic Plan. This important document serves as a roadmap for HOOPP. It lays the foundation on which to grow and to continue generating long-term investment returns while creating value and keeping our pension plan affordable. The strategic plan also recognizes and extends our commitment to advocating for defined benefit pension plans and promoting their importance for the retirement security of Canadians.

In keeping with this commitment, we are proud that our co-sponsored research study *The Value of a Good Pension: How to improve the efficiency of retirement savings in Canada* has been widely recognized for contributing new insights and quantifiable evidence to support the effectiveness of defined benefit plans.

In 2019, our Plan will welcome more than 14,000 new members following the merger of six healthcare pension plans into HOOPP.\* We commend the many parties involved

internally and externally for the dedication and hard work required to make these mergers happen, and we warmly welcome these new members to HOOPP.

In 2018, we welcomed a number of new trustees to the Board, including J. Cameron Nelson (SEIU appointee), Laura Dumoulin (OPSEU appointee) and Christine Chen (OHA appointee), as well as our new pension observers Linda Clayborne (OCHU appointee) and Karli Farrow (OHA appointee).\*\*

We would also like to acknowledge and thank those who left the Board in 2018: David Empey, Terry McCarthy, Marlene Puffer, James Sanders, and Bryce Walker. James and Marlene, who served on the Board for nearly 19 years and 9 years, respectively, were invaluable members of the ALM Committee. Before retiring in June 2018, Bryce served on the Board for almost 10 years, over five of which were in the capacity of chair and vice chair. His contribution was significant, and he will be missed. As well, Eric Kirzner, our ALM Committee's lead investment advisor, leaves that position after 16 years. We thank all of these individuals for their important contributions to HOOPP.

We were fortunate to fill all of our vacant investment advisor positions with the appointments of Bill Moriarty, Joanna Zapior and Graham Pugh. They bring a wealth of investment expertise, and we look forward to working closely with them. Additionally, following a thorough search, we have retained Mercer Canada as our Plan actuary.

Finally, thank you to all HOOPP management and staff. We are very proud to work with you to deliver on our pension promise.



**Dan Anderson**  
CHAIR



**Adrian Foster**  
VICE CHAIR

\* Two of these mergers are still pending regulatory approval.

\*\* SEIU: Service Employees International Union, OPSEU: Ontario Public Service Employees Union, OHA: Ontario Hospital Association, OCHU: Ontario Council of Hospital Unions. For more information about Plan governance and HOOPP's settlor organizations, see page 78.

# Management's Discussion & Analysis

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In addition to historical information, the Management's Discussion & Analysis (MD&A) contains forward-looking statements regarding management's objectives, outlook and expectations. By their very nature, such statements are subject to risks and uncertainties, which may cause actual results to differ from those anticipated. The Plan's financial statements should be read in conjunction with the MD&A.

# 2018 Financial Highlights

# 121%

STATE OF THE PLAN

# \$79.0

BILLION

NET ASSETS

# \$1.7

BILLION

NET INVESTMENT INCOME

# 2.17%

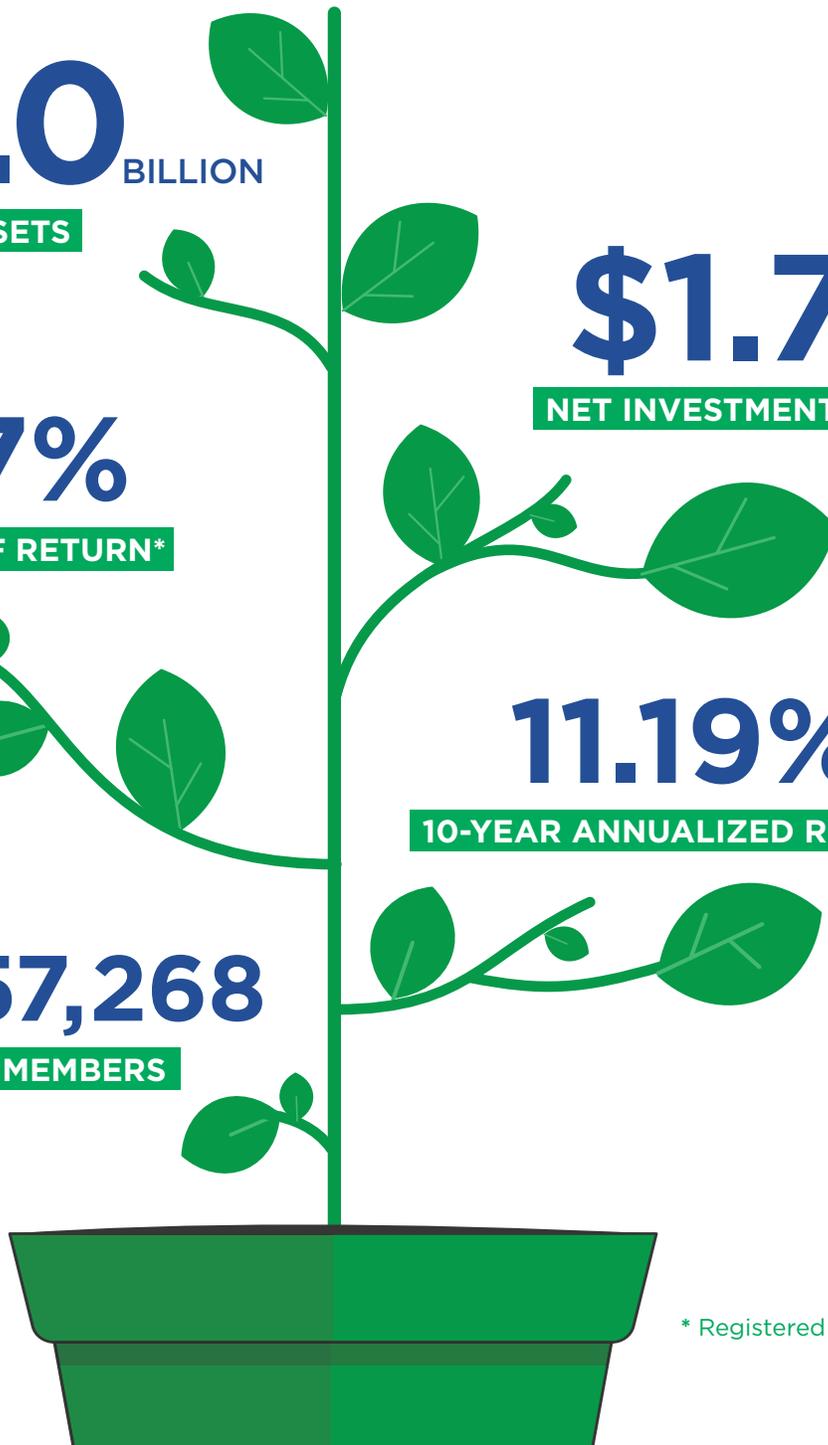
2018 RATE OF RETURN\*

# 11.19%

10-YEAR ANNUALIZED RETURN\*

# 357,268

MEMBERS



\* Registered pension plan

## Plan Overview and Governance

The Healthcare of Ontario Pension Plan (HOOPP or the Plan) has been serving Ontario healthcare workers and their employers since it was first formed in 1960. There are over 570 employers from across the province participating in HOOPP and offering the Plan to their employees. HOOPP now has over 357,000 members.

In 1994, HOOPP was settled as a trust with a jointly governed Board of Trustees (the Board) by its original sponsor, the Ontario Hospital Association (OHA), and by four unions (the Settlor Unions):

- Ontario Nurses' Association (ONA);
- Canadian Union of Public Employees (CUPE);
- Ontario Public Service Employees Union (OPSEU); and
- Service Employees International Union (SEIU).

The Plan is a contributory, defined benefit, multi-employer pension plan registered under the *Pension Benefits Act* (Ontario) and the *Income Tax Act* (Canada). The Plan is regulated under the *Pension Benefits Act* as a jointly sponsored pension plan.

### Mission

HOOPP's governance is based on its mission to deliver on the pension promise. The Board and HOOPP's management administer the Plan and manage and invest the trust fund (the Fund) with a focus and dedication to meeting this mission in the best interests of HOOPP members. This shared focus and dedication is also consistent with the fiduciary duties owed to all Plan beneficiaries by HOOPP Trustees and staff.

### Agreement & Declaration of Trust (ADT)

The foundation for the governance of the HOOPP Plan and Fund is the ADT: it is the trust document entered into by the OHA, Settlor Unions and initial Board members that, among other things, constitutes and empowers the Board.

### The Board

The Board's composition and its Committee structure can be found on [hoopp.com](http://hoopp.com). The mandates of the Board and each Committee set out their respective responsibilities. HOOPP maintains processes and protocols to ensure the Board and its Committees have access to accurate, complete and timely information and documentation to enable them to make decisions and fulfill their responsibilities effectively and efficiently.

### Delegations of Authority

Authority for the day-to-day administration of the Plan and management of the Fund is delegated by the Board to the Plan Manager, who holds the title of President & Chief Executive Officer (President & CEO). This delegation is regularly reviewed. In turn, HOOPP's President & CEO also regularly reviews further delegations of authority to designated HOOPP roles for significant day-to-day operations: the investment of Fund assets, the procurement of goods and services, the making of payments including electronic fund transfers and the accessing of critical HOOPP data and IT systems.

In addition, the roles, responsibilities and accountabilities of HOOPP's agents, advisors and other service providers are set out in HOOPP agreements with each party. The Board's key agents and advisors include the Plan actuary, auditors, custodian, independent legal counsel, investment advisors and compensation advisor.

### Governance Review Processes

HOOPP's commitment to good governance involves a dedication to continuous improvement. This dedication is particularly important in relation to organizational change management. Good governance requires periodic reviews of an organization's structures, mandates, policies and its practices and procedures to determine whether they should be updated or changed. The Board and management both conduct such periodic reviews to ensure HOOPP policies, practices and procedures are kept up to date and responsive to organizational changes and HOOPP's operating environment.

## State of the Plan

At the end of 2018, the Plan reported a surplus for the ninth consecutive year, as measured on a net assets basis. These results were driven largely by positive investment returns in the years following the 2008 financial crisis.

The Plan's funded ratio, the key measure of the current financial health of the Plan was at 121% at the end of 2018, down 9% from 130% in 2017, on a net assets basis.

On a smoothed asset basis, for regulatory filing purposes, the ratio of smoothed assets to HOOPP's pension liabilities is down 1% from the prior year at 121%.<sup>1</sup>

There were two primary reasons for the 9% decline in the funded ratio on a net assets basis. Challenging equity markets during the year led to a lower return of 2.17%. In addition, there was a 20 basis point decrease in the Plan's liability discount rate assumption resulting in an increase in HOOPP's liabilities.

The 1% decline in funded ratio on a smoothed asset basis was more modest because the investment return on this basis was higher during 2018. Asset smoothing results in gradual recognition of the strong investment returns from the last few years and only partially recognizes the 2018 Fund return of 2.17% by deferring to future years. This higher smoothed Fund return was offset by the same liability increase resulting from the change in the discount rate assumption.

The chart below shows the funded status of the Plan for 2018 and 2017, shown on both a net assets basis and on a smoothed asset value basis.

	2018	2017	Year-over-Year Change
<b>Funded Status</b>			
Net assets to Regulatory Pension Obligations	<b>121%</b>	130%	-9%
Smoothed Asset Value to Regulatory Pension Obligations	<b>121%</b>	122%	-1%

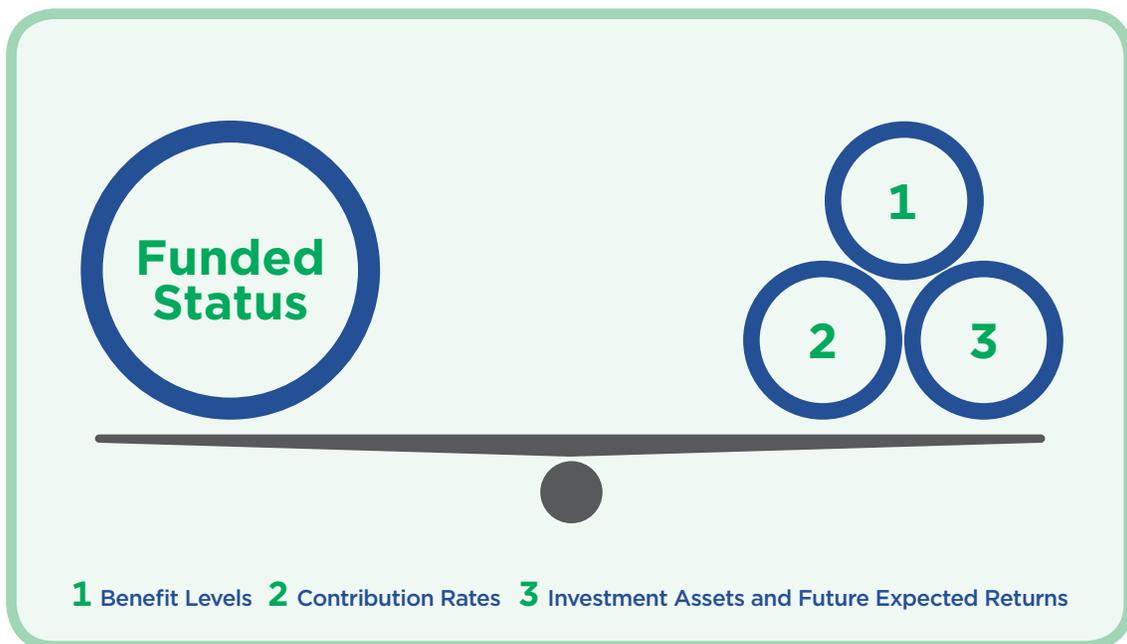
<sup>1</sup> Actuarial technique that recognizes gains and losses, not as they occur, but slowly over a specified period of time.

## Pension Plan Funding Management

While the Plan remains in surplus, history has shown that the market environment can change rapidly as can the funded status of the Plan. Delivering on the pension promise is a complex challenge that involves prudently managing risks to avoid negative impacts on HOOPP's funded status.

In managing the Plan, there are three main components that management and the Board must balance to meet the promise to members:

1. the level of pension benefits provided at retirement;
2. contribution rates from both Plan members and their employers; and
3. total investment assets and future expected investment returns and risk.



The objective in managing the first component – benefits – is to provide a predictable and stable level of pension income to members in retirement. The Plan is designed to provide a level of benefits to members which, in addition to income from other sources, provides total income that will help ensure the members' retirement security.

Determining benefit levels must be done with thoughtful consideration of the second component: contribution rates. Stability of contribution rates is also one of the Board's objectives. HOOPP's contribution levels have remained the same since 2004 and the Board has committed to maintain them at current levels until at least the end of 2020.

The third component is the combination of total available investment assets, current and future expected investment returns and investment risk. Investment returns play an essential role in HOOPP's mission to deliver on the pension promise. It is estimated that approximately 80% of pension benefits paid are derived from investment income. HOOPP's approach to expected

investment returns and risk is the component most actively managed by management and the Board because ever-changing market conditions impact returns the most.

Balancing these three components in a prudent and effective manner will ultimately ensure the long-term sustainability of the Plan. An added complexity is the need to ensure intergenerational equity among members.

## **Future Funding Sustainability**

The risks to the Plan's funding surplus are constantly present: unexpected changes in investment markets can negatively impact the funded status of the Plan. This funding risk poses the greatest threat to the sustainability of the Plan and is the risk that the Plan constantly seeks to mitigate, primarily through the prudent management of investment risk. The Plan recognizes that the complete elimination of funding risk is not possible. The Plan must take some investment risk, within its risk tolerance, in order to earn a sufficient rate of return to keep the cost of the Plan reasonable and affordable. Moreover, unanticipated changes to the demographic profile of HOOPP's members can also be challenging to address through investment strategies.

In general, the two broad categories of risks that contribute to total funding risk arise from (i) financial and economic factors and (ii) demographic factors.

### **Financial and Economic Risk**

Investment income is the most significant source of funding for pension benefits paid to members and it is also a key determinant of how the two components of the funded status are managed (benefit levels and contribution rates). Positive and stable returns from Fund investment strategies are essential to the long-term sustainability of the Plan. Investment returns that exceed expectations provide flexibility in managing benefit levels and contribution rates, while returns below expectations may result in the need to make decisions to reduce benefits or increase contributions. In establishing an appropriate investment strategy, the Plan strives to generate sufficient returns to meet its pension obligations and keep costs affordable. This is done while accepting a level of risk that does not jeopardize its ability to meet those obligations.

The three financial and economic risks that have the greatest impact to the Plan are the level of interest rates, inflation, and the volatility of returns on equities and other return seeking strategies.

The level of interest rates affects the expected return on investments. Changes in interest rates can also impact Plan liabilities, if it leads to a change in the discount rate assumption.

Unanticipated increases in inflation could lead to higher wages, which form the basis of the pension benefits paid to members. Moreover, because many members' accrued benefits include some cost-of-living enhancement, an increase in inflation will increase the Plan's pension obligations.

Lastly, if equities and other return seeking strategies fail to generate a required level of returns, investment income may fall short of the levels necessary to pay future pension benefits. Given the volatility of returns from these strategies, they could result in investment losses. In extreme circumstances, the potential negative impact on the funded status, could lead to adverse consequences on benefits and contributions.

## Demographic Risk

Demographic risks to the Plan include the increased life expectancy (longevity) of members, changing retirement trends (e.g., earlier retirements) and the natural aging of the Plan membership. Demographic risks are more difficult to anticipate and manage as changes occur slowly over long periods of time. With demographic factors, both the longer-term trend and year-over-year changes must be thoughtfully considered. Year-over-year changes can seem minor; however, consistent variances between actual experience and assumptions may indicate patterns where changes to existing assumptions may be needed. The most important demographic risk is an unanticipated increase in the life expectancy of members, as this will increase the amount of pension benefits to be paid beyond what was estimated. This may also lead to intergenerational inequity as unanticipated increases in longevity may mean that the Plan's pricing in prior years was insufficient to fund the promised benefits. For 2018, no changes to either the life expectancy or retirement rate assumptions were made.

Demographic trends are monitored diligently as part of the annual analysis of all actuarial assumptions by the Board, with the support of the Plan's actuary. Additionally, detailed demographic experience studies are conducted from time to time to help ensure assumptions about future expectations remain accurate.

The changing demographic profile of HOOPP's membership, referred to as Plan maturity, is another important factor to monitor, as it impacts the future sustainability of the Plan.

## Plan Maturity

Pension plans naturally age over time, a process often referred to as plan maturity. Newer plans have a greater proportion of working or active members relative to retired members. Among other factors, one key determinant of how quickly a plan ages is the rate at which new and younger members join the plan and replace newly retired members. Over longer periods of time, as a plan matures, the average plan participant age rises with the increasing pool of retirees. It becomes more difficult to replace these retirees with sufficient numbers of new, younger members. However, given the constant membership growth, HOOPP continues to be a relatively young pension plan and the average age of HOOPP's active participants is virtually unchanged from 20 years ago.

Maturity of the Plan is measured by the ratio of active members to retirees. The table below portrays the gradual maturing of the Plan, as the active to retiree ratio has declined from 3.7 in 1988 to 2.5 in 2008 and to 2.2 at the end of 2018. It is projected to decline further to 1.8 by 2028.

### Ratio of Active Members to Retirees

	1988	2008	2018	2028
				(projected)
Active to Retiree Ratio as of December 31	3.7	2.5	2.2	1.8

HOOPP benefits from the flexibility that being a relatively young pension plan provides. However, it is slowly maturing, and HOOPP remains aware of the need to adapt and evolve its investment strategies as the Plan continues to mature. As a plan ages, its risk-taking ability is impacted. Another measure of the relative age of the plan is net cash flow, the difference between contributions received and the pension benefits paid. More mature plans pay out much more in benefits to members who no longer contribute than the contributions they receive from active members. This increases a plan's sensitivity to investment market declines as the remaining asset base with which to recover from investment losses is further reduced. Moreover, any funding deficiencies are more difficult to address since contribution rate increases will have a diminishing impact given the smaller proportion of active members.

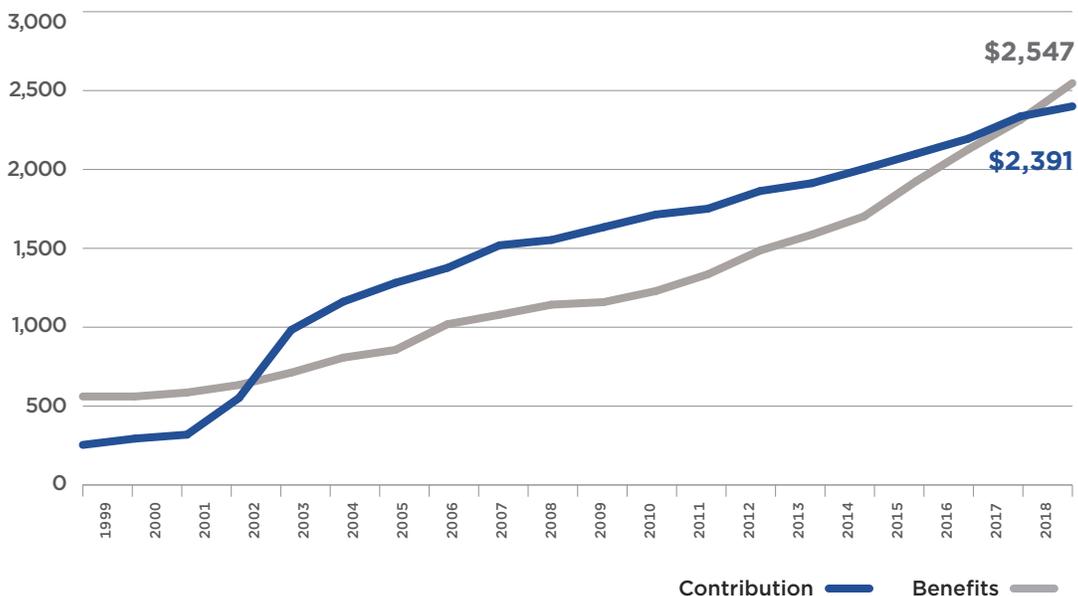
Similar to the active to retiree ratio, the chart below indicates that HOOPP's net cash flow has decreased over the last 20 years. In 2018, total benefits paid exceeded total contributions into the Plan for the first time since 2002 (note: the chart reflects a contribution rate reduction that was in place from 1999 to 2002 to help ensure compliance with legislation that limited the maximum surplus a registered pension plan could have). Although this trend may continue, it does not mean that HOOPP is unable to pay its promised benefits. As mentioned, it is estimated that only approximately 20% of benefits are paid for by contributions. However, it is another aspect of Plan maturity that HOOPP needs to ensure it is preparing for now and into the future.

Note, the net cash flow based on regular required member and employer contributions (i.e., excluding transfers from other plans and past service purchases) and regular monthly pensions paid to retirees and beneficiaries (i.e., excluding lump sum transfers on termination or death and transfers to other plans) continues to be positive in 2018. The excluded amounts can fluctuate from year to year and further details of these amounts can be found in notes 8 and 9 of the financial statements.

Contributions in the chart below represent total contributions received by the Plan and total benefits paid by the Plan (including these other aspects of Plan administration noted above).

### Contributions vs Benefits Paid

(\$ millions)



## Investments

HOOPP's primary approach to reducing funding risk is to employ a Liability Driven Investment (LDI) Strategy – one which closely considers the Plan's liabilities when investing the Fund's assets. This approach focuses on ensuring that growth in the investment portfolio is sufficient to meet the growth in the retirement obligations owed to members. It differs from more traditional investment approaches where success is based solely on asset growth meeting an asset-based benchmark.

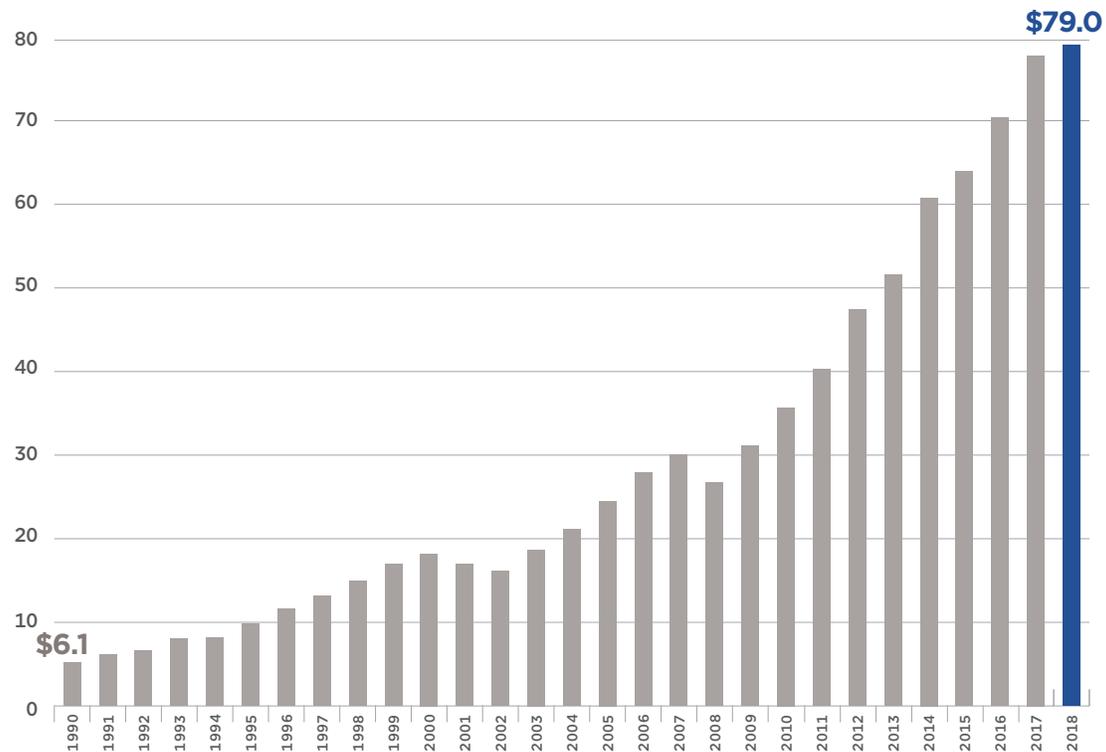
LDI at HOOPP involves allocating the Fund's assets between two broad portfolios: the Liability Hedge Portfolio and the Return Seeking Portfolio.

The Liability Hedge Portfolio is designed to offset the major risks that can increase the pension benefits paid to members, inflation and interest rates, and contains investment assets which perform in a manner similar to that of the Plan's liabilities.

The Return Seeking Portfolio is designed for controlled risk-taking in investment assets and strategies, which are expected to provide diversification benefits for the entire portfolio and generate incremental returns to the Fund to help ensure the Plan remains affordable.

### HOOPP's Net Assets from 1990 to 2018

(\$ billions)



## 2018 Results

The table below shows investment performance for 2018 and 2017, as well as the 10-year and 20-year performance of the Fund (registered pension plan).

	2018	2017	10-Year	20-Year
Total Return	<b>2.17%</b>	10.88%	11.19%	8.52%
Benchmark*	<b>0.01%</b>	7.89%	8.43%	6.88%
Value-Added Return	<b>2.16%</b>	2.99%	2.76%	1.64%

\* Benchmarks are established to measure the performance of investment strategies relative to the risk taken. Some of these benchmarks are discussed below in the discussion of specific investment strategies.

The following summarizes HOOPP's 2018 investment results:

- a net investment income of \$1.7 billion (compared to \$7.6 billion in 2017);
- an investment return of 2.17% (compared to 10.88% in 2017), of which 0.01% represented the benchmark return and 2.16% from active management strategies or value-added; and
- a growth in net assets to \$79 billion from \$77.8 billion in 2017.

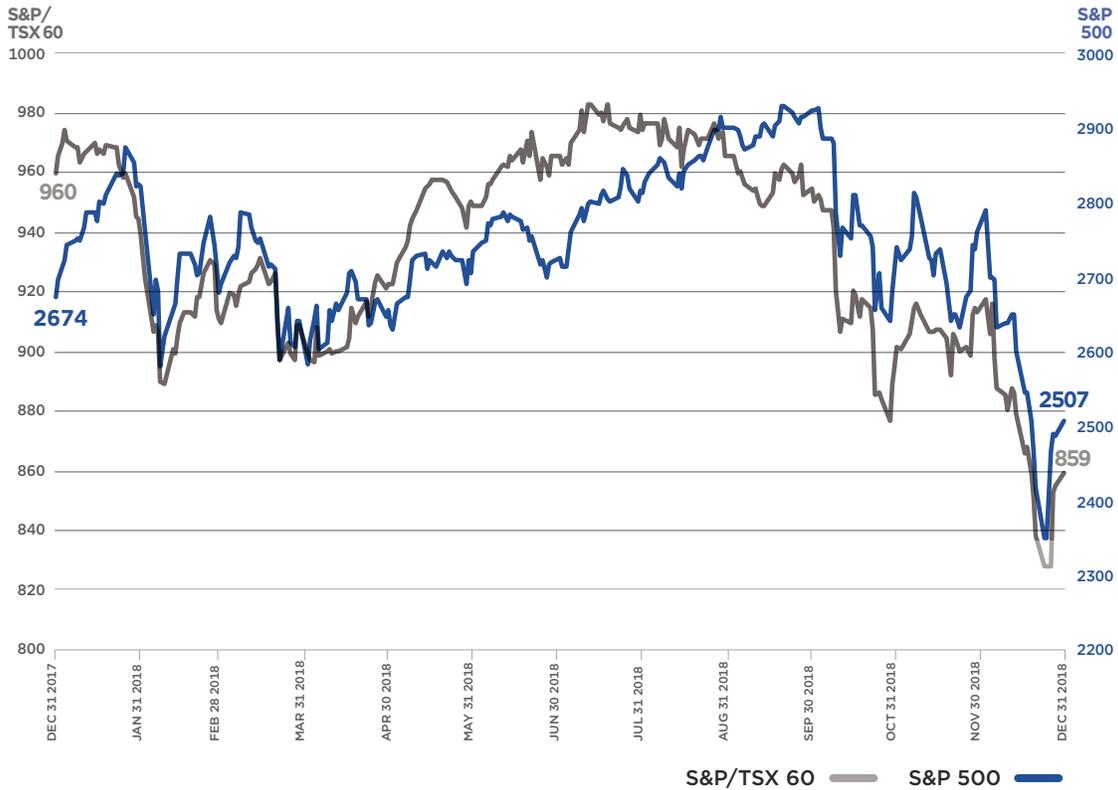
## 2018 Investment Environment

The year 2018 was challenging for investors who weathered losses across most major equity indices and felt the effects of central banks ending nearly a decade of accommodative monetary policy and historically low interest rates. Here in Canada, the S&P/TSX 60 Index lost 7.6% on a total return basis (including dividends), while the U.S. S&P 500 total return was down 4.4% in U.S. dollars. The MSCI EAFE Total Return Index, which measures developed equity markets excluding the U.S. and Canada, lost 13.8% in U.S. dollars. The MSCI Emerging Markets Total Return Index declined 14.6%, also in U.S. dollars.

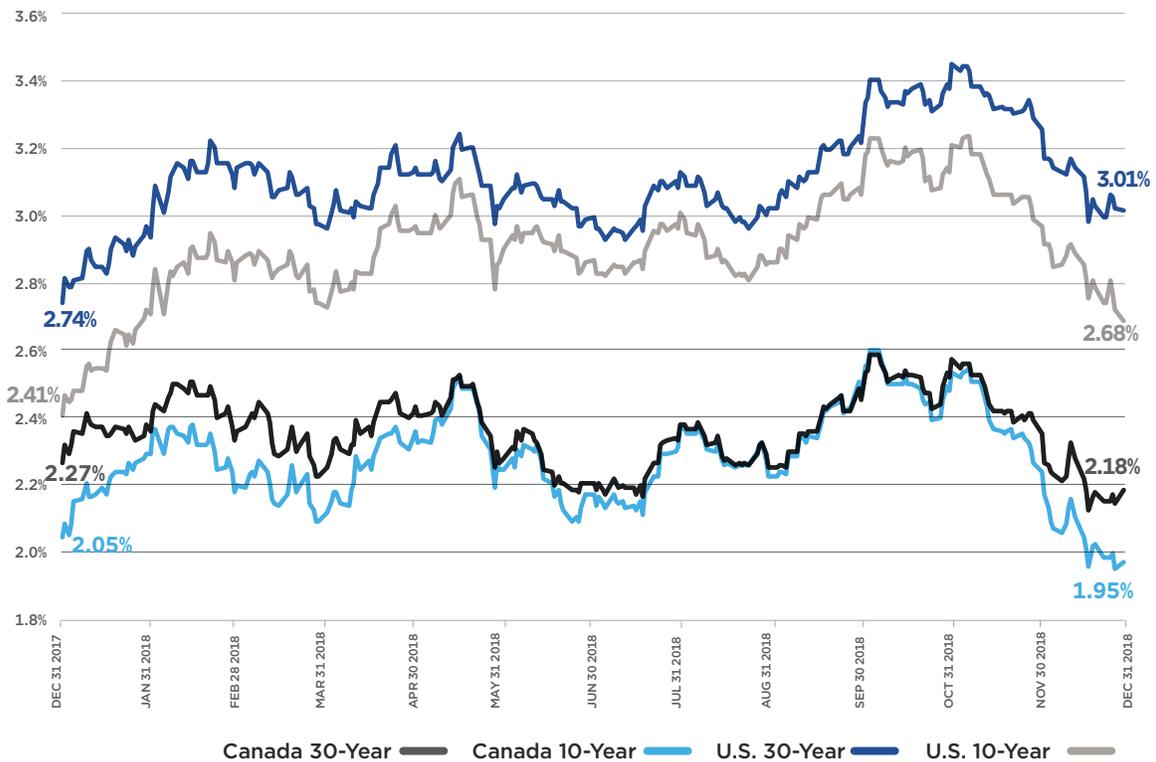
At the same time, the 30-year Government of Canada Bond yield ended the year down 9 basis points at 2.18% from 2.27% at the end of 2017. The 10-year Government of Canada Bond yield fell 10 basis points, to 1.95%, down from 2.05% at the end of 2017. In the U.S., the Federal Reserve raised its benchmark rate an extra 25 basis points in relation to the Bank of Canada during 2018. This, along with stimulative fiscal and regulatory measures in the U.S., led to an increase in the 30-year Treasury Bond yield. It ended the year up 27 basis points, at 3.01%, from 2.74% at the end of 2017. The widely followed 10-year U.S. Treasury Note yield increased 27 basis points, ending the year at 2.68%, up from 2.41% at the end of 2017.

Despite market challenges, the investment team was successful in positioning the Fund defensively in a year when missteps could have resulted in significant losses.

### S&P/TSX 60 (CAN) vs S&P 500 (U.S.)



### Canada and U.S. Interest Rates



## Major Drivers in the Change in Funded Position

The Liability Hedge Portfolio produced a return of \$1,045 million in 2018, down from a return of \$3,670 million in 2017, while the Return Seeking Portfolio posted a gain of \$621 million in 2018, compared to \$3,928 million in 2017. The Liability Hedge Portfolio generated approximately 63% of the investment income in 2018 compared to 48% in 2017, while the Return Seeking Portfolio provided 37% of the Fund's investment income in 2018 compared to 52% in 2017. Details of the performance of individual strategies within the Liability Hedge Portfolio and the Return Seeking Portfolio follow in subsequent sections.

The chart below summarizes the change in HOOPP's funded status and provides details on changes in specific investment strategies and the Plan's liabilities.

	2018	2017
(\$ millions)		
<b>Net investment income</b>	<b>1,666</b>	7,598
<b>Changes due to operations</b>		
Contributions	<b>2,391</b>	2,336
Benefit payments	<b>(2,547)</b>	(2,314)
Operating expenses	<b>(246)</b>	(224)
<b>Total changes due to operations</b>	<b>(402)</b>	(202)
<b>Change in net assets available for benefits</b>	<b>1,264</b>	7,396
<b>Change in pension obligations</b>	<b>(5,526)</b>	(5,141)
<b>Net change in surplus on a net assets basis</b>	<b>(4,262)</b>	2,255
<b>Funded ratio on a net assets basis</b>	<b>121%</b>	130%
Change in smoothing adjustment*	<b>4,555</b>	(1,014)
<b>Regulatory funded ratio</b>	<b>121%</b>	122%

\* Change in the average of the current net assets and the net assets for the four preceding years brought forward with interest at the asset valuation rate and adjusted for contributions, benefit payments and administrative expenses.

The largest driver in the change in net assets is net investment income. The chart below provides details on changes in net investment income derived from specific investment strategies.

	Net Interest and Dividend Income	Net Gain (Loss) on Investments	2018 Net Investment Income	2017 Net Investment Income
(\$ millions)				
<b>Liability Hedge Portfolio</b>				
Short-Term	650	(572)	<b>78</b>	396
Nominal Bonds	1,540	(1,198)	<b>342</b>	2,271
Real Return Bonds	92	(356)	<b>(264)</b>	3
Real Estate	420	469	<b>889</b>	1,000
<b>Total Liability Hedge Portfolio</b>	<b>2,702</b>	<b>(1,657)</b>	<b>1,045</b>	3,670
<b>Return Seeking Portfolio</b>				
Public Equities	283	(2,434)	<b>(2,151)</b>	2,922
Private Equities	115	994	<b>1,109</b>	1,151
Corporate Credit	131	(114)	<b>17</b>	197
Long-Term Option Strategy	253	934	<b>1,187</b>	(496)
Other Return Seeking Strategies	2,901	(2,442)	<b>459</b>	154
<b>Total Return Seeking Portfolio</b>	<b>3,683</b>	<b>(3,062)</b>	<b>621</b>	3,928
<b>Net Investment Income</b>	<b>6,385</b>	<b>(4,719)</b>	<b>1,666</b>	7,598

## Active Management and Relative Performance

The total Fund return of 2.17% exceeded the benchmark return of 0.01% by 2.16% or \$1,656 million. This active management return, or value-added, came from a variety of sources during the year within both the Liability Hedge Portfolio and Return Seeking Portfolio. The Liability Hedge Portfolio generated 0.43% of value-added, with a significant contribution coming from Short-Term, Nominal Bonds and Real Estate, while the Return Seeking Portfolio generated 1.73% of value-added with large contributions from private equity, credit and absolute return strategies.

	2018		2017	
	(\$ millions)	%	(\$ millions)	%
<b>Value-Added</b>				
Liability Hedge Portfolio	<b>333</b>	<b>0.43%</b>	942	1.39%
Return Seeking Portfolio	<b>1,323</b>	<b>1.73%</b>	1,089	1.60%
<b>Total</b>	<b>1,656</b>	<b>2.16%</b>	2,031	2.99%

## Liability Hedge Portfolio Discussion

### Short-Term

This portfolio provides general funding for investment strategies employed by the Fund. In 2018, the portfolio generated returns of \$78 million, compared with \$396 million in 2017.

The Short-Term Portfolio invests in highly rated liquid securities in order to maintain liquidity and enhance return. After two very strong years of performance, credit spreads widened from 2017 levels. The portfolio is well-positioned to meet liquidity demands and to capitalize on any shorter- and longer-term opportunities in the markets.

### Nominal Bonds: Mid-Term and Long-Term Bonds

The continued, gradual removal of monetary accommodation by North American central banks led to an increase of 16 basis points in the average yield on the FTSE Russell All Government Universe Bond Index in 2018. The average yield of the Universe Index rose from 2.28% to 2.44%, mainly as a result of constructive data-driven rate hikes by the Bank of Canada and the U.S. Federal Reserve during the course of the year.

The longer end of the bond market saw a similar rise in yields, led by weakness in provincial financial outlooks and higher U.S. Treasury supply and fiscal stimulus. The average yield on the FTSE Russell All Government Long-Term Bond Index rose 15 basis points from 2.76% to 2.91%. The anomaly was the 30-year Government of Canada Bond. Its yield was actually lower on the year, primarily as a result of very low net supply of long maturity federal bonds in the face of continued net LDI and de-risk buying.

The Universe and Long-Term Bond mandates (comprising 18% and 23% of net assets, respectively) employ strategies that reflect the Fund's varying time horizon outlook on the direction of interest rates. HOOPP uses them to extend or shorten the duration of the portfolio and to over- or underweight certain maturity segments of the portfolio depending on its outlook on the changing shape of the yield curve. Additionally, strategies may seek to capitalize on changing spread differentials between government fixed income products, such as over- or underweighting provincial and/or agency bonds versus federal bonds. Employing these strategies in the portfolio created over \$90 million of value-added during the year.

The Liability Management Strategy Portfolio has been under-exposed to its policy weight of 22.8% of net assets since mid-2016. In 2018, HOOPP favourably covered about half of that underweight exposure at various points by buying Canada 10-year and U.S. 10-year and 30-year bonds at very good levels.

### Real Return Bonds (RRB)

Real interest rates rose 24 basis points in Canada in 2018 on the back of higher overall nominal yields and weaker overall demand for inflation-protected securities. The average yield on the FTSE Russell RRB Overall Index increased from 0.55% to 0.79%. In the U.S., the real yield on 30-year Treasury Inflation Protected Securities (TIPS) rose 48 basis points, from nearly 0.73% to 1.21%. Weakening global equity and commodity markets – primarily during the fourth quarter were also responsible for softer overall demand.

In terms of breakeven inflation rates (BEIR), 30-year RRB breakevens declined about 26 basis points (from approximately 1.69% to 1.43%), while U.S. inflation breakevens on 30-year TIPS declined 20 basis points (from 2.02% to 1.82%).

Inflation breakevens were up at mid year, and remained so through the end of the third quarter.

### Real Estate

In 2018, the HOOPP Real Estate Portfolio produced a return of 8.88% on a currency hedged basis. This represents an outperformance of 135 basis points relative to the benchmark MSCI Canadian Real Estate Index.

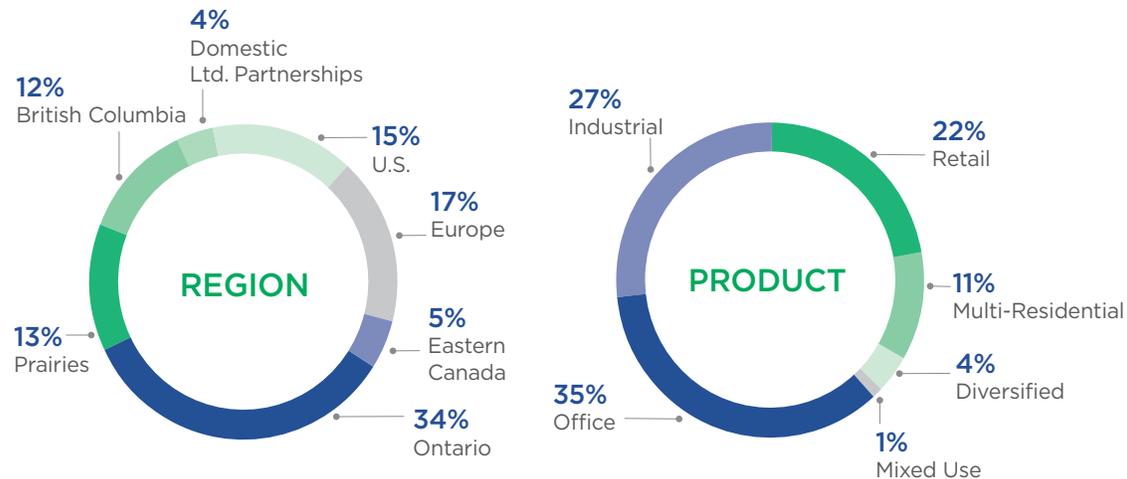
At year-end, the portfolio was valued at \$14.3 billion on a gross market value basis (versus \$13.4 billion at the end of 2017). A total of more than \$1.4 billion in investments or investment commitments were made during the year, offset by just under \$0.5 billion of property sales.

Recent investments position the Real Estate Portfolio well for future positive returns and include the following:

- the start of construction on office development projects in Toronto (a 460,000-square-foot building at 25 Ontario Street) and Vancouver (the 370,000-square-foot phase two of Vancouver Centre), and the substantial lease-up of Creechurch Place, a newly built 276,000-square-foot office tower in London, England;
- the continued expansion of the Industrial Portfolio with the completion of major distribution facilities for Amazon in Germany and in Vancouver, and the commencement of construction for buildings in Doncaster, England (for Amazon) and in the Greater Toronto Area (for Mars Canada);
- in the residential sector, the acquisition of an interest in a 1,209-unit residential project in Denver, Colorado, and completion of a 507-unit apartment complex in Hollywood, California; and
- successfully gaining control of the former Sears premises in a number of Canadian shopping centres within the portfolio, and achieving good progress in implementing plans to backfill the vacant space.

The graphics below illustrate the global diversification and product mix of HOOPP's Real Estate Portfolio.

### Real Estate Asset Mix by Region and Product



## Return Seeking Portfolio Discussion

### Public Equities

Almost all global stock markets posted losses in 2018. The U.S. equity market decline was relatively moderate, while other developed markets such as Japan and Europe, as well as Emerging Markets as a group, posted greater losses. Despite a strong start in 2018, the market tone changed with stock market corrections and a sharp increase in volatility starting near the end of January. Some public equity markets, including those in North America, posted new highs in the summer, but other markets, including Europe and the Emerging Markets indices, did not exceed the January highs as 2018 progressed. Most stock markets were very weak in the fourth quarter, reaching lows for the year in late December.

### Canadian Equities

The Energy sector, one of the largest groups in the Canadian market, fell more than 20% in 2018 due to a decline in global oil prices and a severe lack of takeaway capacity for oil produced in Canada. This is the fourth year in the last five that the Canadian Energy sector has both declined in price and significantly lagged the broader Canadian equity market.

HOOPP's Canadian Equity Portfolios had a return of -6.6% in 2018 (9.8% in 2017).

### U.S. Equities

As the year progressed, market participants became increasingly concerned about slowing economic growth. This concern was reflected in the sector performance of the S&P 500. Healthcare and Utilities, both defensive sectors, were the strongest parts of the S&P 500 in 2018. Most cyclical sectors in the U.S. equity market, such as Industrial and Financials, significantly lagged the broader market.

HOOPP's U.S. Equity Portfolios had a return of -5.2% in 2018 (20.0% in 2017).

### International Equities

The Japanese stock market, which fell close to 17%, was the worst-performing of the developed markets in 2018. Within the MSCI Emerging Market Index, Russia and Brazil posted positive returns of more than 10%. China, the largest single market in the Emerging Market Index, was down 20%. Mexico, down almost 17%, was the weakest-performing major market in Latin America.

The 2018 return for HOOPP's International Equity Portfolio was -14.2% (14.4% in 2017).

### Private Equity

HOOPP Capital Partners (HCP) selectively invests globally in three key areas: (i) privately held businesses that offer the potential for equity or near equity returns, (ii) private equity funds, and (iii) other private capital opportunities such as private debt. Through the work of skilled teams, private capital provides an opportunity for pension funds to earn attractive risk-adjusted returns.

At the end of 2018, HCP had \$9.4 billion invested, with a further \$6.1 billion committed to private investments. The portfolio generated a currency-hedged return of 13.7% for the year compared to 19.6% in 2017 (the return on an unhedged basis was 20.8% in 2018 compared to 18.2% in 2017), exceeding its benchmark by \$651 million. HCP's invested capital has increased by over \$7 billion since 2012 and now includes a larger proportion of direct and co-investments as well as credit and structured investments with lower risk/return attributes.

The fair market value of the invested portfolio represents 12% of the total Fund.

### Corporate Credit

The Fund gains exposure to corporate credit through a combination of corporate bonds, structured products and derivatives. In 2018, credit spreads, like many other risk assets, experienced a sell-off as a result of continued trade tension and removal of liquidity by global central banks.

The Barclay's Aggregate U.S. Credit Index Options Adjusted Spread for corporate bonds widened from 89 basis points at the start of the year to 143 basis points at year end. The five-year maturity investment grade credit derivative index (CDX IG) also widened from 49 basis points at the start of the year to 88 basis points at year-end.

The Credit Portfolios outperformed their benchmarks and met their objective for the year. Underperformance of High-Yield Bonds had a negative impact on performance, while the Canadian Credit and Less Liquid Assets Portfolio and the Securitized Credit Portfolio outperformed due to superior security selection, moving up the capital structure, and generally being defensive in the second half of the year.

Overall, the Credit Portfolios generated value-added of approximately \$62 million (a net positive return of \$18 million for the asset class including the Beta Portfolio return).

### Long-Term Option Strategy

The Long-Term Option Strategy combines equity index exposure with equity index options and was successfully positioned to reduce HOOPP's aggregate equity exposure during 2018. This portfolio had a gain of \$1.2 billion during the year, compared to a loss of \$496 million in 2017.

## Other Return Seeking Strategy

### Asset Allocation Strategies

HOOPP engages in the strategic re-weighting of major asset class risks (equities, fixed income and corporate credit) in order to manage the risk and return of the Fund. In 2018, this program generated a profit of \$285 million, compared to a loss of \$28 million in 2017.

### Absolute Return Strategies

Absolute return strategies are designed to earn positive returns with minimal sensitivities to interest rates, credit or equities. These strategies contributed \$233 million in investment income in 2018, compared to \$158 million in 2017.

## Responsible Investing

HOOPP integrates consideration of Environmental, Social and Governance (ESG) factors in its investment decision-making process. This integration helps broaden the investment team's view of the risks and opportunities inherent in each investment. Greater details about HOOPP's approach to responsible investing are available under the Responsible Investing section of [hoopp.com](http://hoopp.com).

HOOPP encourages positive change with respect to ESG matters through engagements with publicly traded companies. This process includes direct engagements with companies and collaborative engagements with other like-minded investors or via organizations such as the Canadian Coalition for Good Governance (CCGG) and the 30% Club Canadian Investor Group. HOOPP's engagements include issues in each of the ESG categories, and cover companies where it is a shareholder and companies where it does not own shares currently. HOOPP believes that its engagement activity has the potential to improve the value of the companies that take its engagement suggestions seriously.

As responsible owners, HOOPP uses its proxy votes to encourage strong governance and better disclosure and management of ESG issues by companies in its portfolio. ESG issues can be complex, and the social context and disclosure standards for many ESG topics are evolving rapidly. As with all its proxy votes, HOOPP assesses each vote related to ESG topics on a case-by-case basis, which allows it to consider the complexity of the relevant issue.

HOOPP's Proxy Voting Guidelines are available on [hoopp.com](http://hoopp.com). During 2018 HOOPP revised its Proxy Voting Guidelines to strengthen its commitment to gender diversity, consistent with other commitments the Fund has made. HOOPP also clarified its commitment to majority voting for director elections. HOOPP employs an external proxy advisor, but reviews each ballot internally and may override the advisor's recommendations. In 2018, as in prior years, HOOPP voted against the advice of its proxy advisor on a number of director elections. It may also vote against management on shareholder proposals, including those related to ESG matters, and has voted against both management and its proxy advisor on say-on-pay resolutions.

HOOPP's Real Estate group applies responsible investment practices across its core processes – portfolio management, property acquisition, and development. Both the portfolio management team and its management company partners work in close collaboration on an annual sustainability program, directed by a longer-term strategic plan and policy.

The sustainability program consists of management tools, targets, key performance indicators, tracking, recognition, communications and strategic initiatives. Anchored by the Pillar Scorecard, which reports on the portfolio's annual progress and can be found online in HOOPP's annual *Sustainability Report*, the program drives sustainability integration and performance.

HOOPP's Real Estate group achieved the following responsible investing milestones in 2018:

- launch of new leadership initiatives: (i) assessing properties' exposure to climate change risk and determining what resilience measures are in place, (ii) improving tenant engagement around sustainability, and (iii) creating a sustainability working group for HOOPP's retail properties;
- HOOPP's management company partners gathered at its Leadership in Energy and Environmental Design (LEED) Platinum certified office tower, One York, for the 2018 Leadership in Environmental Advancement Program (LEAP) Conference and Awards. Attendees heard from industry experts and were recognized for sustainability leadership and innovative practices;
- recipient of the 2018 Investment and Pensions Europe (IPE) Real Estate Sustainable Strategy Award; and
- a Global Real Estate Sustainability Benchmark (GRESB) Green Star was achieved for the sixth consecutive year.

## Risk Management and Internal Controls

HOOPP has a number of risks it must manage well in order to achieve its objectives. HOOPP's largest risk is funding risk, which is the risk that future returns and asset growth will be insufficient to cover Plan liabilities, which would leave some liabilities unfunded. A failure to manage investment risk effectively could prevent HOOPP from paying its promised pension benefits to its beneficiaries. This risk, therefore, gets the most time and attention from the HOOPP investment management team.

HOOPP is a large and growing financial institution and, as such, it faces many other risks in addition to funding risk. All HOOPP risks are identified and managed within the firm-wide Enterprise Risk Management (ERM) policy and procedures. Within this framework HOOPP sets out the roles and responsibilities for risk identification, mitigation, reporting and oversight. Annually, HOOPP assesses entity-level risks. The results of the assessment are presented to the Audit & Finance Committee and shared with all Board members.

To manage the risks impacting the Plan and the Fund, HOOPP maintains governance and risk management programs and processes, which include:

- programs and processes for managing the recruitment, retention, performance and development of HOOPP staff, its most critical resource;
- a Code of Business Conduct and supporting policies which emphasize HOOPP's commitment to members and other beneficiaries and the roles and responsibilities of Board members, staff and HOOPP's agents and advisors in helping to fulfill the commitment as well as the responsibilities and core values expected of HOOPP staff in the workplace; these policies include a Respect in the Workplace (Harassment and Violence) Policy;
- an efficient and effective Board and Committee reporting and decision-making process;
- robust stress testing tools custom designed to measure the impact of potential future economic scenarios on both Fund assets and Plan liabilities to best manage the risks relating to investment assets, and pension obligations payable in the future, as well as the investment strategies employed to achieve the required risk-adjusted returns;

- an internal audit team that provides independent assurance to management and the Audit & Finance Committee relating to the effectiveness of operational controls;
- a Privacy Officer who works with other responsible HOOPP staff members to develop and maintain appropriate policies and procedures for the protection of members', pensioners' and employees' personal information;
- data security and ongoing maintenance of records and data retention schedules in accordance with both Board and organization-level policies; and
- disaster recovery and business continuity programs that are mature and tested to help maintain and, where needed, improve the resiliency of HOOPP's core operations and processes in the event of disruption.

## Internal Controls over Financial Reporting

As part of HOOPP's commitment to good governance, HOOPP follows the standards outlined in National Instrument 52-109 published by the Canadian Securities Administrators for reporting issuers, though these rules and policies are not binding on HOOPP.

HOOPP's President & CEO and its Senior Vice President and Chief Financial Officer are responsible for ensuring that procedures are in place to maintain appropriate internal controls over financial reporting and Financial Statement note disclosures. These controls are designed to provide reasonable assurance regarding the reliability of financial reporting, including the preparation of financial statements for external purposes in accordance with Canadian Generally Accepted Accounting Principles (GAAP).

During the past year, HOOPP leveraged the framework and criteria set out in the Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) to conduct a comprehensive evaluation of its internal controls over financial reporting (ICFR).

The results of HOOPP's evaluation of the effectiveness of its ICFR confirm it is properly designed and operating effectively to provide reasonable assurance regarding the reliability of financial reporting as of December 31, 2018.

## Plan Liabilities

The estimation of the Plan's pension liabilities, which are based on current and future benefit payments, relies on establishing numerous economic, financial and demographic assumptions. Financial or economic assumptions include inflation expectations, the future growth rate of employee wages and the future expected rate of return of HOOPP's investment strategies.

Key demographic assumptions include the retirement age of HOOPP's members and their life expectancy. All of the assumptions made in the estimation of the total pension obligations are based on the principle that the Plan will operate for the foreseeable future, as a going concern. Using these and other assumptions, together with actual member data, the benefits owed to Plan members are projected for each future year, out over almost 100 years.

The valuation of these future pension benefits depends on the financial assumption of the future expected return of HOOPP's investment portfolio, also known as the discount rate assumption (see more detailed discussion of the discount rate on the following page). To calculate the total value of these future pension benefits today, these estimated future payments are discounted by the estimated expected return of HOOPP's investment portfolio.

The actual future outcomes, both of financial and economic and demographic assumptions, will almost certainly differ from the assumptions made. It is the difference between the actual outcomes and the assumptions made that is the main source of funding risk as discussed earlier in the section *Pension Plan Funding Management*.

The total estimated Plan liabilities or pension obligations as of December 31, 2018 and 2017 is presented below.

	2018	2017	% Change
(\$ millions)			
<b>Pension Obligations</b>	<b>65,128</b>	59,602	9.3%

Changes in the value of the Plan's pension liabilities occur for a number of reasons.

First, as members contribute to the Plan throughout the year, they "earn" future benefits, also called "benefit accrual". Additionally, the value of previously earned benefits grows at the expected return of the Fund. Offsetting this growth are the pension benefits that were paid out during the year, which reduces the total pension obligations.

Second, changes in economic or demographic assumptions, such as changes in the future expected inflation rate, estimated life expectancy or retirement age will impact the calculation of the pension obligations. In 2018, no changes were made to these assumptions in the determination of the Plan's pension obligations.

Of all the assumptions underlying the estimation of the Plan's pension liabilities, one of the most important is the Fund's long-term expected return, also referred to as the discount rate assumption. The expected return is driven to a significant extent by interest rates. Expected returns fall and rise with interest rates - their expected returns are comprised of a theoretical risk-free interest rate and risk premiums, or incremental returns in addition to the risk-free rate. A decrease (increase) in the discount rate assumption causes a corresponding increase (decrease) in the pension liability value. This volatility in the discount rate and the sensitivity of the Plan's pension obligations to changes in the discount rate was a primary reason for HOOPP's adoption of a Liability Driven Investment approach.

At the end of 2018, the discount rate assumption was decreased to 5.30% from 5.50% at the end of 2017, in part due to a decline in long-term interest rates. This 20 basis point decrease in the discount rate assumption resulted in a \$1,675 million increase in the estimated pension obligations.

The table below shows the change in the Plan's pension obligations from the end of 2017 to the end of 2018.

(\$ millions)	
<b>Pension Obligations</b>	
At December 31, 2017	59,602
Increases in benefits due to members	3,851
Changes in assumptions	-
Change in discount rate (expected return)	1,675
<b>At December 31, 2018</b>	<b>65,128</b>

## Key Economic Assumptions

The difference between the discount rate assumption and the inflation assumption is referred to as the real discount rate assumption.

	2018	2017
<b>Assumption</b>		
Inflation Rate	<b>2.00%</b>	2.00%
Real Discount Rate	<b>3.30%</b>	3.50%
Discount Rate	<b>5.30%</b>	5.50%

Given the nature of assumptions, it is important to be aware of the sensitivity of financial results to changes in assumptions. A 1% increase (or decrease) in the discount rate assumption may be considered substantial, but as indicated below, even with this level of change to the assumption, HOOPP would be fully funded at the end of 2018.

The table below highlights the sensitivity of the estimated pension obligations to changes in the discount rate assumption.

Change in Assumption	Discount Rate Assumption	Pension Obligations (\$ millions)	Change in Obligations (as a %)
+1.00%	6.30%	56,737	(13%)
	<b>5.30%</b>	<b>65,128</b>	-
-1.00%	4.30%	75,755	16%

## Operating Expenses

HOOPP continues to invest in its people and technology to grow and support the Fund and service its members and employers.

HOOPP's 2018 operating expenses were \$246 million and includes a planned increase of \$22 million over 2017 operating expenses, most of which was allocated for advancements in new technology. HOOPP's operating expenses represent 0.31% of net assets (2017: 0.29%).

The table below shows 2018 and 2017 operating expenses in absolute amounts and expressed as a percentage of net assets.

	2018	2017
(\$ millions)		
Investment Expenses	<b>146</b>	132
Plan Administration	<b>100</b>	92
Total	<b>246</b>	224
Total Expenses as % of Net Assets	<b>0.31%</b>	0.29%

# Member and Employer Services



## Plan Demographics

**224,330**  
Active members

**101,454**  
Retired members

**31,484**  
Deferred members



**65.5%**  
of active members  
work full-time



**34.5%**  
of active members  
work part-time



**83%**  
of active members  
are female



**17%**  
of active members  
are male

## Average New Annual Pension in 2018

**\$26,700**

## HOOPP Employers

**574** TOTAL HOOPP EMPLOYERS



**152** Small Healthcare Organizations



**142** Hospitals



**82** Service Providers



**65** Foundations

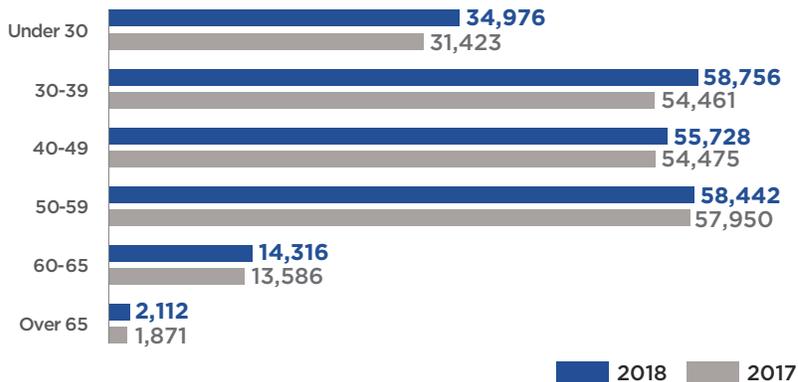


**60** Community Health Centres

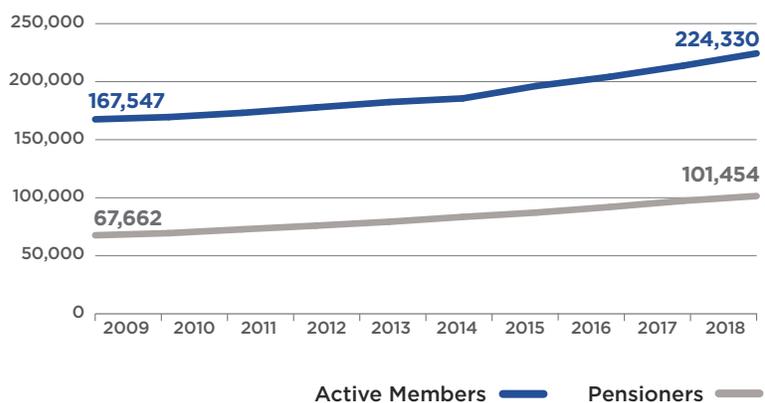


**73** Family Health Teams

## Active Members



## Active and Retired Member Growth



## 2018 Plan Highlights

HOOPP takes great pride in providing members and employers with the highest level of client service. As enhancements were rolled out to both the Plan and administration system, member data from employers continued to be collected on a day-to-day basis and members were assisted with their pension as they progress through their working years, from enrolment to retirement.

In 2018, HOOPP implemented significant Plan benefit improvements that were designed with members in mind. These improvements, approved by the Board of Trustees, have had a positive impact on the vast majority of members – from active members who will receive an increased lifetime pension to retired members whose spouses will receive an increased survivor benefit. As HOOPP delivers on its pension promise, the organization takes pride in this unique opportunity to provide Plan improvements that give members added security and peace of mind.

The Board also approved 100% inflation protection for retired and deferred members for 2018, and took steps to keep contribution rates unchanged until at least the end of 2020. The current rates have been in place since 2004, helping to keep the Plan affordable for members and employers.

## Investing in HOOPP's Pension Administration Platform

HOOPP reached a milestone in its multi-year project to upgrade the pension administration system. Following an extensive pilot phase in 2017, the enhanced system launched for all members and employers on January 1, 2018. Bringing this previously outsourced function back in-house will help lower administration costs, contributing to the long-term stability of the Plan.

The launch of this system required changes in how employers administered the Plan. HOOPP acknowledges the continued support of employers, who were key partners as early implementation challenges were addressed.

Converting to this new record-keeping system also provides HOOPP with additional flexibility to adapt to changes in the future. Ensuring the organization is well-positioned to continue providing effective and cost-efficient service, in person and by phone, as well as through an online self-serve experience remains a priority. Actively encouraging members to register on HOOPP Connect so they can experience the convenience and benefits of this service has been a key communications initiative. For example, members can now use HOOPP Connect to download personal documents and communicate securely and conveniently with Member Services. More than 92,000 members are currently registered.

Amid the rollout of benefit improvements and the transition to the new administration system, high member satisfaction scores were maintained, as shown by the quarterly survey conducted by an independent third party. Members reported being satisfied with the accuracy, consistency and timeliness of the service they received from HOOPP. Going forward, HOOPP remains committed to developing innovative ways to strengthen and enhance the service provided to members and employers.

## Welcoming Employers

In 2018, HOOPP welcomed 32 new employers into the Plan, bringing the total number of employers to 574.

In addition, the following healthcare pension plans merged into HOOPP effective January 1, 2019, bringing approximately 5,200 new members into the Plan:

- Providence Healthcare Pension Plan;
- St. Joseph's Health Centre Pension Plan;
- The Pension Plan for the Employees of the Sisters of St. Joseph for the Diocese of Toronto in Upper Canada; and
- The Sisters of St. Joseph Pension Plan for Designated Employees.

Two additional mergers with the Pension Plan of Kitchener-Waterloo Hospital and St. Michael's Hospital Pension Plan are expected to take effect on June 1 and July 1, 2019, respectively, pending regulatory approval. These two mergers would bring approximately 9,000 additional members into the Plan.

These transactions were made possible by several years of planning and preparation, discussions, regulatory approvals and strong partnerships between plan sponsors and HOOPP. Through this complex undertaking, all parties remained committed to a common goal: providing retirement security. Merging existing pension plans into HOOPP increases the size of the Plan and provides greater flexibility to members in their working years. These mergers broaden HOOPP's reach in the healthcare sector.

## Engaging with Members and Employers

HOOPP also continues to actively reach out to members and employers to answer questions, share information about the value of the HOOPP pension, and advocate for retirement security. In 2018, various information sessions were held across the province, including onsite employer meetings, webcasts, member presentations, and conferences.

In addition to day-to-day service support, HOOPP uses print and digital newsletters, its website, and social media to communicate and share information, providing members and employers the opportunity to engage with HOOPP depending on their preferences.

## Ready for the Future

For Member and Employer Services, 2018 was a year of both foundational work and change, ensuring that HOOPP can continue to strengthen and evolve its service offering so it remains effective, cost-efficient and relevant in a changing world.

# **Financial Statements & Notes to Financial Statements**

## Management's Responsibility for Financial Reporting

The financial statements of the Healthcare of Ontario Pension Plan (the Plan) and the accompanying notes, which are an integral part of the financial statements, have been prepared by management and approved by the Board of Trustees (the Board).

Management is responsible for the integrity and fairness of the information presented, including amounts that are based on best estimates and judgments. These financial statements have been prepared in accordance with the Canadian accounting standards for pension plans and are compliant with the requirements of Part IV of the Chartered Professional Accountants of Canada (CPA Canada) Handbook – Accounting, specifically Section 4600, Pension Plans, and the relevant sections of the Canadian accounting standards for private enterprises (ASPE) in Part II of the CPA Canada Handbook – Accounting. The financial statements also comply with the financial reporting requirements of the *Pension Benefits Act* (Ontario) and *Regulations* (PBA). The significant accounting policies are disclosed in note 1 to the financial statements and the financial information presented throughout the annual report is consistent with that found in the financial statements.

Systems of internal control and supporting procedures have been established and maintained to provide assurance that transactions are authorized, assets safeguarded and proper records maintained. These controls include an organizational structure that provides a well-defined division of responsibilities, a corporate code of conduct, accountability for performance and the timely communication of policies and guidelines throughout the organization.

Ultimate responsibility for the financial statements rests with the members of the Board. The Audit & Finance Committee, consisting of four members who are not officers or employees of the Plan, reviews

the financial statements and recommends them to the Board for approval. The Audit & Finance Committee also assists the Board in its responsibilities by reviewing recommendations from the external and internal auditors, and management's action plans to respond to recommendations for improvements in internal control over financial reporting arising from their audits. The Audit & Finance Committee meets regularly with management and the external and internal auditors to review the scope and timing of their audits, findings, and recommendations for improvement, and to satisfy itself that it has appropriately discharged its responsibilities.

The Plan's external auditor, PricewaterhouseCoopers LLP, was appointed by the Board and is directly responsible to the Audit & Finance Committee. The Plan's external auditor has conducted an independent examination of the financial statements in accordance with Canadian generally accepted auditing standards, performing such tests and procedures as they consider necessary to express an opinion in their Independent Auditor's Report. The external auditor has full and unrestricted access to management and the Audit & Finance Committee to discuss their audit approach and any findings arising from their audits of the financial statements that relate to the integrity of the Plan's financial reporting and the adequacy of the systems of internal control.



**Jim Keohane**

President &  
Chief Executive  
Officer



**Barbara Thomson**

Senior Vice President,  
Finance & Chief Financial  
Officer

March 6, 2019

## Actuaries' Opinion

Mercer (Canada) Limited (Mercer) was retained by the Board of Trustees of the Healthcare of Ontario Pension Plan (the Board) to perform an actuarial valuation of the Plan as at December 31, 2018. The purpose of this valuation is to determine pension obligations of the Plan as at December 31, 2018, for inclusion in the Plan's financial statements in accordance with Section 4600, *Pension Plans*, of the Chartered Professional Accountants of Canada (CPA Canada) Handbook – Accounting.

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

The results of the valuation disclosed total going concern pension obligations of \$65,128 million in respect of service accrued to December 31, 2018 and a smoothed value of net assets of \$78,622 million determined at the same date.

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

- members' demographic data provided by HOOPP management as at October 1, 2018 and members' pay data provided as at December 31, 2017, all of which was projected to December 31, 2018, using management's estimates of experience for the intervening periods;
- the benefits specified by the terms of the Plan including the 100% of 2018 CPI adjustment which will become effective April 1, 2019 in respect of all pensioners' and deferred vested members' benefits; and
- assumptions about future events (for example, economic factors such as future rates of inflation and returns on the pension fund, as well as demographic factors) which were developed by Plan management in consultation with Mercer and have been adopted by Plan management and approved by the Board.

Changes have been made to the actuarial assumptions affecting the pension obligations since the previous valuation for the purpose of the Plan's financial statements at December 31, 2018, as described in the notes to the financial statements.

The smoothed value of the Plan's net assets was based on financial information provided by HOOPP management and the asset smoothing method adopted by Plan management which smoothes out short-term market fluctuations.

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

*In our opinion,*

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

Nonetheless, differences between future experience and our assumptions about such future events will result in gains or losses which will be revealed in future valuations.

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

**Mercer (Canada) Limited**



**Scott Clausen**  
Fellow, Canadian  
Institute of Actuaries

March 6, 2019



**Andrew Whale**  
Fellow, Canadian  
Institute of Actuaries

# Independent Auditor's Report

To the Board of Trustees of  
Healthcare of Ontario Pension Plan

## Our Opinion

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Healthcare of Ontario Pension Plan (HOOPP) as at December 31, 2018 and 2017, and the changes in net assets available for benefits and changes in its pension obligations for the years then ended in accordance with Canadian accounting standards for pension plans.

## What We Have Audited

HOOPP's financial statements comprise:

- the statements of financial position as at December 31, 2018 and 2017;
- the statements of changes in net assets available for benefits for the years then ended;
- the statements of changes in pension obligations for the years then ended; and
- the notes to the financial statements, which include a summary of significant accounting policies.

## Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. 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 believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

## Independence

We are independent of HOOPP in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada. We have fulfilled our other ethical responsibilities in accordance with these requirements.

## Other Information

Management is responsible for the other information. The other information comprises the information, other than the financial statements and our auditor's report thereon, included in the annual report.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

## 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 HOOPP'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 HOOPP or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing HOOPP'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 generally accepted auditing standards 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 generally accepted auditing standards, 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 HOOPP'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 HOOPP'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 HOOPP 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.

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.

*PricewaterhouseCoopers LLP*

**Chartered Professional Accountants,  
Licensed Public Accountants**

Toronto, Ontario

March 6, 2019

# Statements of Financial Position

As at December 31	2018	2017
(\$ millions)		
<b>NET ASSETS AVAILABLE FOR BENEFITS</b>		
<b>Assets</b>		
Investment assets (note 2)	<b>\$ 172,487</b>	\$ 178,310
Contributions receivable		
Employers	<b>97</b>	93
Members	<b>76</b>	80
Other assets (note 7)	<b>196</b>	207
<b>Total assets</b>	<b>172,856</b>	178,690
<b>Liabilities</b>		
Investment liabilities (note 2)	<b>93,701</b>	100,803
Other liabilities	<b>136</b>	132
<b>Total liabilities</b>	<b>93,837</b>	100,935
<b>Net assets available for benefits</b>	<b>79,019</b>	77,755
<b>Pension obligations</b> (note 11)	<b>65,128</b>	59,602
<b>Surplus</b> (note 11)	<b>\$ 13,891</b>	\$ 18,153

*See Description of Plan and accompanying notes to financial statements.*

## ON BEHALF OF THE BOARD OF TRUSTEES



**Dan Anderson**  
Chair of the Board



**Adrian Foster**  
Vice Chair of the Board



**Wayne Gladstone**  
Chair, Audit &  
Finance Committee

## Statements of Changes in Net Assets Available for Benefits

Year ended December 31	2018	2017
(\$ millions)		
<b>Net assets available for benefits, beginning of year</b>	<b>\$ 77,755</b>	<b>\$ 70,359</b>
<b>Investment operations</b>		
Net interest and dividend income (note 4)	<b>6,385</b>	5,945
Net gain (loss) on investments (note 4)	<b>(4,719)</b>	1,653
Operating expenses - investment (note 10)	<b>(146)</b>	(132)
<b>Total investment operations</b>	<b>1,520</b>	7,466
<b>Plan operations</b>		
Contributions (note 8)		
Employers	<b>1,285</b>	1,224
Members	<b>1,106</b>	1,112
Benefit payments (note 9)	<b>(2,383)</b>	(2,205)
Refunds and transfers (note 9)	<b>(164)</b>	(109)
Operating expenses - plan (note 10)	<b>(100)</b>	(92)
<b>Total plan operations</b>	<b>(256)</b>	(70)
<b>Change in net assets available for benefits</b>	<b>1,264</b>	7,396
<b>Net assets available for benefits, end of year</b>	<b>\$ 79,019</b>	<b>\$ 77,755</b>

See Description of Plan and accompanying notes to financial statements.

## Statements of Changes in Pension Obligations

Year ended December 31	2018	2017
(\$ millions)		
<b>Pension obligations, beginning of year</b>	<b>\$ 59,602</b>	<b>\$ 54,461</b>
<b>Changes in pension obligations</b>		
Interest accrued on benefits	<b>3,291</b>	2,973
Benefits accrued	<b>2,537</b>	2,441
Amendments to the plan (note 11)	<b>228</b>	2,853
Changes in actuarial assumptions (note 11)	<b>1,675</b>	(432)
Estimated experience (gains) losses (note 11)	<b>342</b>	(380)
Benefits paid (note 9)	<b>(2,547)</b>	(2,314)
<b>Total changes in pension obligations</b>	<b>5,526</b>	5,141
<b>Pension obligations, end of year</b>	<b>\$ 65,128</b>	<b>\$ 59,602</b>

See Description of Plan and accompanying notes to financial statements.

# Notes to Financial Statements

## Description of Plan

The following description of the Healthcare of Ontario Pension Plan Trust Fund (HOOPP or the Plan) is a summary only. A complete description of the Plan provisions can be found in the *HOOPP Plan Text*, the official Plan document.

### General

The Plan is a contributory defined benefit jointly sponsored pension plan, where factors, such as earnings and years of service, define members' benefits. The Plan was established under an *Agreement and Declaration of Trust* (as amended) for the benefit of eligible employees of participating employers.

The Board, consisting of 16 voting members, governs HOOPP. The Ontario Hospital Association (OHA) appoints eight Trustees, while four unions, namely the Ontario Nurses' Association (ONA), the Canadian Union of Public Employees (CUPE), the Ontario Public Service Employees Union (OPSEU) and the Service Employees International Union (SEIU), each appoint two Trustees. Each Trustee has a legal obligation to administer the Plan in the best interests of all its members, regardless of their union or other affiliation.

HOOPP is registered with the Financial Services Commission of Ontario (FSCO), and with the Canada Revenue Agency (CRA) under Registration Number 0346007. HOOPP is a Registered Pension Plan (RPP), which is generally exempt from income taxes for contributions and investment income earned.

The Board is responsible for administering the Plan in accordance with the PBA, the *Income Tax Act* (Canada) and *Regulations* (ITA), the *Plan Text* and HOOPP's policies and procedures.

### Funding

Plan benefits are funded by contributions and investment earnings. The Board's Funding Decision Framework aims to secure the pension promise and achieve long-term stability in contribution rates for both employers and members. Actuarial funding valuations are conducted annually to determine pension obligations, the funded position, and contribution requirements of the Plan.

Under the terms of the Plan, contributions are set by the Board to cover the total annual cost of benefits. This includes the current service cost of benefits (with recognition of HOOPP's administrative expenses), plus special payments required to amortize unfunded pension obligations less any surplus amortization amounts, if applicable.

## Retirement Pensions

A retirement pension is based on the member's contributory service, the highest average annualized earnings during any consecutive five-year period, and the most recent five-year average year's maximum pensionable earnings (YMPE).

Members can receive an unreduced pension at the earlier of age 60 or as soon as they have completed 30 years of eligibility service, provided they have attained at least 55 years of age. Members are eligible to retire at age 55, usually with a reduced pension.

Members who retire early will receive a bridge benefit until age 65 or death, whichever occurs first. The bridge benefit supplements a member's basic HOOPP pension until age 65 when Canada Pension Plan benefits normally begin.

Members who choose to work beyond age 65 can continue to earn benefits until November 30 of the calendar year in which the member turns age 71, when they must begin to receive their pension.

## Disability Benefits

A disability pension is available to disabled members who meet the eligibility requirements. A disability pension is based on the member's contributory service and average annualized earnings earned to the date of disability retirement with no reduction for early pension commencement and no entitlement to a bridge benefit.

Alternatively, an eligible disabled member may elect to continue to accrue service through a waiver of contributions at no cost until age 65 or until they have accrued 35 years of contributory service, whichever occurs first. Disabled members who may not be eligible for a disability pension may, instead, be eligible for a waiver of contributions.

## Death Benefits

A death benefit may be available to a surviving spouse or designated beneficiary upon the death of a member. Depending on eligibility requirements, the benefit may be paid in the form of a survivor pension or lump-sum payment.

## Portability

Members who terminate employment shall be entitled to receive a deferred pension. They may also opt to transfer the commuted value of the benefit out of HOOPP to another pension plan or registered retirement vehicle, subject to locking-in provisions and certain age restrictions.

Members wanting to transfer their contributions or the value of their benefits from another registered pension plan to HOOPP can do so, provided the transfer meets all eligibility requirements and the other plan agrees to transfer the funds.

## Inflation Protection

Retirement pensions and deferred pensions are adjusted annually by an amount equal to 75% of the previous year's increase in the Canadian Consumer Price Index (CPI) for all contributory service earned through to the end of 2005. Depending on the Plan's financial status and other factors, the Board can approve an annual increase above the guaranteed level up to 100% of the increase in the previous year's CPI.

For retirements and deferred retirements occurring after 2005, the Board may approve an annual increase of up to 100% of the increase in CPI in respect of pensions earned for service after 2005.

In all cases, the increases in CPI are limited to an annual maximum of 10%.

### **Retirement Compensation Arrangement**

In conjunction with its RPP, HOOPP operates a Retirement Compensation Arrangement (RCA). The RCA is administered as part of the overall Plan; however, its assets are held in a segregated account. The RCA provides supplementary pension benefits to members whose earnings result in a pension that exceeds the maximum pension permitted under the ITA for RPPs. Additional information on the RCA is disclosed in note 13. Contributions received and income earned in the RCA are taxable. Depending on the contributions received, benefit payments made, and investment income earned through the RCA, a portion of taxes may be refundable and is disclosed in note 7 as refundable withholding tax on contributions.

## **Note 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

### **Basis of Presentation**

The financial statements of the RPP and RCA plans are combined for purposes of presenting HOOPP's financial statements. These financial statements have been prepared in accordance with the Canadian accounting standards for pension plans and are compliant with the requirements of Part IV of the CPA Canada Handbook - Accounting, specifically Section 4600, *Pension Plans*, and the relevant sections of the Canadian accounting standards for private enterprises (ASPE) in Part II of the CPA Canada Handbook - Accounting (referred to herein as the "Handbook").

The financial statements comply with the financial reporting requirements of the PBA and address certain disclosure requirements issued by FSCO in 2013 and amended in 2014. The requirements are addressed by disclosures within certain notes to the financial statements.

The significant accounting policies used in the preparation of these financial statements are summarized below.

### **Investments**

#### ***Valuation***

All investment transactions are recorded when the risks and rewards of ownership are transferred. Investment transactions relating to marketable securities and derivatives are recorded as of the trade date. Investments are recorded at fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction in the principal (or most advantageous) market between market participants at the measurement date under current market conditions, regardless of whether that price is directly observable or estimated using another valuation technique.

The quoted market price, when available, is used to measure fair value. When the quoted market price is not available, management uses appropriate valuation techniques to determine fair value. The valuation techniques include discounted cash flows, earnings multiples, prevailing market rates for comparable instruments with similar characteristics and/or in similar industries, pricing models and management's best estimates. Inputs used to

determine fair values include contractual cash flows and interest rates, interest rate discount curves, credit spreads and volatilities. The output of any pricing model is an approximation of a fair value that cannot be determined with certainty and valuation techniques employed may not fully reflect all factors relevant to the investments held.

The fair values of investments are determined as follows:

- i. Cash and cash collateral pledged or received are recorded at cost, which is equivalent to their fair value.
- ii. Short-term securities are generally valued at quoted market prices if they exist. Otherwise, they are recorded at cost or amortized cost, which together with accrued interest approximates fair value due to their short-term nature.
- iii. Bonds are generally valued based on quoted mid-market prices obtained from independent, multi-contributor third party pricing sources. Where quoted prices are not available, fair values are calculated using either discounted cash flows based on current market yields on comparable securities, or prices provided by independent third parties.
- iv. Commercial loans are valued using discounted cash flows based on current market yields on comparable securities.
- v. Securities purchased under resell agreements and securities sold under repurchase agreements are accounted for as collateralized lending and collateralized borrowing transactions, respectively, and are recorded at cost, which together with accrued interest approximates fair value due to their short-term nature.
- vi. Public equities are valued at quoted closing market prices. When quoted closing market prices are not available, appropriate valuation techniques and pricing models are used to estimate fair value.
- vii. Investments in real estate include investments held directly and through ownership in limited partnership funds. Direct investments in income-producing properties are valued at estimated fair values based on annual appraisals determined by independent accredited appraisers. Independent accredited appraisers review any appraisals occurring prior to December 1 at year end to determine whether further adjustments to fair value are required. In the year of acquisition, cost is used as an approximation for fair value, unless there is evidence of a significant change in value. Properties under development are recorded at cost. Investments in limited partnership funds are valued based on financial information provided by the funds' General Partners under limited partnership agreements (unless a specific and conclusive reason exists to vary from the value provided by the General Partners). Mortgages held on real estate investments are valued using discounted cash flows based on current market yields on comparable securities.
- viii. Investments in private equities and special situations include investments held directly and through ownership in limited partnership funds. Direct equity investments are valued using quoted market prices, through the use of other appropriate valuation techniques such as capitalized earnings or discounted cash flows methodologies, or based on information provided by external fund managers. In the year of acquisition, cost is used as an approximation for fair value, unless there is evidence of a significant change in value. Investments in limited partnership funds are valued based on financial information provided by the funds' General Partners under limited partnership agreements (unless a specific and conclusive reason exists to vary from the value provided by the General Partners). Debt investments are valued using discounted cash flows based on current market yields on comparable securities.

- ix. Exchange-traded derivatives are valued based on quoted closing market prices. For over-the-counter derivatives, where quoted closing prices are not available, appropriate valuation techniques, primarily pricing models, are used to estimate fair value. These pricing models are based on generally accepted valuation models, use readily observable market prices and inputs that are actively quoted and can be validated with external sources, including industry data and pricing services. Depending on the types and contractual terms of derivatives, fair value can be modeled using a series of techniques that are consistently applied. The valuation techniques used by HOOPP require one or more of the following key inputs:
- bond prices – quoted prices are generally available from pricing services for government bonds and most corporate bonds;
  - credit spreads – obtained from independent pricing services or derived based on other credit-based instruments;
  - foreign currency exchange rates – forward and spot exchange rates are obtained from an independent data service;
  - implied volatilities – obtained or derived from independent data services;
  - interest rates – quoted rates obtained from central banks and from swap, bond and futures markets; and
  - public equity and equity indices prices – based on quoted closing market prices.
- x. Investments also include pending trades, accrued investment income and accrued investment liabilities. These investments are recorded at amortized cost, which approximates fair value due to their short-term nature.

#### ***Net Investment Income (Loss)***

Net investment income (loss) generally consists of net interest and net dividend income, which includes net operating income (loss) from investments in real estate, and private equity and special situations, as well as realized gains (losses) and cash settlements on investments, and unrealized gains (losses) resulting from changes in fair value.

Net interest income is recognized on an accrual basis and net dividend income is recognized on the ex-dividend date. Realized gains and losses on investments are recognized upon disposition and are calculated based on average cost. The change in unrealized gains and losses on investments represents the year-over-year change in the difference between the cost and the fair value of investments.

#### ***Management Fees and Performance Fees***

Management fees and performance fees related to investments in real estate and private equity are expensed as incurred and reported as a component of net investment income.

### ***Transaction Costs***

Transaction costs, which are incremental costs attributable to the acquisition, issue or disposal of investments are expensed as incurred and reported as a component of net investment income.

### ***Foreign Currency Translation***

Investment assets and investment liabilities denominated in foreign currencies are translated into Canadian dollars at the rate of exchange prevailing at the year-end date. Investment income and expenses are translated into Canadian dollars at the rate of exchange prevailing on the date of the transaction. The realized gains and losses arising from these investment transactions are included in realized gains and losses on the sale of investments. Unrealized gains and losses on translation of investment assets and investment liabilities are included in the change in unrealized gains and losses on investments.

### **Pension Obligations**

Pension obligations are determined based on an actuarial valuation prepared by an independent actuarial consulting firm. These pension obligations are measured in accordance with accepted actuarial practice using actuarial assumptions and methods adopted by HOOPP for the purpose of establishing the long-term funding requirements of the Plan. The year-end valuation of pension obligations is based on data extrapolated to the current valuation date of December 31. The valuation uses the projected accrued benefit actuarial cost method and management's estimate of certain future events.

The pension obligations included in these financial statements are consistent with the results that would be used for a December 31 regulatory filing valuation if one were to be completed.

### **Contributions**

Contributions from members and employers are recorded on an accrual basis. Contributions for past service purchases and transfers from other plans are recorded when received.

### **Benefits**

Benefit payments to members and pensioners, commuted value transfers, refunds to former members, and transfers to other pension plans are recorded in the period in which they are paid. Any benefit payment amounts accrued and not yet paid are reflected in the pension obligations.

### **Fixed Assets**

Fixed assets and intangible assets are recorded at cost and amortized on a straight-line basis over their estimated useful lives.

## Use of Estimates

The preparation of the financial statements requires management to make estimates and assumptions based on information available as at the date of the financial statements. Such estimates and assumptions may affect the reported amounts of assets and liabilities, income and expenses, pension obligations and related disclosures. Significant estimates are used primarily in the determination of pension obligations (note 11) and the fair value of certain investments (note 2). Actual results could differ from those estimates.

## Related Party Transactions

HOOPP's Board, management and subsidiaries are considered related parties according to the Handbook. Any transactions between these related parties and HOOPP are not significant for the purposes of these financial statements, except for those disclosed in note 14.

## Note 2 - INVESTMENTS

The investment objective of the Plan is to earn an annual average rate of return that exceeds its long-term funding target by employing appropriate asset mix policies and risk diversification strategies. The nominal long-term return target of the Plan during the year was 5.90%.

Investment assets and investment liabilities are measured at fair value and classified using a fair value hierarchy that is based on the methods and assumptions used to determine their fair values. The fair value hierarchy gives highest priority to unadjusted quoted prices in active markets for identical assets or liabilities and lowest priority to unobservable inputs. The fair value hierarchy has the following three levels:

- *Level 1* - unadjusted quoted prices in active markets for identical assets or liabilities;
- *Level 2* - inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices); and
- *Level 3* - inputs for the asset or liability that are not based on observable market data (i.e., unobservable inputs).

In some cases the inputs used to measure the fair value of an investment asset or investment liability might be categorized within different levels of the fair value hierarchy. In those cases, the classification for each asset or liability is determined based on the lowest level input that is significant to the entire assessment. For this purpose, the significance of an input is assessed against the fair value measurement in its entirety. Assessing the significance of a particular input to the fair value measurement requires judgment and evaluation of factors specific to the investment asset or investment liability being considered. Determining whether an input is observable also requires considerable judgment. Observable data is considered to be market data that is readily available, regularly distributed and updated, easily corroborated and obtained from independent sources that are actively involved in that particular market.

Investments that are classified as Level 1 include actively traded equity investments and exchange traded derivatives. These investments are valued at quoted, unadjusted, closing market prices. Cash is also included as Level 1.

Investments that are classified as Level 2 include short-term securities, securities purchased under resell agreements, securities sold under repurchase agreements, most government and corporate bonds and over-the-counter derivatives. For these investments, fair values are either derived from a number of prices that are provided by independent price sources or from pricing models that use observable market data such as swap curves, credit spreads and volatilities.

There were no significant transfers between Level 1 and Level 2 during 2018 or 2017.

Investments that are classified as Level 3 include investments in real estate, private equity and special situations, commercial loans, some over-the-counter derivatives and some marketable securities. For these investments, trading activity is infrequent and fair values are derived using valuation techniques. The significant inputs used in the pricing models are either not observable or assumptions are made about significant inputs.

Transfers from Level 2 to Level 3 occur when an investment asset's or investment liability's fair value, which was determined previously through the use of a valuation technique with significant observable inputs, is now determined using a valuation technique with significant unobservable inputs. Transfers from Level 3 to Level 2 occur when techniques used for valuing the investment involve significant observable inputs that were previously unobservable.

### a. Fair value hierarchy

The Plan's investment assets and investment liabilities are presented in the table below.

(\$ millions)	2018				No Level <sup>(1)</sup>	Total Fair Value	Total Cost
	Level 1	Level 2	Level 3				
<b>INVESTMENT ASSETS</b>							
<b>Cash</b>	\$ 8	\$ -	\$ -	\$ -	\$ -	\$ 8	\$ 8
<b>Fixed income</b>							
Short-term securities	-	1,203	-	-	-	1,203	1,203
Bonds							
Canadian	-	89,836	-	-	-	89,836	88,624
Non-Canadian	-	11,908	1,349	-	-	13,257	12,204
Commercial loans							
Non-Canadian	-	-	49	-	-	49	48
<b>Total fixed income</b>	-	102,947	1,398	-	-	104,345	102,079
<b>Securities purchased under resell agreements (note 5)</b>	-	10,871	-	-	-	10,871	10,573
<b>Public equities</b>							
Canadian	1,126	-	603	-	-	1,729	1,822
Non-Canadian	22,608	14	-	-	-	22,622	23,578
<b>Total public equities</b>	23,734	14	603	-	-	24,351	25,400
<b>Private equities and special situations</b>							
Canadian	-	-	1,227	-	-	1,227	482
Non-Canadian	-	-	8,899	-	-	8,899	6,838
<b>Total private equities and special situations</b>	-	-	10,126	-	-	10,126	7,320
<b>Real estate</b>							
Canadian	-	-	9,443	-	-	9,443	7,319
Non-Canadian	-	-	3,812	-	-	3,812	2,726
<b>Total real estate</b>	-	-	13,255	-	-	13,255	10,045
<b>Derivative instruments (notes 3 &amp; 5)</b>	36	8,427	16	-	-	8,479	2,333
<b>Investment receivables</b>							
Cash collateral pledged (note 5)	-	-	-	-	-	-	-
Pending trades <sup>(1)</sup>	-	-	-	257	-	257	254
Accrued investment income <sup>(1)</sup>	-	-	-	795	-	795	795
<b>Total investment receivables</b>	-	-	-	1,052	-	1,052	1,049
<b>Total investment assets</b>	23,778	122,259	25,398	1,052	-	172,487	158,807
<b>INVESTMENT LIABILITIES</b>							
<b>Cash overdraft</b>	(9)	-	-	-	-	(9)	(9)
<b>Equities sold short (note 5)</b>	(19,232)	-	-	-	-	(19,232)	(18,918)
<b>Bonds sold short (note 5)</b>	-	(15,058)	-	-	-	(15,058)	(14,717)
<b>Derivative instruments (notes 3 &amp; 5)</b>	(10)	(21,241)	(3)	-	-	(21,254)	(7,906)
<b>Securities sold under repurchase agreements (note 5)</b>							
	-	(26,155)	-	-	-	(26,155)	(25,594)
<b>Cash collateral received (note 5)</b>	(11,531)	-	-	-	-	(11,531)	(11,531)
<b>Pending trades<sup>(1)</sup></b>	-	-	-	(305)	-	(305)	(303)
<b>Accrued investment liabilities<sup>(1)</sup></b>	-	-	-	(157)	-	(157)	(157)
<b>Total investment liabilities</b>	(30,782)	(62,454)	(3)	(462)	-	(93,701)	(79,135)
<b>Net Investments</b>	\$ (7,004)	\$ 59,805	\$ 25,395	\$ 590	-	\$ 78,786	\$ 79,672

<sup>(1)</sup> These are investment assets or investment liabilities for which a fair value hierarchy classification is not required.

2017							
(\$ millions)	Level 1	Level 2	Level 3	No Level <sup>(1)</sup>	Total Fair Value	Total Cost	
<b>INVESTMENT ASSETS</b>							
<b>Cash</b>	\$ 21	\$ -	\$ -	\$ -	\$ 21	\$ 21	
<b>Fixed income</b>							
Short-term securities	-	3,011	-	-	3,011	3,011	
Bonds							
Canadian	-	88,624	-	-	88,624	85,734	
Non-Canadian	-	10,736	786	-	11,522	10,858	
Commercial loans							
Non-Canadian	-	-	20	-	20	20	
<b>Total fixed income</b>	-	102,371	806	-	103,177	99,623	
<b>Securities purchased under resell agreements</b> (note 5)	-	7,797	-	-	7,797	7,860	
<b>Public equities</b>							
Canadian	267	-	603	-	870	855	
Non-Canadian	35,449	7	-	-	35,456	34,350	
<b>Total public equities</b>	35,716	7	603	-	36,326	35,205	
<b>Private equities and special situations</b>							
Canadian	-	-	1,526	-	1,526	627	
Non-Canadian	-	-	5,694	-	5,694	4,555	
<b>Total private equities and special situations</b>	-	-	7,220	-	7,220	5,182	
<b>Real estate</b>							
Canadian	-	-	8,808	-	8,808	6,890	
Non-Canadian	-	-	3,144	-	3,144	2,408	
<b>Total real estate</b>	-	-	11,952	-	11,952	9,298	
<b>Derivative instruments</b> (notes 3 & 5)	22	8,671	21	-	8,714	2,222	
<b>Investment receivables</b>							
Cash collateral pledged (note 5)	1,911	-	-	-	1,911	1,911	
Pending trades <sup>(1)</sup>	-	-	-	372	372	372	
Accrued investment income <sup>(1)</sup>	-	-	-	820	820	820	
<b>Total investment receivables</b>	1,911	-	-	1,192	3,103	3,103	
<b>Total investment assets</b>	37,670	118,846	20,602	1,192	178,310	162,514	
<b>INVESTMENT LIABILITIES</b>							
<b>Cash overdraft</b>	-	-	-	-	-	-	
<b>Equities sold short</b> (note 5)	(22,231)	-	-	-	(22,231)	(20,091)	
<b>Bonds sold short</b> (note 5)	-	(11,693)	-	-	(11,693)	(12,113)	
<b>Derivative instruments</b> (notes 3 & 5)	(13)	(22,094)	(10)	-	(22,117)	(8,144)	
<b>Securities sold under repurchase agreements</b> (note 5)							
	-	(30,135)	-	-	(30,135)	(30,426)	
<b>Cash collateral received</b> (note 5)	(13,592)	-	-	-	(13,592)	(13,591)	
<b>Pending trades</b> <sup>(1)</sup>	-	-	-	(936)	(936)	(941)	
<b>Accrued investment liabilities</b> <sup>(1)</sup>	-	-	-	(99)	(99)	(99)	
<b>Total investment liabilities</b>	(35,836)	(63,922)	(10)	(1,035)	(100,803)	(85,405)	
<b>Net Investments</b>	\$ 1,834	\$ 54,924	\$ 20,592	\$ 157	\$ 77,507	\$ 77,109	

<sup>(1)</sup> These are investment assets or investment liabilities for which a fair value hierarchy classification is not required.

## b. Offsetting financial assets and financial liabilities

The following financial instruments are subject to enforceable master netting arrangements or similar agreements and/or may require the transfer of collateral. HOOPP presents these financial instruments as gross amounts in the statements of financial position, since the netting provisions contained in the respective agreements apply in limited circumstances. However, where HOOPP has a legally enforceable right to set-off the recognized amounts and intends to settle on a net basis, HOOPP offsets financial assets and financial liabilities and presents the net amount in the statements of financial position. If the effect of these arrangements, together with the collateral pledged or received were taken into consideration, the potential impact on HOOPP's financial position would be as follows:

2018							
(\$ millions)	Gross Amounts of Recognized Financial Instruments	Amounts Set Off in the Statements of Financial Position	Net Amounts of Financial Instruments Presented (note 2a)	Amounts Subject to Enforceable Master Netting Arrangements or Similar Agreements <sup>(1)</sup>	Cash and Securities Collateral Pledged (Received) <sup>(2)</sup>	Net Amount	
<b>Financial assets</b>							
Securities purchased under resell agreements <sup>(3)</sup>	\$ 11,133	\$ (258)	\$ 10,875	\$ (9,987)	\$ (883)	\$	5
Securities on loan <sup>(4)</sup>	19,037	-	19,037	-	(18,968)		69
Derivative instruments <sup>(5)</sup>	8,712	-	8,712	(7,002)	(1,682)		28
<b>Total financial assets</b>	<b>38,882</b>	<b>(258)</b>	<b>38,624</b>	<b>(16,989)</b>	<b>(21,533)</b>		<b>102</b>
<b>Financial liabilities</b>							
Securities sold under repurchase agreements	(26,413)	258	(26,155)	9,987	16,076		(92)
Derivative instruments <sup>(5)</sup>	(21,496)	-	(21,496)	7,002	14,385		(109)
<b>Total financial liabilities</b>	<b>\$ (47,909)</b>	<b>\$ 258</b>	<b>\$ (47,651)</b>	<b>\$ 16,989</b>	<b>\$ 30,461</b>		<b>\$ (201)</b>

<sup>(1)</sup> Refer to note 6 for additional information on master netting arrangements.

<sup>(2)</sup> Refer to note 5 for additional information on cash and securities collateral.

<sup>(3)</sup> Includes pending trade receivables of \$4 million.

<sup>(4)</sup> Included within fixed income and public equity investment assets in Note 2a.

<sup>(5)</sup> Includes pending trade receivables and payables of \$233 million and \$242 million, respectively.

2017							
(\$ millions)	Gross Amounts of Recognized Financial Instruments	Amounts Set Off in the Statements of Financial Position	Net Amounts of Financial Instruments Presented (note 2a)	Amounts Subject to Enforceable Master Netting Arrangements or Similar Agreements <sup>(1)</sup>	Cash and Securities Collateral Pledged (Received) <sup>(2)</sup>	Net Amount	
<b>Financial assets</b>							
Securities purchased under resell agreements	\$ 7,797	\$ -	\$ 7,797	\$ (7,097)	\$ (445)	\$	255
Securities on loan <sup>(3)</sup>	19,711	-	19,711	-	(19,704)		7
Derivative instruments <sup>(4)</sup>	8,795	-	8,795	(7,125)	(1,658)		12
<b>Total financial assets</b>	<b>36,303</b>	<b>-</b>	<b>36,303</b>	<b>(14,222)</b>	<b>(21,807)</b>		<b>274</b>
<b>Financial liabilities</b>							
Securities sold under repurchase agreements	(30,135)	-	(30,135)	7,097	23,024		(14)
Derivative instruments <sup>(4)</sup>	(22,242)	-	(22,242)	7,125	14,969		(148)
<b>Total financial liabilities</b>	<b>\$ (52,377)</b>	<b>\$ -</b>	<b>\$ (52,377)</b>	<b>\$ 14,222</b>	<b>\$ 37,993</b>		<b>\$ (162)</b>

<sup>(1)</sup> Refer to note 6 for additional information on master netting arrangements.

<sup>(2)</sup> Refer to note 5 for additional information on cash and securities collateral.

<sup>(3)</sup> Included within fixed income and public equity investment assets in note 2a.

<sup>(4)</sup> Includes pending trade receivables and payables of \$81 million and \$125 million, respectively.

### c. Changes in fair value measurement for investments in Level 3

The following table presents the changes in fair value measurement for investments included in Level 3 during the year ended December 31, 2018.

(\$ millions)	2018						Fair Value Dec. 31, 2018
	Fair Value Dec. 31, 2017	Total Gains (Losses) Included in Net Income <sup>(1)</sup>	Purchases and Issues	Sales and Settlements	Transfers In <sup>(2)</sup>	Transfers Out <sup>(2)</sup>	
<b>Bonds</b>							
Non-Canadian	\$ 786	\$ 83	\$ 828	\$ (348)	\$ -	\$ -	\$ 1,349
<b>Commercial loans</b>							
Canadian	-	-	-	-	-	-	-
Non-Canadian	20	2	27	-	-	-	49
<b>Public equities</b>							
Canadian	603	-	-	-	-	-	603
<b>Private equities and special situations</b>							
Canadian	1,526	83	52	(434)	-	-	1,227
Non-Canadian	5,694	1,413	3,184	(1,335)	-	(57)	8,899
<b>Real estate<sup>(3)</sup></b>							
Canadian	8,808	261	512	(138)	-	-	9,443
Non-Canadian	3,144	412	290	(34)	-	-	3,812
<b>Assets from derivative instruments</b>	21	(19)	(22)	33	3	-	16
<b>Liabilities from derivative instruments</b>	(10)	(1)	29	(20)	(1)	-	(3)
<b>Total</b>	<b>\$ 20,592</b>	<b>\$ 2,234</b>	<b>\$ 4,900</b>	<b>\$ (2,276)</b>	<b>\$ 2</b>	<b>\$ (57)</b>	<b>\$ 25,395</b>

<sup>(1)</sup> For those investment assets and investment liabilities held at the end of the year, the total gains were \$1,549 million.

<sup>(2)</sup> Transfers into and transfers out of Level 3 are assumed to occur at the end of the year.

<sup>(3)</sup> For real estate, additional mortgage debt borrowings of \$100 million are netted in Purchases and Issues and mortgage debt repayments of \$482 million are netted in Sales and Settlements.

(\$ millions)	2017						Fair Value Dec. 31, 2017
	Fair Value Dec. 31, 2016	Total Gains (Losses) Included in Net Income <sup>(1)</sup>	Purchases and Issues	Sales and Settlements	Transfers In <sup>(2)</sup>	Transfers Out <sup>(2)</sup>	
<b>Bonds</b>							
Non-Canadian	\$ 863	\$ 13	\$ -	\$ (90)	\$ -	\$ -	\$ 786
<b>Commercial loans</b>							
Canadian	648	(1)	-	(647)	-	-	-
Non-Canadian	163	(1)	20	(162)	-	-	20
<b>Public equities</b>							
Canadian	603	-	-	-	-	-	603
<b>Private equities and special situations</b>							
Canadian	1,409	221	109	(213)	-	-	1,526
Non-Canadian	3,560	796	2,171	(812)	-	(21)	5,694
<b>Real estate<sup>(3)</sup></b>							
Canadian	8,124	161	616	(93)	-	-	8,808
Non-Canadian	1,929	431	846	(62)	-	-	3,144
<b>Assets from derivative instruments</b>	68	54	(39)	(57)	1	(6)	21
<b>Liabilities from derivative instruments</b>	(19)	1	(17)	27	(2)	-	(10)
<b>Total</b>	<b>\$ 17,348</b>	<b>\$ 1,675</b>	<b>\$ 3,706</b>	<b>\$ (2,109)</b>	<b>\$ (1)</b>	<b>\$ (27)</b>	<b>\$ 20,592</b>

<sup>(1)</sup> For those investment assets and investment liabilities held at the end of the year, the total gains were \$1,164 million.

<sup>(2)</sup> Transfers into and transfers out of Level 3 are assumed to occur at the end of the year.

<sup>(3)</sup> For real estate, additional mortgage debt borrowings of \$310 million are netted in Purchases and Issues and mortgage debt repayments of \$295 million are netted in Sales and Settlements.

### d. Sensitivity to changes in assumptions for investments in Level 3

The following table illustrates the impact to fair value for certain investments in Level 3 when changing the significant inputs to reasonable alternative assumptions.

(\$ millions)	Significant Inputs	2018		2017	
		Change in Significant Inputs	Increase (Decrease) to fair value	Change in Significant Inputs	Increase (Decrease) to fair value
Private equity	<b>EBITDA multiple</b>	<b>+/- 10%</b>	<b>\$ 144/(144)</b>	EBITDA multiple	+/- 10% \$ \$ 93/(93)
Private debt	<b>Discount rate</b>	<b>+/- 1%</b>	<b>(21)/17</b>	Discount rate	+/- 1% (11)/14
Real estate	<b>Capitalization rate</b>	<b>+/- 0.25%</b>	<b>(472)/522</b>	Capitalization rate	+/- 0.25% (432)/477

The above sensitivity analysis excludes investments where fair values are based on information provided by the general partners or the external fund managers as the Plan does not have access to the assumptions and methodologies used to fair value the underlying investments. For other investments included in Level 3, management's judgment is that changing one or more of the inputs to a reasonable alternative assumption would not change the fair value of the Plan significantly.

### e. Significant investments

Investments, excluding short sales and derivative exposures, where the cost or fair value exceeds 1% of the cost or fair value of the Fund, being approximately \$790 and \$780 million respectively, as at December 31, 2018, are as follows:

	Maturity Date	Coupon Rate %	Fair Value	Cost
(\$ millions)				
<b>Fixed income</b>				
Canadian federal bonds	2019-2037	2.23-8.00	\$ 8,748	\$ 8,716
United States treasury bonds	2045-2048	2.88-3.00	5,028	4,608
Canadian provincial and municipal bonds	2020-2045	3.45-11.00	9,761	10,227
Real return bonds	2021-2047	0.75-4.25 <i>Plus CPI*</i>	10,200	9,827
<b>Public equities</b>				
SPDR S&P 500 ETF Trust			\$ 4,765	\$ 4,791
iShares Russell 2000 ETF			1,185	1,254
Altaba Inc.			948	1,061
<b>Other</b>				
Private equity			\$ 1,862	\$ 904

\* CPI - Consumer Price Index

## Note 3 - DERIVATIVE FINANCIAL INSTRUMENTS

Derivatives are financial contracts, the value of which is derived from changes in the underlying asset, index of prices or rates, interest rate or foreign exchange rate.

The Plan's investment objectives for the use of derivatives are to enhance returns by facilitating changes in the investment asset mix, to enhance equity and fixed income portfolio returns, and to manage financial risk. Derivatives may be used in all of HOOPP's permitted asset classes. The Plan utilizes the following derivative financial instruments:

## Foreign Exchange Forward Contracts

Foreign exchange forward contracts are customized agreements negotiated between two parties to buy or sell a specific amount of foreign currency at a price specified at origination of the contract with settlement at a specified future date. Forward contracts are used to modify the Plan's exposure to currency risk.

## Futures Contracts

Futures contracts are standardized agreements, which can be purchased or sold on a futures exchange market at a predetermined future date and price, in accordance with terms specified by the regulated futures exchange, and they are subject to daily cash margining. HOOPP invests in both bond futures and equity futures, which relate to a specific equity or bond, a basket of equities or bonds or index of equities or bonds. These types of derivatives are used to modify exposures efficiently without actually purchasing or selling the underlying asset.

## Options

Options are contractual agreements under which the seller grants the purchaser the right, but not the obligation, either to buy (call option) or sell (put option) a financial instrument at a predetermined price on or before a specified future date. The seller receives a premium from the purchaser for this right. HOOPP invests in interest rate options, swaptions, foreign currency options, equity options, and options on credit default swaps. Options are used to manage the exposures to market risks and to enhance returns.

## Swaps

Swaps are contractual agreements between two counterparties to exchange a series of cash flows. HOOPP utilizes the following swap instruments:

- Equity swaps are agreements between two parties to exchange a series of cash flows based on the return of an equity, a basket of equities or an equity index. One party typically agrees to pay a floating interest rate in return for receiving the equity return. HOOPP also invests in equity-based swaps such as variance, volatility, and dividend swaps. These equity-based swaps are used for yield enhancement purposes and to adjust exposures to particular indices without directly purchasing or selling the securities that comprise the index.
- Interest rate swaps and cross-currency swaps are agreements between two parties to exchange a series of fixed or floating cash flows in the same currency or different currencies based on the notional amount. Interest rate swaps are used to manage interest rate exposures and cross-currency swaps are used to manage both interest rate and currency exposures.
- Credit default swaps are agreements between two parties where the buyer of the credit protection pays a premium to the seller in exchange for payment of the notional amount from the seller against delivery of the related/relevant debt securities if a credit event such as a default occurs. Instead of physical settlement, credit default swaps can also be cash settled. Credit default swaps are used to promote credit diversification and for risk mitigation.

### a. Derivative notional and fair values

The following table summarizes the notional and fair values of the Plan's derivative positions.

(\$ millions)	2018		
	Notional Value <sup>(1)</sup>	Assets	Fair Value <sup>(2)</sup> Liabilities
<b>Credit derivatives</b>			
Credit default swap options	\$ 20,541	\$ 45	\$ (38)
Credit default swaps <sup>(3)</sup>	15,491	66	(78)
<b>Currency derivatives</b>			
Forwards	15,647	242	(68)
Options	1,363	24	-
Swaps	9,888	195	(1,373)
<b>Equity derivatives</b>			
Futures contracts	11,669	35	(9)
Options	125,122	6,260	(16,748)
Swaps	76,834	1,071	(1,583)
<b>Interest rate derivatives</b>			
Futures contracts	90	-	-
Options	8,495	14	-
Swaps	30,804	427	(1,338)
Swaptions	17,387	100	(19)
<b>Total</b>	<b>\$ 333,331</b>	<b>\$ 8,479</b>	<b>\$ (21,254)</b>

<sup>(1)</sup> Notional values represent the contractual amounts to which a rate or price is applied for computing the cash flows to be exchanged, and are therefore not recorded as assets or liabilities in these financial statements. Notional values are also the basis on which the fair values of the contracts and the returns are determined. Notional values do not necessarily represent the future cash flows to be exchanged, nor do they indicate the Plan's exposure to market or credit risk.

<sup>(2)</sup> Contracts with a positive fair value are recorded as investment assets while contracts with a negative fair value are recorded as investment liabilities in note 2.

<sup>(3)</sup> HOOPP, through the sale of credit protection, indirectly guarantees the underlying reference obligations. The notional amount and fair value of the credit protection sold are \$10,285 million and \$6 million, respectively. These contracts mature between 2020 and 2025.

(\$ millions)	2017		
	Notional Value <sup>(1)</sup>	Assets	Fair Value <sup>(2)</sup> Liabilities
<b>Credit derivatives</b>			
Credit default swap options	\$ 12,420	\$ 3	\$ (4)
Credit default swaps <sup>(3)</sup>	15,372	40	(113)
<b>Currency derivatives</b>			
Forwards	9,515	32	(125)
Options	2,528	34	(11)
Swaps	11,824	229	(1,450)
<b>Equity derivatives</b>			
Futures contracts	6,117	15	(13)
Options	119,489	7,383	(18,113)
Swaps	86,915	506	(442)
<b>Interest rate derivatives</b>			
Futures contracts	1,156	2	-
Options	5,316	10	-
Swaps	28,256	348	(1,819)
Swaptions	10,649	112	(27)
<b>Total</b>	<b>\$ 309,557</b>	<b>\$ 8,714</b>	<b>\$ (22,117)</b>

<sup>(1)</sup> Notional values represent the contractual amounts to which a rate or price is applied for computing the cash flows to be exchanged, and are therefore not recorded as assets or liabilities in these financial statements. Notional values are also the basis on which the fair values of the contracts and the returns are determined. Notional values do not necessarily represent the future cash flows to be exchanged, nor do they indicate the Plan's exposure to market or credit risk.

<sup>(2)</sup> Contracts with a positive fair value are recorded as investment assets while contracts with a negative fair value are recorded as investment liabilities in note 2.

<sup>(3)</sup> HOOPP, through the sale of credit protection, indirectly guarantees the underlying reference obligations. The notional amount and fair value of the credit protection sold are \$7,530 million and \$13 million, respectively. These contracts mature between 2019 and 2024.

### b. Derivative notional values by term to maturity

The following table summarizes the notional values for the Plan's derivative positions by term to maturity.

(\$ millions)	2018			
	Within 1 Year	1 to 5 Years	Over 5 Years	Total
<b>Credit derivatives</b>				
Credit default swap options	\$ 20,541	\$ -	\$ -	\$ 20,541
Credit default swaps	236	13,243	2,012	15,491
<b>Currency derivatives</b>				
Forwards	15,647	-	-	15,647
Options	716	170	477	1,363
Swaps	5,456	4,432	-	9,888
<b>Equity derivatives</b>				
Futures contracts	11,669	-	-	11,669
Options	72,456	45,518	7,148	125,122
Swaps	60,699	16,135	-	76,834
<b>Interest rate derivatives</b>				
Futures contracts	90	-	-	90
Options	1,364	7,131	-	8,495
Swaps	6,382	21,672	2,750	30,804
Swaptions	13,778	2,492	1,117	17,387
<b>Total</b>	<b>\$ 209,034</b>	<b>\$ 110,793</b>	<b>\$ 13,504</b>	<b>\$ 333,331</b>

(\$ millions)	2017			
	Within 1 Year	1 to 5 Years	Over 5 Years	Total
<b>Credit derivatives</b>				
Credit default swap options	\$ 12,420	\$ -	\$ -	\$ 12,420
Credit default swaps	3,008	9,536	2,828	15,372
<b>Currency derivatives</b>				
Forwards	9,515	-	-	9,515
Options	1,183	905	440	2,528
Swaps	5,438	6,257	129	11,824
<b>Equity derivatives</b>				
Futures contracts	6,117	-	-	6,117
Options	59,107	55,511	4,871	119,489
Swaps	73,703	13,212	-	86,915
<b>Interest rate derivatives</b>				
Futures contracts	1,156	-	-	1,156
Options	-	5,316	-	5,316
Swaps	3,719	20,583	3,954	28,256
Swaptions	6,649	2,752	1,248	10,649
<b>Total</b>	<b>\$ 182,015</b>	<b>\$ 114,072</b>	<b>\$ 13,470</b>	<b>\$ 309,557</b>

## Note 4 - NET INVESTMENT INCOME

### a. Net investment income based on investment assets and investment liabilities

The Plan's net investment income for the year ended December 31, presented by investment assets and investment liabilities, is as follows:

(\$ millions)	2018		
	Net Interest and Dividend Income <sup>(1)(2)</sup>	Net Gain (Loss) on Investments <sup>(3)(4)</sup>	Net Investment Income
<b>Cash and pending trades</b>	\$ (141)	\$ (766)	\$ (907)
<b>Fixed income</b>			
Short-term securities	33	(14)	19
Net bonds			
Canadian	2,949	(1,824)	1,125
Non-Canadian	239	(20)	219
Commercial loans			
Canadian	-	-	-
Non-Canadian	1	2	3
<b>Total fixed income</b>	3,222	(1,856)	1,366
<b>Net repurchase agreements</b>	(288)	(804)	(1,092)
<b>Net public equities</b>			
Canadian	(117)	(200)	(317)
Non-Canadian	3,150	(4,081)	(931)
<b>Total public equities</b>	3,033	(4,281)	(1,248)
<b>Private equities and special situations</b>			
Canadian	54	83	137
Non-Canadian	60	1,452	1,512
<b>Total private equities and special situations</b>	114	1,535	1,649
<b>Real estate</b>			
Canadian	388	261	649
Non-Canadian	57	412	469
<b>Total real estate</b>	445	673	1,118
<b>Derivative instruments</b>	-	808	808
<b>Total investment income</b>	6,385	(4,691)	1,694
<b>Transaction costs</b>	-	(28)	(28)
<b>Net investment income</b>	\$ 6,385	\$ (4,719)	\$ 1,666

<sup>(1)</sup> Includes net operating income (loss) from investments in real estate and private equity.

<sup>(2)</sup> Includes management fees incurred on investments in real estate and private equity of \$111 million.

<sup>(3)</sup> Includes realized losses from investments of \$3,407 million and change in unrealized losses from investments of \$1,284 million before allocating the effect of transaction costs.

<sup>(4)</sup> Includes gain (loss) from foreign exchange.

	2017		
(\$ millions)	Net Interest and Dividend Income <sup>(1)(2)</sup>	Net Gain (Loss) on Investments <sup>(3)(4)</sup>	Net Investment Income
<b>Cash and pending trades</b>	\$ (8)	\$ 223	\$ 215
<b>Fixed income</b>			
Short-term securities	46	-	46
Net bonds			
Canadian	2,839	(730)	2,109
Non-Canadian	289	(21)	268
Commercial loans			
Canadian	77	(2)	75
Non-Canadian	3	(1)	2
<b>Total fixed income</b>	<b>3,254</b>	<b>(754)</b>	<b>2,500</b>
<b>Net repurchase agreements</b>	(160)	591	431
<b>Net public equities</b>			
Canadian	(427)	(436)	(863)
Non-Canadian	2,795	(1,672)	1,123
<b>Total public equities</b>	<b>2,368</b>	<b>(2,108)</b>	<b>260</b>
<b>Private equities and special situations</b>			
Canadian	42	221	263
Non-Canadian	9	798	807
<b>Total private equities and special situations</b>	<b>51</b>	<b>1,019</b>	<b>1,070</b>
<b>Real estate</b>			
Canadian	434	161	595
Non-Canadian	6	412	418
<b>Total real estate</b>	<b>440</b>	<b>573</b>	<b>1,013</b>
<b>Derivative instruments</b>	-	2,144	2,144
<b>Total investment income</b>	<b>5,945</b>	<b>1,688</b>	<b>7,633</b>
<b>Transaction costs</b>	-	(35)	(35)
<b>Net investment income</b>	<b>\$ 5,945</b>	<b>\$ 1,653</b>	<b>\$ 7,598</b>

<sup>(1)</sup> Includes net operating income (loss) from investments in real estate and private equity.

<sup>(2)</sup> Includes management fees incurred on investments in real estate and private equity of \$105 million.

<sup>(3)</sup> Includes realized gains from investments of \$164 million and change in unrealized gains from investments of \$1,524 million before allocating the effect of transaction costs.

<sup>(4)</sup> Includes gain (loss) from foreign exchange.

## b. Real estate income

The Plan's net real estate operating income for the year ended December 31 is as follows:

	2018	2017
(\$ millions)		
Rental revenue	\$ 885	\$ 884
Property operating and other expenses	(400)	(404)
Operating income	485	480
Mortgage interest	(40)	(40)
<b>Net real estate operating income</b>	<b>\$ 445</b>	<b>\$ 440</b>

## Note 5 – TRANSFERS OF FINANCIAL ASSETS

### Financial assets transferred to HOOPP's counterparties

Transfers of financial assets result from HOOPP's arrangements with its counterparties, whereby the Plan:

- transfers the contractual rights to receive the cash flows of the financial assets; or
- retains the contractual rights to receive the cash flows of the financial assets, but assumes a contractual obligation to pay the cash flows to one or more recipients in an arrangement.

For HOOPP, transfers of financial assets to counterparties occur directly through securities lending arrangements. HOOPP also transfers financial assets indirectly through collateral pledged to counterparties as a result of investment strategies such as repurchase agreements, securities borrowing arrangements and derivatives. Transferred financial assets continue to be recognized as HOOPP's assets on the statements of financial position if the risks and rewards of ownership remain with HOOPP.

The following describes HOOPP's transactions that may result in the direct or indirect transfer of financial assets:

#### ***Securities lending program and other transfers of financial assets (direct)***

The Plan participates in a securities lending program where it lends securities that it owns directly to third parties in exchange for a fee. The borrower provides cash or marketable securities of higher value as collateral which mitigates the credit risk associated with the program. The Plan also lends securities through a third party, in accordance with a securities lending agreement, in exchange for a fee.

The Plan also transfers financial assets received from HOOPP's counterparties as a result of various transactions. These financial assets have not been recognized on HOOPP's statements of financial position as the risks and rewards remain with the counterparty.

#### ***Collateral pledged (indirect)***

##### ***i. Repurchase agreements***

The Plan enters into repurchase agreements, which are economically similar to collateralized loans. Under these agreements, the Plan effectively sells securities and simultaneously agrees to buy them back at a specified price at a future date. The net position represents the fair value of collateral pledged, as a result of the change in value of the securities sold under repurchase agreements.

##### ***ii. Securities borrowing arrangements***

The Plan enters into short positions, where it agrees to sell securities that it does not already own, to reduce or eliminate economic exposures as part of certain active management strategies and as an offset to long positions in some derivative strategies. The Plan borrows securities, or uses securities received through other strategies, to facilitate the taking of short positions. For securities borrowed, the Plan is required to pledge cash or marketable securities of higher value as collateral, which mitigates the counterparty's credit risk associated with the program.

##### ***iii. Derivatives***

A transfer of financial assets only occurs when the Plan pledges collateral, typically in the form of cash, fixed income or equities, for obligations incurred in the ordinary course of trading in derivatives.

When the Plan pledges cash collateral for any of the above investment strategies, this cash is derecognized from the statements of financial position. A receivable for the equivalent amount is then recognized to reflect this cash collateral due from the Plan's counterparties.

For any collateral pledged, the counterparty has the right to re-pledge, loan or use it under repurchase agreements in the absence of default by the owner of the collateral.

### **Financial assets received from HOOPP's counterparties**

Securities are received from HOOPP's counterparties directly through securities borrowing arrangements, or indirectly through investment strategies such as securities lending arrangements, resell agreements, and derivatives, which give rise to the counterparty transferring or pledging collateral with HOOPP. These securities are only recognized as HOOPP's assets on the statements of financial position if the risks and rewards of ownership are transferred to HOOPP.

The following describes HOOPP's transactions that may result in financial assets received from its counterparties:

#### ***Securities borrowing arrangements (direct)***

The Plan borrows securities, or uses securities received through other strategies, to facilitate the taking of short positions. For securities borrowed, the Plan is required to pledge cash or marketable securities of higher value as collateral which mitigates the counterparty's credit risk associated with the program.

#### ***Collateral received (indirect)***

##### ***i. Resell agreements***

The Plan enters into resell agreements, which are economically similar to collateralized loans. Under these agreements, the Plan effectively purchases securities and simultaneously agrees to sell them back at a specified price at a future date. The net position represents the fair value of collateral received, as a result of the change in value of the securities under resell agreements.

##### ***ii. Securities lending program***

For securities lent, the borrower provides cash or marketable securities of higher value as collateral which mitigates the credit risk to the Plan, associated with the program.

##### ***iii. Derivatives***

The Plan receives collateral, typically in the form of cash, fixed income or equities, for receivables recognized in the ordinary course of trading in derivatives.

When the Plan receives cash collateral for any of the above investment strategies, this cash is recognized on the statements of financial position. A liability for the equivalent amount is recognized to reflect this cash collateral due to the Plan's counterparties.

For any collateral received, the Plan has the right to re-pledge, loan or use it under repurchase agreements in the absence of default by the owner of the collateral. On termination of the agreement, the Plan is obligated to return the collateral received to the owner. As at December 31, 2018, the fair value of total collateral rehypothecated by the Plan is \$674 million (2017: \$1,101 million).

## Net position of financial assets transferred to and received from HOOPP's counterparties

As at December 31, the fair values and carrying amounts of HOOPP's direct and indirect transferred financial assets, their associated liabilities and receivables and the financial assets received from counterparties were as follows:

(\$ millions)	2018		
	Repurchase Agreements	Securities Lending/Borrowing and Other Transfers	Derivatives
Fair value/carrying amount of financial assets transferred out <sup>(1)</sup>	\$ -	\$ 32,178	\$ -
Fair value/carrying amount of collateral pledged <sup>(2)</sup>	27,024	41,328	16,483
Fair value/carrying amount of financial assets received <sup>(3)</sup>	-	(22,035)	-
Fair value/carrying amount of collateral received <sup>(4)</sup>	(11,707)	(15,873)	(2,320)
Fair value/carrying amount of associated receivables (note 2)	10,871	-	8,479
Fair value/carrying amount of associated liabilities <sup>(5)</sup>	(26,155)	(34,390)	(21,254)
<b>Net position</b>	<b>\$ 33</b>	<b>\$ 1,208</b>	<b>\$ 1,388</b>

<sup>(1)</sup> Includes securities lent, both directly and through a third party, of \$19,037 million, which have not been derecognized from HOOPP's statements of financial position as the risks and rewards remain with HOOPP. The remaining amount of \$13,141 million represents other transfers of financial assets received from various transactions, which have not been recognized on HOOPP's statements of financial position as the risks and rewards remain with the counterparty.

<sup>(2)</sup> Includes cash collateral pledged of \$nil. The full amount represents securities that have not been derecognized from HOOPP's statements of financial position, as the risks and rewards remain with HOOPP.

<sup>(3)</sup> These securities have not been recognized on HOOPP's statements of financial position as the risks and rewards remain with the counterparty.

<sup>(4)</sup> Includes cash collateral received of \$11,531 million. The remaining amount represents securities that have not been recognized on HOOPP's statements of financial position, as the risks and rewards remain with HOOPP's counterparty, or the third party's counterparty in accordance with the securities lending agreement.

<sup>(5)</sup> Includes \$100 million of accrued investment liabilities relating to investments sold short. Amounts for repurchase agreements and derivatives are presented in note 2.

(\$ millions)	2017		
	Repurchase Agreements	Securities Lending/Borrowing and Other Transfers	Derivatives
Fair value/carrying amount of financial assets transferred out <sup>(1)</sup>	\$ -	\$ 27,417	\$ -
Fair value/carrying amount of collateral pledged <sup>(2)</sup>	30,369	40,244	16,535
Fair value/carrying amount of financial assets received <sup>(3)</sup>	-	(16,208)	-
Fair value/carrying amount of collateral received <sup>(4)</sup>	(7,632)	(16,251)	(1,745)
Fair value/carrying amount of associated receivables (note 2)	7,797	-	8,714
Fair value/carrying amount of associated liabilities <sup>(5)</sup>	(30,135)	(34,007)	(22,117)
<b>Net position</b>	<b>\$ 399</b>	<b>\$ 1,195</b>	<b>\$ 1,387</b>

<sup>(1)</sup> Includes securities lent, both directly and through a third party, of \$19,711 million, which have not been derecognized from HOOPP's statements of financial position as the risks and rewards remain with HOOPP. The remaining amount of \$7,706 million represents other transfers of financial assets received from various transactions, which have not been recognized on HOOPP's statements of financial position as the risks and rewards remain with the counterparty.

<sup>(2)</sup> Includes cash collateral pledged of \$1,911 million. The remaining amount represents securities that have not been derecognized from HOOPP's statements of financial position, as the risks and rewards remain with HOOPP.

<sup>(3)</sup> These securities have not been recognized on HOOPP's statements of financial position as the risks and rewards remain with the counterparty.

<sup>(4)</sup> Includes cash collateral received of \$13,592 million. The remaining amount represents securities that have not been recognized on HOOPP's statements of financial position, as the risks and rewards remain with HOOPP's counterparty, or the third party's counterparty in accordance with the securities lending agreement.

<sup>(5)</sup> Includes \$83 million of accrued investment liabilities relating to investments sold short. Amounts for repurchase agreements and derivatives are presented in note 2.

## Note 6 – RISK MANAGEMENT

HOOPP's primary mission is to secure the pension promise for all of its members, pensioners and beneficiaries (HOOPP members). In order to accomplish this, the Plan must actively manage its net funded position (i.e., surplus or deficit). There are two major components to the net funded position - the Plan's going concern pension obligations and net investments - which HOOPP manages and measures in concert. The risk that the imbalance between the net investments and pension obligations becomes a deficit is referred to as funding risk.

The Plan's investments are exposed to financial risks (i.e., market risk, credit risk and liquidity risk) through its investment activities.

HOOPP's Board is responsible, with the assistance of staff, agents and advisors, for prudently managing, investing and administering the Plan in order to secure the pension promise for HOOPP's members. This requires Board oversight of the investments and pension obligations to ensure they are being managed in the best interests of HOOPP members. The Board has established a policy framework, which outlines the Board's risk tolerances, and which guides the development of investment strategies to meet HOOPP's overall objectives.

The cornerstone of the policy framework is the Funding Decision Framework. The Funding Decision Framework sets out criteria to be considered when contemplating changes to contribution rates and/or benefits levels, and establishes a target range for the Plan's funded ratio, which is the ratio of the Plan's net investments to its pension obligations. HOOPP's investment policy and strategic asset mix will also impact the Plan's funded ratio and can be altered to support the management of HOOPP's funded position.

Broadly, the Plan manages funding risk by:

- utilizing a liability driven investment (LDI) approach, an investment strategy that aligns the Plan's investments to the Plan's pension obligations, which helps determine appropriate investments and reduces funding risk;
- setting and managing to a minimum and a target expected range for the Plan's funded ratio;
- annually reviewing the actuarial assumptions underlying the Plan's pension obligations to ensure continued appropriateness; and
- complying with the PBA, the ITA, the Plan's *Agreement and Declaration of Trust*, and the *Plan Text*.

The Board provides a framework for the investment of the Plan's investments through the following key documents, which collectively form HOOPP's policy framework, and which the Board reviews and approves at least annually:

- Investment Risk Framework – the Board's view of the Plan's risk tolerance;
- Statement of Investment Policies and Procedures (SIP&P) – investment guidelines for the management of the Plan, including objectives and how they will be reached; and
- Investment Policies and Guidelines (IP&G) – the Plan's policy benchmark, policy asset mix and detailed investment limits.

The Investment Management Division provides advice and recommendations to the Board about the investing of Plan investments to meet the Plan's target funding ratio and they design and execute investment strategies, in compliance with HOOPP's policy framework. The Finance Division, which is independent from the Investment Management Division, monitors the limits set out in the IP&G. Compliance reporting is provided quarterly to the Board's Asset Liability Management Committee and the Board.

The Board's Asset Liability Management Committee oversees the management and investment of the Plan's investments and pension obligations. It monitors and evaluates the investment management process and performance of the Plan and reviews and recommends to the Board asset liability management policies. The Committee also reviews, monitors and makes recommendations to the Board on matters such as actuarial valuations and the appointment and performance of the Board's external actuarial advisors.

The Board's Plan Committee oversees the Plan's benefits design and administration. It reviews, monitors and makes recommendations to the Board on matters such as proposed changes to benefits, Plan amendments, and contribution rates, as well as benefit administration. The Committee also monitors compliance with legislative and regulatory requirements and the Board's policies.

### **Funding Risk**

The primary risk that HOOPP faces is funding risk - the risk that the Plan's net investment growth and contribution rates will not be sufficient to cover the Plan's pension obligations resulting in an unfunded liability (i.e., a funding deficit). If the funding deficit reaches a certain level, or persists, it may need to be eliminated by reducing benefits, raising contributions, or a combination of both.

The Plan's net funded position can change relatively quickly if there are changes in the value of the Plan's net investments or pension obligations, which may result in a mismatch between the Plan's net investments and its pension obligations. The most significant economic contributors to funding risk are as follows:

- declines in interest rates;
- equity markets failing to achieve expected returns; and
- unexpected increases in inflation.

In addition to the economic contributors to funding risk listed above and further described in the Financial Risk Management section below, the Plan's pension obligations are also affected by non-economic factors such as changes in member demographics.

As at December 31, 2018, the Plan had a surplus for financial statement purposes of \$13,891 million (2017: \$18,153 million) based on the difference between the fair value of net assets available for benefits and the pension obligations. On a regulatory filing basis at December 31, 2018, the Plan had a regulatory filing surplus of \$13,494 million, compared to \$13,201 million as at December 31, 2017 (based on the smoothed asset value of net assets described in note 11).

The Board manages funding risk by monitoring and reviewing the funded ratio on an ongoing basis, relying on the results of various scenarios, to ensure it remains in the targeted range. If and when the future funded ratio falls outside the range, the Board determines whether changes to the investment policy, strategic asset mix, and contribution rates and/or benefits may be required.

When formulating the investment policy to effectively manage both risk and the net funded position, HOOPP must consider investment strategies that are suitable for the Plan's pension obligations. Failing to do this would result in greater volatility in the Plan's funded status, leading to a greater risk of making changes to benefits and/or contribution rates.

The Board's external actuary performs an annual valuation to determine the Plan's funded status and also forecasts future results.

HOOPP is registered with FSCO and is required to file a regulatory filing valuation periodically. It last filed a regulatory filing valuation for the year ended December 31, 2017. See note 12 for more information on HOOPP's regulatory filing valuation.

### **Financial Risk Management**

The Plan's investment activities expose it to financial risks, which include:

- market risk (including interest rate risk, foreign currency risk and other price risk);
- credit risk; and
- liquidity risk.

#### ***Market risk***

Market risk is the risk that the fair value of a financial instrument will fluctuate due to changes in market prices, whether those changes are caused by factors specific to the individual investment or its issuer or factors affecting all securities traded in the market.

### i. Interest rate risk

Interest rate risk is the risk that the fair value of a financial instrument will fluctuate because of changes in market interest rates.

The Plan is exposed to interest rate risk as a result of the policy decision to invest in interest rate sensitive instruments as part of the LDI approach to investing. The Plan's interest rate sensitive instruments and the remaining term to maturity or repricing dates, whichever is earlier as at December 31, are summarized below by class of financial instrument.

(\$ millions)	2018				Total
	Within 1 Year	1 to 5 Years	5 to 10 Years	Over 10 Years	
<b>Short-term securities</b>	\$ 1,203	\$ -	\$ -	\$ -	\$ 1,203
<b>Public equities - preferred shares</b>	-	617	-	-	617
<b>Canadian bonds<sup>(1)(2)</sup></b>					
Federal bonds	16,553	3,883	1,557	2,523	24,516
Provincial and municipal bonds	2,698	18,747	6,108	19,058	46,611
Real return bonds	-	936	1,475	8,850	11,261
Corporate bonds	649	67	152	147	1,015
<b>Non-Canadian bonds<sup>(1)(2)</sup></b>	(5,375)	145	927	9,546	5,243
<b>Non-Canadian commercial loans</b>	-	27	22	-	49
<b>Derivative instruments</b>	(6,918)	(26,731)	(423)	188	(33,884)
<b>Repurchase agreements</b>	(15,284)	-	-	-	(15,284)
<b>Total</b>	<b>\$ (6,474)</b>	<b>\$ (2,309)</b>	<b>\$ 9,818</b>	<b>\$ 40,312</b>	<b>\$ 41,347</b>

<sup>(1)</sup> Net of Canadian bonds sold short of \$6,972 million and non-Canadian bonds sold short of \$8,086 million.

<sup>(2)</sup> Includes accrued interest of \$539 million on Canadian bonds and \$72 million on non-Canadian bonds.

(\$ millions)	2017				Total
	Within 1 Year	1 to 5 Years	5 to 10 Years	Over 10 Years	
<b>Short-term securities</b>	\$ 3,011	\$ -	\$ -	\$ -	\$ 3,011
<b>Public equities - preferred shares</b>	-	610	-	-	610
<b>Canadian bonds<sup>(1)(2)</sup></b>					
Federal bonds	10,678	2,874	(916)	3,448	16,084
Provincial and municipal bonds	1,500	22,193	7,579	18,101	49,373
Real return bonds	-	958	1,507	8,612	11,077
Corporate bonds	4,501	50	171	136	4,858
<b>Non-Canadian bonds<sup>(1)(2)</sup></b>	19	232	94	7,296	7,641
<b>Non-Canadian commercial loans</b>	-	-	20	-	20
<b>Derivative instruments</b>	11,361	(32,341)	(2,328)	189	(23,119)
<b>Repurchase agreements</b>	(22,338)	-	-	-	(22,338)
<b>Total</b>	<b>\$ 8,732</b>	<b>\$ (5,424)</b>	<b>\$ 6,127</b>	<b>\$ 37,782</b>	<b>\$ 47,217</b>

<sup>(1)</sup> Net of Canadian bonds sold short of \$7,770 million and non-Canadian bonds sold short of \$3,923 million.

<sup>(2)</sup> Includes accrued interest of \$538 million on Canadian bonds and \$42 million on non-Canadian bonds.

***Risk measurement***

The Plan's interest rate sensitive portfolio is reviewed to ensure compliance to policy. The Asset Liability Management Committee receives quarterly reports, which include interest rate exposure for the interest rate sensitive portfolio. As at December 31, 2018, a 1% increase/decrease in interest rates would have decreased/increased the Plan's net assets available for benefits by \$7,322 million (2017: \$6,723 million). While the increase/decrease in interest rates would have decreased/increased the value of the Plan's assets, longer-term trends in increases/decreases in interest rates would have also decreased/increased the value of the Plan's pension obligations.

***Risk management***

While the Plan's interest rate sensitive products are exposed to interest rate risk, this risk has been assumed purposefully as part of the LDI approach to offset the interest rate risk inherent in the Plan's pension obligations. HOOPP uses duration to measure the sensitivity of the fair value of fixed income investments to changes in market interest rates. HOOPP manages its exposure to investment interest rate risk by ensuring the modified duration of the fixed income mandates remains within the approved ranges of the respective benchmarks as stipulated in the IP&G and the overall asset mix remains within the approved policy weights specified in the IP&G. This is accomplished by rebalancing the portfolio on a regular basis and through the use of derivatives, including interest rate swaps, cross-currency swaps and interest rate futures.

***ii. Foreign currency risk***

Foreign currency risk is the risk that the fair value of a financial instrument denominated in a foreign currency will fluctuate due to changes in applicable foreign exchange rates. While HOOPP pension benefits are paid in Canadian dollars, some of the Plan's financial instruments are denominated in other currencies. The Plan's foreign currency exposure (including through derivatives) as at December 31 is presented below. The table also includes the Canadian dollar equivalent impact of a 5% increase/decrease in the applicable foreign exchange rate on the Plan's net assets available for benefits.

(\$ millions)	2018			2017		
	Local Currency	Canadian Dollar Equivalent	Impact of +/- 5% Change	Local Currency	Canadian Dollar Equivalent	Impact of +/- 5% Change
British Pounds	14	\$ 24	\$ 1/(1)	163	\$ 277	\$ 14/(14)
Chinese Yuan	555	110	6/(6)	-	-	-
Danish Kroner	44	8	-	(1,417)	(287)	(14)/14
Euros	105	162	8/(8)	310	465	23/(23)
Japanese Yen	(1,625)	(20)	(1)/1	3,302	37	2/(2)
United States Dollars	260	355	18/(18)	(17)	(21)	(1)/1

***Risk measurement***

The exposures to foreign currency are measured daily and reported monthly for compliance purposes. Each quarter, management provides the Board with reports and analysis, illustrating the impact on assets of foreign currency rate changes. As at December 31, 2018, a strengthening/weakening in the Canadian dollar of 1% against other currencies would result in a decrease/increase to the Plan's net assets available for benefits of approximately \$6.4 million (2017: decrease/increase of approximately \$4.7 million).

### ***Risk management***

While certain limited risk-taking activities are permitted, HOOPP manages its exposure to foreign currency risk by ensuring the exposures are effectively hedged in accordance with the limits stipulated in the IP&G. These limits generally require the Plan's foreign currency exposure to be hedged within a 5% tolerance of the Fund's net asset value. This is accomplished through the use of derivatives, which include foreign exchange forward contracts and cross-currency swaps.

### ***iii. Other price risk***

The Plan is also exposed to other price risk, which is the risk that the fair value of a financial instrument will fluctuate because of changes in market prices (other than those arising from interest rate risk or currency risk). HOOPP is exposed to other price risk, which includes primarily equity price risk through its investment in public equities and derivative instruments. In addition, HOOPP has exposure to other equity-based price risk of \$2,197 million (2017: \$3,370 million) through its investments in indices that are proprietary to other financial institutions and through dividend derivatives. The 1% increase/decrease in the indices and dividends would have resulted in an increase/decrease in the Plan's net assets available for benefits of \$22 million (2017: \$34 million).

The Plan's total exposure to equity price risk (including through derivatives) as at December 31 is presented below. The table also includes the impact of a 10% increase/decrease in the equity markets benchmark price index on the Plan's net assets available for benefits.

<b>2018</b>				
(\$ millions)	Effective Equity Exposure	% of Net Assets Available for Benefits	Benchmark	Impact of a 10% Increase/ (Decrease)
<b>Canadian</b>	\$ 4,067	5.1%	S&P/TSX 60 Total Return Index	\$ 407/(407)
<b>United States</b>				
Equities	10,090		S&P 500 Total Return Index	1,087/(977)
Long option strategy	(4,632)		S&P 500 Futures with 10-Year Options	(387)/268
	5,458	6.9%		700/(709)
<b>International</b>	8,541	10.8%	Blend of International Indices <sup>(1)</sup>	907/(849)
	<b>\$ 18,066</b>			<b>\$ 2,014/(1,965)</b>

<sup>(1)</sup> The blended benchmark is composed of the following international stock market indices: Dow Jones Euro Stoxx 50 Index, Tokyo Stock Price Index (Topix), FTSE 100, Swiss Market Index (SMI), Hang Seng Index, Australian Securities Exchange (ASX) 200.

<b>2017</b>				
(\$ millions)	Effective Equity Exposure	% of Net Assets Available for Benefits	Benchmark	Impact of a 10% Increase/ (Decrease)
<b>Canadian</b>	\$ 7,497	9.7%	S&P/TSX 60 Total Return Index	\$ 750/(750)
<b>United States</b>				
Equities	8,393		S&P 500 Total Return Index	839/(839)
Long option strategy	(62)		S&P 500 Futures with 10-Year Options	413/517
	8,331	10.7%		1,252/(322)
<b>International</b>	6,385	8.2%	Blend of International Indices <sup>(1)</sup>	639/(639)
	<b>\$ 22,213</b>			<b>\$ 2,641/(1,711)</b>

<sup>(1)</sup> The blended benchmark is composed of the following international stock market indices: Dow Jones Euro Stoxx 50 Index, Tokyo Stock Price Index (Topix), FTSE 100, Swiss Market Index (SMI), Hang Seng Index, Australian Securities Exchange (ASX) 200.

***Risk measurement***

HOOPP measures risk daily by monitoring exposure levels to Board approved limits, which include total equity exposure and single-name limits. Compliance limit reporting is provided to the Board on a quarterly basis. Sensitivity analysis is performed to measure the impact of public equity market changes, to quantify the underlying risk and to ensure risk mitigation strategies are effective.

As at December 31, 2018, a 1% increase/decrease in equity markets would have resulted in an increase/decrease in the Plan's net assets available for benefits of \$181 million (2017: \$215 million).

***Risk management***

HOOPP manages equity risk through diversification, by investing in major equity markets with benchmarks approved by the Board, and through physical and derivative markets in order to minimize non-systemic risk. Rebalancing occurs regularly to ensure the weighting of the equity investments, in respect to the overall value of the Plan, remains within the limits established by the Board.

***Credit risk***

Credit risk is the risk of loss associated with an obligor's potential inability or unwillingness to fulfill its contractual obligations.

Counterparty credit risk is the risk of loss in the event the counterparty (excluding clearing houses) defaults on a transaction, or otherwise fails to perform under the terms of a contract.

The Plan assumes credit risk exposure through its investment in fixed income instruments and the underlying reference bond of credit derivatives. Counterparty credit risk is introduced through the Plan's securities lent/borrowed, repurchase agreements and derivatives.

HOOPP has investment policies and procedures in place, which specify the requirements for using collateral to reduce the total net credit risk exposure to individual corporate entities. Only collateral of a certain quality is considered acceptable. Contracts with various counterparties are in place and define the terms under which collateral is transferred. Terms may include minimum transfer amounts or thresholds, eligible securities, and rules for the settlement of disputes. The collateral pledged and received is the only recourse available to the counterparties of these transactions.

The Plan's total credit risk exposure as at December 31 was as follows:

(\$ millions)	2018		2017	
	Total Credit Exposure	% of Total	Total Credit Exposure	% of Total
<b>Sovereign securities AAA<sup>(1)</sup></b>	\$ 20,568	16.4%	\$ 20,500	17.3%
<b>Fixed income instruments</b>				
AAA	20,821	16.6%	15,124	12.7%
AA	39,134	31.4%	20,514	17.3%
A	7,568	6.0%	33,148	27.9%
BBB	718	0.6%	1,311	1.1%
BB or below	1,618	1.3%	1,072	0.9%
<b>Credit derivatives</b>	<b>14,915</b>	<b>11.9%</b>	8,088	6.8%
<b>Counterparty credit risk exposure</b>				
Derivatives	1,737	1.4%	1,671	1.4%
Repurchase agreements	1,063	0.8%	882	0.7%
Securities lending program	16,952	13.6%	16,408	13.9%
<b>Maximum credit risk exposure</b>	<b>125,094</b>	<b>100%</b>	118,718	100%
Credit risk protection (credit derivatives)	(10,816)		(8,706)	
Collateral received	(16,164)		(15,441)	
<b>Total</b>	<b>\$ 98,114</b>		\$ 94,571	

<sup>(1)</sup> As at December 31, 2018, includes securities issued by the governments of Canada, Germany and United States (2017: Canada, Germany, and the United States).

### ***Risk measurement***

HOOPP measures the risk by monitoring the Plan's exposure each day to credit based on Board- approved credit limits, which include overall exposure limits, single-name limits, and - counterparty exposure to determine whether collateral should be requested. Counterparty credit risk exposure for financial contracts is measured by the positive fair value of the contractual obligations with the counterparties, less any collateral or margin received, as at the reporting date. Compliance reporting is provided quarterly to the Asset Liability Committee and the Board. Investments in any one issuer are limited to 5% of the total net assets of the Plan.

### ***Risk management***

HOOPP's policy is to manage credit risk by placing limits on investments in below-investment grade debt, diversifying credit holdings, and limiting investments based on single-name issuer limits as stipulated by the Board in the IP&G. HOOPP assigns credit ratings to its sovereign securities and fixed income instruments as determined by recognized credit rating agencies, where available. For fixed income instruments that are not rated by a recognized credit ratings agency, HOOPP assigns credit ratings based on an internal rating process. HOOPP will also employ the use of credit derivatives to achieve its objective of managing credit risk. HOOPP has a long-term focus on credit risk; therefore, changes in the market value of securities due to fluctuations in credit spreads are not of primary concern.

HOOPP mitigates counterparty credit risk by transacting exchange-traded derivative contracts and, when required, by dealing primarily with over-the-counter derivatives counterparties with a minimum credit rating of A, as determined by a recognized credit

rating agency. HOOPP also uses an internal credit-limit monitoring process and has master netting arrangements in place and the right to obtain collateral, all of which mitigate counterparty credit risk. Exposure to any counterparty with whom the Plan has non-exchange traded derivative contracts shall not exceed the limits specified and approved by the Board in the IP&G. Counterparty exposure is determined daily and collateral is either requested or delivered in accordance with the agreements in place. Note 5 provides more information on collateral.

### ***Liquidity risk***

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset.

#### ***Risk measurement***

On a daily basis, HOOPP forecasts cash flow requirements for up to one week to ensure sufficient cash is made available to meet short-term requirements.

Also, the ratio of assets available to cover potential margin calls is determined daily. When calculating the assets available for liquidity, factors such as market value, collateral pledged and received, securities purchased under resell agreements and securities sold under repurchase agreements, and securities lending and borrowing positions are considered. The potential margin call is based on the Plan's exposure to various derivatives and their potential daily market movement.

In addition, consideration is given to the Plan's financial liabilities, which include investment-related liabilities (note 2), accrued pension obligations (note 11), and contracts that give rise to commitments for future payments (notes 14 and 15).

#### ***Risk management***

HOOPP manages liquidity risk by maintaining sufficient cash and cash equivalents, investing in highly liquid securities which can be easily converted to cash, and through the use of investment income and contributions received, to meet liquidity requirements. Highly liquid securities mainly consist of sovereign, supranational and provincial debt, as well as shares of corporations listed in major equity indices. These sources of funds are used to pay pension benefits, settle financial liabilities and pay for operating expenses.

The Plan's assets available for liquidity needs, as at December 31 are as follows:

	2018	2017
(\$ millions)		
Liquid securities	\$ 91,741	\$ 78,318
Less: net liquid securities transferred <sup>(1)</sup>	(56,001)	(63,843)
<b>Securities available for liquidity needs</b>	<b>\$ 35,740</b>	<b>\$ 14,475</b>

<sup>(1)</sup> Includes securities purchased under resell agreements and securities sold under repurchase agreements, securities lent and borrowed, collateral pledged and received.

## Note 7 - OTHER ASSETS

As at December 31, other assets consist of the following amounts:

	2018	2017
(\$ millions)		
Refundable withholding tax on contributions	\$ 130	\$ 137
Fixed assets and intangible assets	51	58
Other	15	12
<b>Total</b>	<b>\$ 196</b>	<b>\$ 207</b>

## Note 8 - CONTRIBUTIONS

Contributions received are reconciled annually, one year in arrears, to ensure the appropriate amounts have been remitted. To perform this reconciliation, HOOPP requires each employer to verify and update HOOPP's records for each of their member's service and contributions. With this information, HOOPP performs a reconciliation for each employer to determine if the correct amount of contributions has been remitted to HOOPP. Once this reconciliation is complete, HOOPP is able to calculate the amount of any differences related to contributions. Any shortfalls are recovered from the employer and any overpayments are refunded or credited towards future remittances.

Contributions received or receivable during the year ended December 31 were comprised of the following:

	2018	2017
(\$ millions)		
<b>Employers</b>		
Current service contributions	\$ 1,285	\$ 1,224
<b>Members</b>		
Current service contributions	1,020	971
Past service contributions from members	60	25
Transfers from other plans	26	116
	<b>1,106</b>	<b>1,112</b>
<b>Total</b>	<b>\$ 2,391</b>	<b>\$ 2,336</b>

## Note 9 - BENEFITS

Benefits paid during the year ended December 31 were comprised of the following:

	2018	2017
(\$ millions)		
<b>Benefit payments</b>		
Retirement pension and bridge benefits <sup>(1)</sup>	\$ 1,984	\$ 1,823
Commuted value transfers and death benefits	399	382
	<b>2,383</b>	<b>2,205</b>
<b>Refunds and transfers</b>		
Refunds	139	85
Transfers to other plans	25	24
	<b>164</b>	<b>109</b>
<b>Total</b>	<b>\$ 2,547</b>	<b>\$ 2,314</b>

<sup>(1)</sup> Includes disability payments of \$79 million (2017: \$80 million).

## Note 10 – OPERATING EXPENSES

For the year ended December 31, HOOPP incurred operating expenses for Investment and Plan related activities as follows:

	2018	2017
(\$ millions)		
<b>Investment<sup>(1)</sup></b>		
Administration	\$ 138	\$ 124
Legal, actuarial and other professional fees <sup>(2)</sup>	5	5
Custodial	3	3
	<b>146</b>	132
<b>Plan<sup>(1)</sup></b>		
Administration	83	84
Legal, actuarial and other professional fees <sup>(2)</sup>	17	8
	<b>100</b>	92
<b>Total</b>	<b>\$ 246</b>	<b>\$ 224</b>

<sup>(1)</sup> Based on an allocation of corporate expenses that includes direct and indirect expenses associated with Investment and Plan related activities. Management allocates these costs using estimates of time associated with each activity.

<sup>(2)</sup> Includes amounts paid or payable to the auditors pertaining to statutory audit services of \$971,000 (2017: \$1,142,000), and non-audit services of \$245,000 (2017: \$169,000). Also includes amounts paid or payable to the actuary pertaining to actuarial services of \$489,000 (2017: \$700,000).

## Note 11 – PENSION OBLIGATIONS

### Pension Obligations

The pension obligations are based on management's assumptions and include a provision for investment expenses. The Plan provisions considered in the valuations were those in effect at the valuation dates.

Estimates used for financial reporting purposes reflect management's expectations of long-term economic and demographic conditions. The primary economic assumptions include the discount rate, salary escalation rate and price inflation rate. The non-economic assumptions include considerations such as mortality, withdrawal and retirement rates.

The discount rate is based on the long-term expected Fund return and includes a margin for conservatism, as appropriate for a funding valuation. The price inflation rate is based on the expected CPI rate.

For the December 31, 2018 actuarial valuation, the Board approved a decrease to the discount rate as indicated below.

To determine the pension obligations as at December 31, 2018, and December 31, 2017, the following economic assumptions were analyzed and reviewed by management and

the Plan's actuarial advisors for reasonableness and approved by the Board for financial reporting purposes:

	2018 <sup>(3)</sup>	2017 <sup>(3)</sup>
Discount rate <sup>(1)</sup>	5.30%	5.50%
Rate of price inflation	2.00%	2.00%
Real discount rate	3.30%	3.50%
Salary escalation rate	3.50%	3.50% <sup>(2)</sup>

<sup>(1)</sup> Net of allowance for investment expenses of 0.25% (2017: 0.25%).

<sup>(2)</sup> For 2017, a two-tiered rate of 3.20% per annum for the first year following the valuation date and 3.50% thereafter was assumed.

<sup>(3)</sup> For 2018, impact from change to the discount rate was an actuarial loss of \$1,675 million (2017: Impact from change to the discount rate was an actuarial gain of \$432 million).

### Actuarial Methodology for Financial Reporting

For the determination of the actuarial present value of the pension obligations as at December 31, 2018, an actuarial valuation was conducted by Mercer (Canada) Limited. The valuation uses the projected accrued benefit actuarial cost method with respect to all benefits and assumes that the Plan will continue on a going concern basis. The data used in the valuation was based on members' demographic data provided by HOOPP staff as at October 1, 2018 and members' pay data provided as at December 31, 2017, all of which were projected to December 31, 2018 using management's estimates of experience for the intervening periods. The pensionable earnings estimates were determined based on 2017 experience and estimate assumptions.

Using this method and data, the pension obligations (or going concern actuarial pension obligations) as at December 31, 2018, were \$65,128 million (2017: \$59,602 million).

### Estimated Experience Gains and Losses

Estimated experience gains and losses represent the change in the pension obligations due to the difference between actual economic and demographic experience and expected experience. During 2018, there was an estimated experience loss of \$342 million (2017: gain of \$380 million).

### Plan Provisions

As discussed under the Description of the Plan, the Board has the authority to provide ad hoc inflation protection for retirees and deferred retirees. During 2017, the Board confirmed 100% of the 2017 CPI increase as an ad hoc increase effective April 1, 2018. As at December 31, 2017, the additional impact to the pension obligations for this ad hoc inflation protection adjustment is \$121 million. In addition, in 2017, the Board also approved certain improvements to the Plan provisions effective January 1, 2018. The impact to the pension obligations at December 31, 2017 is \$2,732 million. During 2018, the Board confirmed 100% of the 2018 CPI increase as an ad hoc increase effective April 1, 2019. As at December 31, 2018, the additional impact to the pension obligations for this ad hoc inflation protection adjustment is \$228 million.

## Surplus

According to the Handbook, the surplus for financial statement presentation purposes is the difference between the market value of net assets available for benefits and the pension obligations. The surplus for financial statement purposes on December 31, 2018, was \$13,891 million (2017: \$18,153 million).

The net assets value used for regulatory filing purposes, referred to as the “smoothed” value of net assets, is determined in a manner that reflects long-term market trends consistent with assumptions underlying the actuarial present value of pension obligations. The smoothed value of net assets is determined by taking an average of the current market value of net assets and the market values for the four preceding years. The market values for the four preceding years are adjusted for contributions, benefit payments and operating expenses. They are also adjusted to include assumed investment return, which is based on long-term expected fund returns. The regulatory filing surplus on December 31, 2018, was \$13,494 million (2017: \$13,201 million).

The market value of net assets available for benefits exceeds the smoothed value of net assets, resulting in a difference between the surplus for financial statement purposes and that for regulatory filing purposes of \$397 million at December 31, 2018 (2017: \$4,952 million).

## Note 12 - REGULATORY FILING VALUATION

In accordance with the PBA and the ITA, an actuarial valuation is required to be filed at least every three years to estimate the Plan’s surplus or deficit, and to determine the Plan’s minimum funding requirements. Towers Watson Canada Inc., the Plan’s former actuarial advisor, prepared the last actuarial valuation for regulatory filing purposes, as at December 31, 2017, and a copy of that valuation was filed with FSCO and CRA. The effective date of the next required valuation is December 31, 2020.

The funding valuation method used to determine the pension obligations is the projected accrued benefit actuarial cost method. Under this method, the pension obligations are determined by calculating the actuarial present value of benefits based on service at the valuation date and projected final average earnings. The actuarial current service cost of benefits is determined based on benefits (with projected final average earnings) in respect of service in the year following the valuation date, a portion of which is covered by member contributions.

Towers Watson Canada Inc., in consultation with management, recommended the actuarial assumptions to be used for the regulatory filing valuation. The economic assumptions used for the December 31, 2017 regulatory filing valuation were as follows:

Economic Assumptions	Rates
Discount rate <sup>(1)</sup>	5.50%
Rate of price inflation	2.00%
Real discount rate	3.50%
Salary escalation rate <sup>(2)</sup>	3.50%

<sup>(1)</sup> Net of allowance for investment expenses of 0.25%.

<sup>(2)</sup> A two-tiered rate of 3.20% per annum for the first year following the valuation date and 3.50% thereafter is assumed.

The most recent regulatory filing valuation conducted as at December 31, 2017, disclosed a smoothed value of net assets of \$72,803 million with accrued going concern pension obligations of \$59,602 million, resulting in a going concern regulatory filing surplus of

\$13,201 million. In accordance with Regulation 1.3.1 (3) of the PBA, the solvency deficiency at December 31, 2017, was deemed to be \$nil.

### Note 13 – RETIREMENT COMPENSATION ARRANGEMENT

The RCA is an arrangement that is funded by member and employer contributions as well as investment earnings and managed in accordance with the overall Plan. The RCA assets are segregated under a separate account from the assets of the RPP. The allocation of contributions to the RCA and RPP are driven by the requirements of the ITA in a manner that is expected to be sufficient to pay the benefits as they become due. Total pension benefits are calculated using the pension formula disclosed under the Description of the Plan based on a member's total pensionable earnings. Benefits payable from the RCA are then determined as those which exceed amounts permitted under the ITA for an RPP. The net asset value available for RCA benefits at December 31, 2018 was \$229 million (2017: \$272 million).

### Note 14 – RELATED PARTY TRANSACTIONS – LEASE COMMITMENT

As at December 31, 2018, a wholly-owned subsidiary of the Plan held a significant ownership interest in a commercial office building. The Plan is also a tenant in this office building. The term of its lease is 15 years with two renewal options, each for 5 years. The lease payments are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. The future minimum lease payments by year, and in aggregate, are as follows:

	Minimum Lease Payments	
(\$ millions)		
2019	\$	6
2020		6
2021		6
2022		6
2023		6
Thereafter		84
<b>Total minimum lease payments</b>	<b>\$</b>	<b>114</b>

### Note 15 – COMMITMENTS

As part of normal business operations, the Plan enters into commitments related to the funding of investments. The Plan or its subsidiaries have committed to either purchase limited partnership units, which fund real estate and private equity investments, or to directly invest in real estate and private equity. These commitments will be funded over the next several years in accordance with agreed-on terms and conditions. As at December 31, 2018, these commitments totalled \$1,641 million related to real estate investments and \$6,592 million related to private equity investments (2017: \$1,619 million and \$6,264 million, respectively). Commitments that are deemed to be insignificant have not been disclosed.

## Note 16 – CAPITAL

HOOPP defines its capital as the Plan's surplus or deficit. The objective of managing the Plan's capital is to ensure that the Plan is fully funded in order to meet the pension obligations over the long term. Refer to note 6 for further disclosure on HOOPP's capital.

## Note 17 – GUARANTEES, INDEMNIFICATIONS AND CONTINGENCIES

Guarantees are contracts under which the guarantor is required to make payment to a third party where a principal obligor fails to pay or perform a stated obligation owed to that party. Indemnification agreements are similar to guarantees in that the indemnifying party may be required to make payments to the indemnified party in the event that the indemnified party incurs certain specified losses or expenses, often as a result of the act or omission of the indemnifying party.

### Guarantees

The Plan indirectly guarantees the underlying reference obligations when it sells credit protection (i.e., it commits to compensate the counterparty in the event of a default in relation to the reference obligation). The maximum potential exposure is the notional amount of the credit protection sold. However, when carefully structured and coupled with other hedging instruments, the exposure can be limited with certainty. The notional amount, fair value and the term to maturity of the credit protection sold by the Plan are disclosed in note 3. The nature of any assets held as collateral is disclosed in note 5.

### Indemnifications

According to the *Agreement and Declaration of Trust*, the Plan may indemnify its trustees and employees against certain claims that may be made against them. In addition, the Plan may in certain circumstances in the course of the Plan's investment activities and its normal course of operations, agree to indemnify a contractual counterparty. Under the terms of these various arrangements, the Plan may be required to compensate counterparties for costs incurred because of various contingencies such as legal claims or changes in laws and regulations. The number of such agreements, the range of indemnifications and the contingent nature of the liabilities in such agreements, prevent HOOPP from making a reasonable estimate of the maximum amount that would be required to pay all such indemnifications. As at December 31, 2018, the amount recorded as a liability for claims under these arrangements was \$nil (2017: \$nil).

### Contingencies

As at December 31, 2018, the Plan was involved in defending against certain claims, such as tax claims, or asserting claims against third parties. The outcome and possible impact to the Plan of such litigation or claims is inherently difficult to predict. A provision for a present obligation is recognized when a reliable estimate can be determined and the settlement of any contingent obligation is probable. However, it is the opinion of management that any impact that may result would not have a significant adverse effect on the Plan's financial statements.

## Note 18 – SUBSEQUENT EVENTS

Effective November 1, 2015, legislative changes permitting public sector single-employer pension plans (SEPPs) to merge into jointly-sponsored pension plans (JSPPs) came into force. As a result, non-HOOPP SEPPs are permitted to merge into HOOPP subject to certain conditions.

Effective January 1, 2019, two pension plans sponsored by Providence St. Joseph's and St. Michael's Healthcare, namely St. Joseph's Health Centre Pension Plan and the Providence Healthcare Pension Plan, as well as two pension plans sponsored by the Sisters of St. Joseph for the Diocese of Toronto in Upper Canada, namely the Pension Plan for the Employees of the Sisters of St. Joseph for the Diocese of Toronto in Upper Canada and the Sisters of St. Joseph Pension Plan for Designated Employees, merged into HOOPP. As a result of these mergers, assets will be transferred to the Plan and become part of the net assets available for benefits and pension obligations will be assumed by the Plan. Amounts cannot be accurately measured or estimated until final member data is received.



# Ten Year Review

(unaudited)

For the year ended December 31

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
(\$ millions)										
<b>CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS</b>										
<b>Net assets available for benefits, beginning of year</b>	<b>\$ 77,755</b>	\$ 70,359	\$ 63,924	\$ 60,848	\$ 51,626	\$ 47,414	\$ 40,321	\$ 35,717	\$ 31,116	\$ 26,732
<b>Change in net assets available for benefits</b>										
Net investment income (loss)	<b>1,666</b>	7,598	6,579	3,103	9,105	4,046	6,857	4,327	4,245	4,040
Contributions										
Employers	<b>1,285</b>	1,224	1,173	1,108	1,075	1,033	1,003	954	921	890
Members	<b>1,106</b>	1,112	1,022	991	929	880	860	797	793	744
Benefit payments	<b>(2,547)</b>	(2,314)	(2,127)	(1,925)	(1,702)	(1,587)	(1,486)	(1,335)	(1,229)	(1,159)
Operating expenses	<b>(246)</b>	(224)	(212)	(201)	(185)	(160)	(141)	(139)	(129)	(131)
Total change in net assets available for benefits	<b>1,264</b>	7,396	6,435	3,076	9,222	4,212	7,093	4,604	4,601	4,384
<b>Net assets available for benefits, end of year</b>	<b>\$ 79,019</b>	\$ 77,755	\$ 70,359	\$ 63,924	\$ 60,848	\$ 51,626	\$ 47,414	\$ 40,321	\$ 35,717	\$ 31,116
<b>NET ASSETS AVAILABLE FOR BENEFITS</b>										
<b>Assets</b>										
Investment assets										
Cash	<b>\$ 8</b>	\$ 21	\$ 19	\$ 57	\$ 2	\$ 8	\$ (1)	\$ 3	\$ 14	\$ -
Fixed income	<b>104,345</b>	103,177	115,472	115,930	106,200	86,694	74,669	71,241	60,322	49,121
Public equities	<b>24,351</b>	36,326	16,106	9,150	2,182	4,596	1,705	931	773	889
Private equities and special situations	<b>10,126</b>	7,220	4,969	4,339	3,275	2,580	1,999	1,972	1,841	1,492
Real estate	<b>13,255</b>	11,952	10,053	9,063	7,717	7,008	5,854	4,924	4,100	3,548
Securities purchased under resell agreements	<b>10,871</b>	7,797	6,283	2,498	3,286	3,046	3,117	3,188	1,134	336
Derivative instruments	<b>8,479</b>	8,714	7,252	5,236	5,808	5,053	1,624	3,041	1,831	1,019
Investment receivables	<b>1,052</b>	3,103	3,635	1,063	934	1,438	1,276	1,538	1,322	1,566
Contributions receivable	<b>173</b>	173	171	156	156	150	150	142	135	133
Other assets	<b>196</b>	207	205	165	151	146	150	148	142	142
<b>Total assets</b>	<b>172,856</b>	178,690	164,165	147,657	129,711	110,719	90,543	87,128	71,614	58,246
<b>Liabilities</b>										
Investment liabilities	<b>(93,701)</b>	(100,803)	(93,661)	(83,616)	(68,753)	(58,999)	(43,046)	(46,722)	(35,825)	(27,071)
Other liabilities	<b>(136)</b>	(132)	(145)	(117)	(110)	(94)	(83)	(85)	(72)	(59)
<b>Total liabilities</b>	<b>(93,837)</b>	(100,935)	(93,806)	(83,733)	(68,863)	(59,093)	(43,129)	(46,807)	(35,897)	(27,130)
<b>Net assets available for benefits</b>	<b>79,019</b>	77,755	70,359	63,924	60,848	51,626	47,414	40,321	35,717	31,116
<b>Pension obligations</b>	<b>65,128</b>	59,602	54,461	49,151	46,923	41,478	39,919	36,782	34,897	32,020
<b>Surplus (deficit)</b>	<b>\$ 13,891</b>	\$ 18,153	\$ 15,898	\$ 14,773	\$ 13,925	\$ 10,148	\$ 7,495	\$ 3,539	\$ 820	\$ (904)
<b>Investment Performance</b>										
Investment rate of return-net	<b>2.17%</b>	10.88%	10.35%	5.12%	17.72%	8.55%	17.10%	12.19%	13.68%	15.18%
Benchmark return	<b>0.01%</b>	7.89%	6.12%	3.95%	15.62%	6.46%	14.29%	9.87%	10.31%	9.77%
Long-term return target	<b>5.90%</b>	6.04%	5.94%	6.04%	6.93%	6.34%	6.50%	6.50%	6.63%	6.50%

# Governance



**Front row (left to right):** R. Wayne Gladstone, Louis Rodrigues, Christine Chen, Karli Farrow, Jim Flett, Barry Wainstein **Back row (left to right):** Linda Clayborne, Laura Dumoulin, Linda Haslam-Stroud, Jon Clark, Gerry Rocchi, J. Cameron Nelson, Anthony Dale, Adrian Foster, Dan Anderson, Sharon Richer, Sandi Blancher

In 1993, HOOPP's five Settlor organizations signed an Agreement & Declaration of Trust, creating a joint-governance structure that features equal representation from members and employers. As a result, HOOPP is governed by an independent Board of Trustees made up of 16 voting members; eight trustees are appointed by the Ontario Hospital Association (OHA) and eight are appointed by the four unions representing the majority of Plan members:

- Ontario Nurses' Association (ONA)
- Canadian Union of Public Employees (CUPE)
- Ontario Public Service Employees Union (OPSEU)
- Service Employees International Union (SEIU)

There are also two non-voting Board members. One observer representing pensioners is appointed by the OHA, and one is appointed by the Settlor Unions.

The Board is responsible for overseeing all aspects of the Plan and the HOOPP Trust Fund. Its duties include:

- approving changes to the Plan and benefits
- setting contribution levels
- establishing investment policy
- monitoring investment performance
- approving annual operating budgets

The Trustees have a fiduciary duty to act in the best interests of all members. The Board regularly reviews its approach to governance in order to remain current with best practices.

HOOPP's President & CEO assumes day-to-day responsibility for overall leadership and management of the Plan.

# Executive Leadership



Jim Keohane



Reno Bugiardini



Victoria S. Hubbell



Steven McCormick



David L. Miller



Barbara Thomson



Jeff Wendling



Michael Wissell

Led by President & CEO Jim Keohane, HOOPP's executive team is committed to the organization's mission in delivering on the pension promise and works in accordance with Board policy in the best interests of the Plan's members, pensioners and employees.

**CHAIRS****Dan Anderson**

2018 Chair

Retired Director and Chief Negotiator, Ontario Nurses' Association (ONA)

**Adrian Foster**

2018 Vice Chair

OHA-appointed Trustee

**TRUSTEES****Sandi Blancher**Vice President,  
OPSEU Local 106**Christine Chen**

OHA-appointed Trustee

**Jon Clark**

SEIU Healthcare

**Anthony Dale**

President &amp; CEO, Ontario Hospital Association

**Laura Dumoulin**OPSEU Local 675  
Membership Secretary/  
Communications Chairman**Jim Flett**Retired President & CEO,  
Kingston General Hospital**R. Wayne Gladstone**Past Board Chair, Central  
East LHIN**Linda Haslam-Stroud**

Retired President, Ontario Nurses' Association (ONA)

**J. Cameron Nelson**

SEIU-appointed Trustee

**Sharon Richer**Secretary/Treasurer,  
Ontario Council of Hospital  
Unions (OCHU)**Gerry Rocchi**

OHA-appointed Trustee

**Louis Rodrigues**First Vice President,  
Ontario Council of Hospital  
Unions (OCHU)**Barry Wainstein**Retired Vice-Chairman  
and Deputy Head,  
Global Capital Markets,  
Scotiabank**OBSERVERS  
REPRESENTING  
PENSIONERS****Linda Clayborne**

OCHU-appointed Observer

**Karli Farrow**

OHA-appointed Observer

**EXECUTIVES****Jim Keohane**President & Chief  
Executive Officer**Reno Bugiardini**Senior Vice President,  
Information Technology  
& Facilities Services**Victoria S. Hubbell**Senior Vice President,  
Strategy & Stakeholder  
Relations**Steven McCormick**Senior Vice President, Plan  
Operations**David L. Miller**General Counsel & Senior  
Vice President, Governance**Barbara Thomson**Senior Vice President,  
Finance & Chief Financial  
Officer**Jeff Wendling**Executive Vice President &  
Chief Investment Officer**Michael Wissell**Senior Vice President,  
Portfolio Construction  
& Risk**SENIOR  
MANAGEMENT****Stephen Anderson**Vice President, Equity  
Derivatives & Collateral  
Management**Shrirang Apte**

Vice President, Credit

**Paul Kirk**Vice President, Short Term  
& Foreign Exchange**Adrian Mitchell**Vice President, Public  
Equities**Jeff Rabb**Vice President, Investment  
Reporting, Valuation & Risk**Nan Samaroo**Vice President, Investment  
Operations**Ray Tanveer**Vice President, Interest  
Rates**Stephen Taylor**

Vice President, Real Estate

**Silvano Trinca**Vice President, Plan  
Operations**Jim Walker**Managing Partner, HOOPP  
Capital Partners**Ivana Zanardo**Vice President, Plan  
Operations**ADVISORS****Mercer (Canada) Limited**

Actuary

**PricewaterhouseCoopers  
LLP**

External Auditor

**Paul Litner, Hoskin &  
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**Korn Ferry Hay Group**Board Compensation  
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