HOOPP
Healthcare of Ontario Pension Plan

# 2016 *Annual Report*

## TABLE OF CONTENTS

# President & CEO's Message

## We are committed to delivering on the pension promise today and in the years to come, and through challenging market conditions such as what we experienced in 2016.

At HOOPP, we know that our members rely on their pensions as a stable and secure source of income in retirement. Our top priority is to provide these pensions. We are committed to delivering on the pension promise today and in the years to come, and through challenging market conditions such as what we experienced in 2016.

We are pleased to report that the Plan's assets grew by approximately $6.5 billion to $70.4 billion in 2016, representing an investment return of 10.35%. This positive return builds on our long-term track record of investment success. Our compounded 10-year rate of return is just over 9%, one of the highest 10-year returns of any pension plan in the world.

Our 2016 funded status remained strong at 122%, meaning that the Fund has $1.22 on hand for every $1 we owe in pension benefits to retired and active members. We consider our true measure of success to be our funded status, as this demonstrates our ability to meet our current and future pension obligations.

To meet these obligations, we designed and implemented liability driven investing (LDI), a long-term investment strategy that aligns the Plan's assets to the Plan's

# We are proud to say that we reached new milestones in 2016. We now have more than 500 employers across Ontario and more than 90,000 retired members.

pension obligations, which helps determine appropriate investments and reduces funding risk. We accept that in a strongly rising market, our short-term returns may be lower than those of others. On the other hand, in a down market, the Fund is safeguarded and will not lose as much as others do. This strategy is in place for the long-term benefit of our members.

In addition to delivering on the pension promise, we are able to provide other valuable benefits to Plan members and employers. In 2016, our retired and deferred members received the maximum inflation protection provided under the Plan, equal to 100% of the change in the consumer price index (CPI) from the previous year. This cost of living adjustment (COLA), helps protect pensions from the impact of rising prices.

As well, our contribution rates will remain unchanged until the end of 2018. HOOPP has maintained the same contribution rates – consistently among the lowest of major pension plans in Canada – since 2004. This keeps the Plan sustainable and affordable for members and employers.

We are proud to say that we reached new milestones in 2016. We now have more than 500 employers across Ontario and more than 90,000 retired members. The underlying demographics of our Plan remain strong as our employers continue to expand their workforce in response to rising demand for healthcare services.

## Investing for our future

In 2016, we made changes to prepare our organization for the future. We moved to a new HOOPP-owned building at 1 York Street, in the south core of the Financial District in downtown Toronto. This energy-efficient building with LEED-platinum certification will provide us with space to grow through the coming years.

We are also continuing with our multiyear project to upgrade our pension administration and online services system. Our new system will give our members more self-service options, and it provides us with better technology to be able to serve members and accommodate growth in our membership without increasing our costs.

HOOPP reached several milestones on this project in 2016. A small group of HOOPP employers and their employees who are

HOOPP members, along with a group of recent retirees, are now taking part in a year-long prelaunch of the new system. We expect to roll out the full system to all members in 2018.

As part of our ongoing commitment to service excellence, we redesigned our website, hoopp.com. It is now mobile friendly and easier to read and navigate. Most importantly, this redesign ensures that HOOPP is in line with the legislative requirements set out in the *Accessibility for Ontarians with Disabilities Act*.

Our ongoing move to Agile Development methodologies has created a cultural shift in our IT group, enabling us to create and evolve our own technologies in a cost-effective way. This includes developing our own proprietary technology and moving to cloud-based applications, resulting in enhanced efficiency and security.

For example, in our investment division, we have used Agile methods to develop technology and systems that provide us with better, more efficient ways to screen stock market and trading data, as well as better analytical tools for understanding and measuring risks. These tools help us compete more efficiently in the marketplace. With the right technology, HOOPP is well-positioned to uncover opportunities resulting from regulatory changes taking place in the financial services sector.

HOOPP and our Board would like to say a fond farewell to Board chair Helen Fetterly, who is leaving the Board and her working life to step into retirement. Helen has made countless contributions to HOOPP over her 20 years as a Board member. Over that time, she stood out for her dedication to our members – from her work on DB Advocacy and organizing town halls to advocating for cost of living adjustments. Travelling across Ontario, she has met healthcare workers in every corner, and always made time to speak to them about the importance of their pensions. In particular, Helen was tireless in her efforts to encourage part-time employees at HOOPP employers to become members of the Plan, ensuring they have access to a secure pension in retirement. Thank you and best wishes to Helen as she embarks on the next chapter.

Moving forward, we welcome Bryce Walker to the position of Board Chair and Dan Anderson as Vice Chair of the Board.

To all our members – active, retired and deferred – and to our employers, we say thank you. We know that you put your trust in our organization. At HOOPP, we work diligently every day to earn your trust and keep it, as we deliver on the pension promise. Together, we are investing for our future.

**Jim Keohane**
President & CEO

# Chairs' Message

**With another year of strong financial performance, the Board was able to take steps to provide members with inflation protection that protects the buying power of their pension.**

We have a responsibility to ensure that HOOPP can pay retirement pensions today and in the years to come. With this duty in mind, we are diligently taking steps to plan for the future.

More than 320,000 members in Ontario's healthcare industry count on HOOPP for a secure retirement income. Our members, along with our more than 500 employers, count on the Plan to be stable and sustainable over the long term. HOOPP's Board of Trustees oversees the Plan, ensuring that investment strategies, risk management, services to members and employers, and Plan changes are aligned to our mission of delivering on the pension promise.

We are proud to say that HOOPP delivered a positive return in a challenging year. Our funded status stands at 122% for 2016.

We thank HOOPP's management and staff for all their hard work. Together, whether they are responsible for the investment of the Fund, providing service and information to Plan members and employers, or providing support to the organization, they are dedicated and committed to our mission.

## Retirement security

With another year of strong financial performance, the Board was able to take steps to provide members with inflation protection that protects the buying power of their pension. The Board approved a cost of living adjustment (COLA) for 2016 to provide an increase at 100% of the change in the consumer price index (CPI) over the previous year. Effective April 1, 2017, all current and deferred pensions will increase by 1.5%.

As well, the Board made a decision to keep contribution rates unchanged until at least the end of 2018. The current rates have been in place since 2004. In this way, HOOPP stands apart. Many other plans have increased their contribution rates over the last decade, particularly following the financial crisis in 2008. We know that our decision to keep rates stable, made possible by the Plan's strong funded position, helps keep the Plan affordable for members and employers.

Our records show that of the approximately 18,600 new members who joined the Plan in 2016, about 60% work part-time. This result comes a year after the Board made a significant decision to remove eligibility requirements for part-time and other non-full-time workers at HOOPP employers. In the past these employees needed to work a minimum number of hours or earn a certain amount in the previous calendar year to be eligible to join the Plan. Now, these workers can join the Plan as soon as they are hired.

This influx of part-time members, who tend to be younger than the average age of our members, benefits the Plan, lowering the overall age of its investment base and making it more diverse. This new membership also shows that working Canadians of all ages are planning for the future, seeking a secure and stable source of income in retirement. They're wise to do so.

A growing body of independent research shows that many people feel anxious about whether they will have an adequate income when they retire. HOOPP released a study late last year, completed by researchers at the University of Toronto, showing the impact that long-term care, home care, dental care, medications, and other out-of-pocket healthcare costs have on seniors.

Many seniors begin retirement feeling that they have an adequate income. However, the cost of a nursing home or assisted living can easily run into tens of thousands of dollars each year, quickly eating into their monthly income, which is typically fixed. Since these costs tend to increase as people age, women, in particular, are vulnerable because they tend to live longer. Our study found that one-quarter of women have insufficient incomes before long-term care, and nearly half, 44%, are in that position once they need it.

At HOOPP, we believe that all seniors in Canada should have sufficient income to retire with dignity. We believe that the certainty of a defined benefit (DB) pension, as provided by plans such as HOOPP, is the most efficient way to provide this income. That's why we commission research and raise awareness about the importance of DB plans in many different ways. For instance, our DB Advocacy program now includes more than 4,000 DB Ambassadors who are committed to speaking out for DB plans. New in 2016, we held DB Ambassador Roundtables in Hamilton and Ottawa. These sessions are a way to showcase the value of DB plans in Canada, bringing together members to learn more about how much DB pensions contribute to the Canadian economy. This forum also provides an opportunity for Ambassadors to share information and explore ways to spread the word and make a difference.

## Serving members and employers

In December, we launched our redesigned website. It has a modern design, along with more information about pensions and HOOPP – and a section that focuses on DB Advocacy. It's also easier to navigate from smartphones and tablets – traffic that now accounts for the fastest-growing segment of visitors to our website.

We also updated our logo and our brand colours to help make all our communications, in print and online, more accessible by being easier to read and more user friendly. In addition to helping us meet the new standards set out in the *Accessibility for Ontarians with Disabilities Act*, these enhancements ensure that we can better serve all our members, now and in the future.

In 2016, we added a new direct deposit service for retired members who live abroad. Our members asked for this change, and we delivered. It's more convenient and secure, and means no more waiting for the monthly cheque to arrive in the mail for our members who live in the United States, United Kingdom, Australia, Singapore, and parts of Europe.

We also made a Plan change to our policy on disability. We now accept documentation from nurse practitioners, in addition to primary care physicians. This change provides added convenience and flexibility for members who are applying for disability benefits, and it recognizes the changing landscape of Canada's healthcare system.

## Planning for the future

In 2016, HOOPP moved into a new energy-efficient building that will provide our organization with space to grow in the coming years. It includes a dedicated space for members to meet with Client Services Representatives in person.

The Board continues to work closely with HOOPP management and staff to improve overall governance and risk management. It is important that we have a clear understanding of the risks facing all pension plans, including HOOPP, in order to make decisions that will protect the stability and sustainability of the Plan.

Helen Fetterly

**Helen Fetterly**
Chair

Bryce Walker

**Bryce Walker**
Vice Chair

# Management's Discussion & Analysis

**CONTENTS**



**In addition to historical information, the 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.**

# 2016 Financial Highlights

**STATE OF THE PLAN**

**122%***

**NET INVESTMENT INCOME**

**$6,579 MILLION**

**2016 RATE OF RETURN†**

**10.35%**

**NET ASSETS**

**$70.4 BILLION**

**10-YEAR ANNUALIZED RETURN†**

**9.08%**

**MEMBERS**

**321,000**

* Funded Ratio on a Smoothed Asset Basis (129% on a Net Assets Basis)

† Registered Pension Plan

# Plan Overview

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 now over 510 employers from across the province participating in HOOPP and offering the Plan to their employees, who number over 321,000 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 (DB), multi-employer pension plan registered under the *Pension Benefits Act* (Ontario) (the PBA) and the *Income Tax Act* (Canada). The Plan is regulated under the PBA as a jointly sponsored pension plan (or JSPP).

# State of the Plan

As the Canadian population continues to age and discussions surrounding retirement security increase in both frequency and intensity, our commitment to delivering on the pension promise remains as strong as ever.

The Plan's funded ratio, the key measure of the current financial health of the Plan is at 129% at the end of 2016, up 1% from 128% in 2015, on a net assets basis.

On a smoothed[1] asset basis, for regulatory filing purposes, the ratio of smoothed assets to our pension liabilities is 122% up 2% from 120% in 2015. Despite an often volatile investment environment during 2016, the funded ratios of the Plan rose, a testament to HOOPP's commitment to its Liability Driven Investment (LDI) strategy, discussed in more detail in the *Investments* section.

*The chart below shows the Funded Status of the Plan for 2016 and 2015, shown on both a net assets basis and on a smoothed asset value basis:*

| | 2016 | 2015[2] | Year-over-Year Change |
|---|---|---|---|
| Net Assets to Regulatory Pension Obligation | **129%** | 128% | +1% |
| Smoothed Asset Values to Regulatory Pension Obligation | **122%** | 120% | +2% |

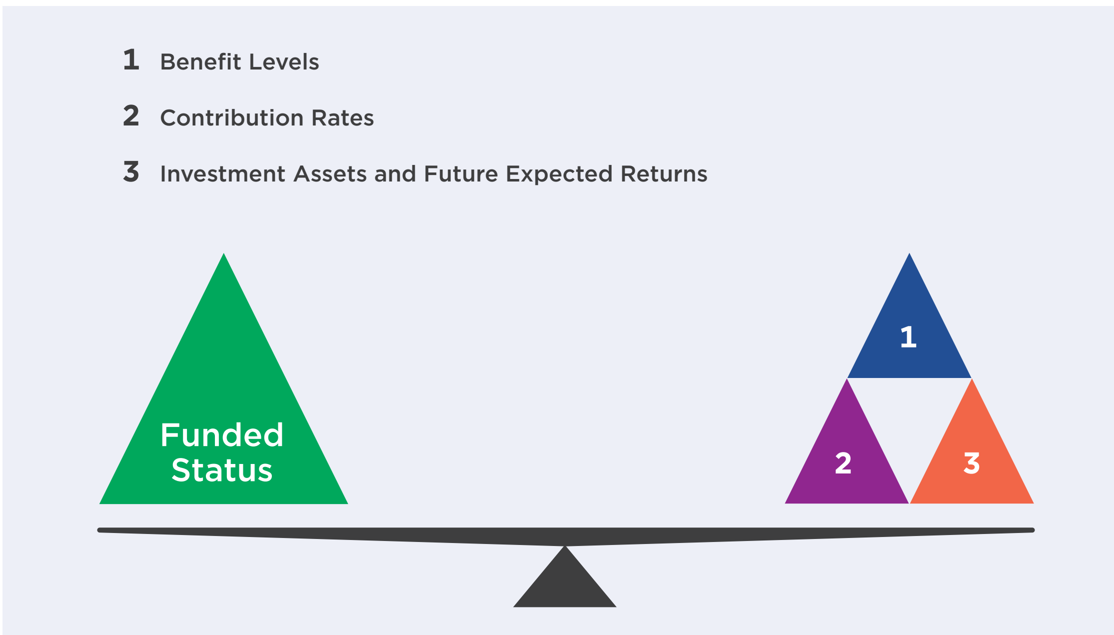
[1] *Actuarial technique that recognizes gains and losses, not as they occur, but slowly over a specified period of time.*
[2] *Net assets funded status revised from 130% to 128% and smoothed asset funded status revised from 122% to 120% to reflect assumption of full inflation protection when calculating future commuted values (CVs).*

## Pension Plan Funding Management

The Plan remains in surplus, however, due to the constantly changing economic and market environment and the evolving demographic profile of our members, the financial health of the Plan can rapidly change. Delivering on the pension promise is a complex challenge that involves managing our exposure to these risks and prudently making adjustments using the levers at our disposal.

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

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




The objective in managing the first component – benefits – is to provide a predictable and stable level of pension income to our members in retirement. The Plan is designed to provide a level of benefits to members which, in addition to income from other sources, provide total retirement income that will ensure the members' retirement security. Determining benefit levels must be done in conjunction with the setting of the second component: contribution rates. To ensure the long-term sustainability of the Plan, contribution rates must be set so that the Plan remains affordable to both our members and their employers.

In 2016, no changes were made to the benefit levels of the Plan, and the Board has committed to maintain contribution rates at current levels until the end of 2018. These contribution rates have remained at the same level since 2004.

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 our mission to deliver on the pension promise - it is estimated that approximately 75% of pension benefits paid are derived from investment income. Managing HOOPP's approach to expected investment returns and risk are the components with which Management and the Board can most quickly respond when faced with rapidly changing economic conditions.

Balancing these three levers in a prudent and effective manner will ultimately ensure the long-term sustainability of the Plan. An added complexity in managing the Plan is the need to ensure intergenerational equity exists among members; that is, meeting the goal of having each generation of members receive a consistent level of benefit that is in proportion to their contributions, such that no generation is disadvantaged to the detriment of their own retirement security.

## Future Funding Sustainability

The risks to maintaining the Plan's current funding surplus are constantly present, as unexpected rapid and severe changes to 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 remains at the center of Management's and the Board's attention. The Plan is constantly searching for ways to mitigate funding risk, primarily through the prudent management of the third component, as described above, of investment assets, future expected investment returns and risk. However, the Plan recognizes that the complete elimination of funding risk is neither possible nor desirable. The Plan chooses to take investment risk within its risk tolerance, in order to earn a rate of return high enough to keep the cost of the Plan (contribution rates) reasonable and affordable. Furthermore, the changing demographic profile of our members is subject to a level of uncertainty and the risks to the Plan due to these changes are difficult to hedge or de-risk.

In general, the two broad categories of risks that contribute to total funding risk come from financial and economic factors and demographic factors.

### Financial and Economic Risk

Investment income is a significant source of funding of pension benefits paid to our members, and is also a key determinant of how the other two of the three components are managed, i.e. the levels of contribution rates and benefits. Positive and stable performance of investment strategies is essential to the long-term sustainability of the Plan. Investment returns that exceed our expectations provide us with flexibility in managing benefit levels and contribution rates, while returns below expectations may result in unfavourable decisions surrounding benefits and contributions. In establishing an appropriate investment strategy, we strive to balance the aim to generate a sufficient return to meet our pension obligations and keep costs affordable, with the acceptance of a level of risk that does not jeopardize our ability to meet those obligations.

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

The level of interest rates affects our expected return on investments. As rates fall, so do expected returns on investments, making it more difficult to earn the returns needed to pay our benefits.

Unanticipated increases in inflation could lead to higher wages which form the basis of the pension benefits promised to our members. Additionally, members' pension benefits enjoy some protection against inflation and therefore higher inflation increases the Plan's pension obligation.

Lastly, if equities and other return seeking strategies fail to achieve their respective expected returns, investment income will fall short of the required levels to pay future pension benefits. Additionally, the volatility of returns of these strategies could cause shortfalls in investment returns and the funded status, particularly in the short-term, which in extreme circumstances, could lead to adverse impacts on benefits and contributions.

## Demographic Risk

Demographic risks to the Plan include increased life expectancy (longevity) of our members, changing retirement trends (e.g. early retirements) and the natural aging of the plan membership. Demographic risks are more difficult to detect as changes occur slowly over long periods of time and are generally identified by looking at longer periods of historical information. 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, variances if consistently above or below 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 our 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 previous years was inadequate. In 2016, no changes to the life expectancy assumption were made (changes were made in 2014 following the release of updated mortality tables by the Canadian Institute of Actuaries). No changes were made to the retirement rate assumption during the 2016 year. Small adjustments to the retirement rate assumption were made in 2015, following a retirement experience study.

The Plan monitors demographic trends carefully with an annual analysis of all assumptions by the Board's actuary that compares recent experience to assumptions. Additionally, detailed demographic experience studies are conducted from time to time to help ensure assumptions about future expectations remain relevant.

The changing demographic profile of our membership, referred to as plan maturity, is another important trend to follow as it impacts the future sustainability of the Plan and is discussed in more detail on the following page.

## Plan Maturity

All 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, due to the increasing pool of retirees and the difficulty in replacing these retirees with new younger members in ever greater numbers.

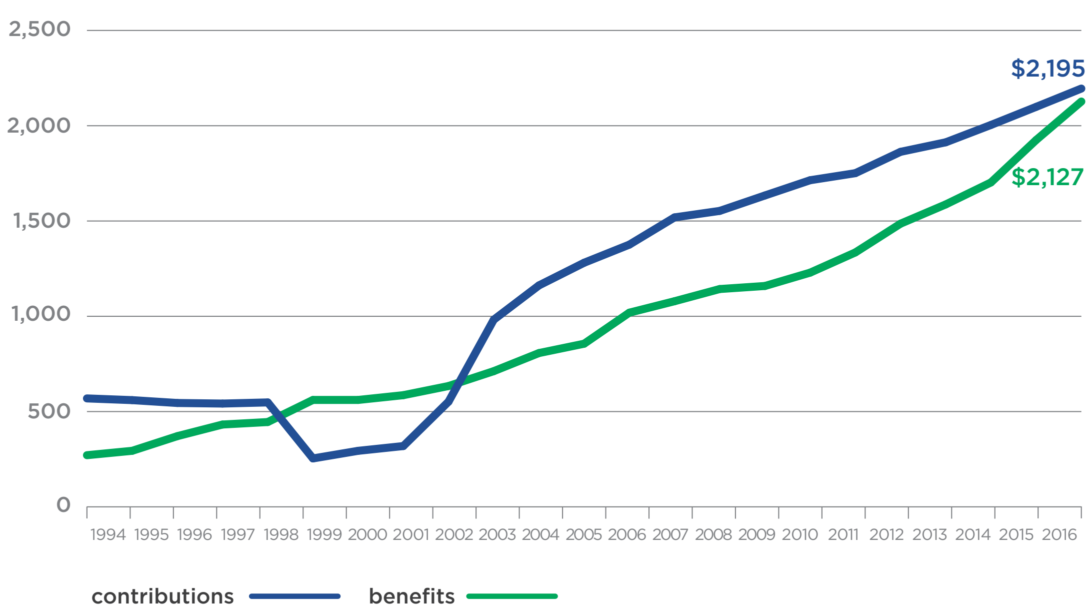
As a plan ages, the key implication is the impact to its risk taking ability. More mature plans pay out more in benefits than the contributions they receive from active members, which increases a plan's sensitivity to investment market declines - the remaining asset base with which to "earn back" losses is reduced since there are negative net contributions which further reduce the asset base. Furthermore, any funding deficiencies are more difficult to address since contribution rate increases will have a diminishing impact given the smaller proportion of active members.

One key measure of the relative age of the plan is net cash flow between contributions received and pension benefits paid.

The chart below shows that HOOPP is a relatively young plan as cash flows received from contributions was greater than benefits paid by $68 million (2015: $174 million) however, it is clear the Plan is maturing as this difference is narrowing. (Note: the chart reflects that a contribution rate reduction was in place from 1999 – 2002 to help ensure compliance with legislation that limited the maximum surplus a registered pension plan can have.)

### Contributions vs Benefits Paid

($ millions)



Another key measure of the relative maturity of the plan is the ratio of active members to retirees. The numbers below portray the gradual maturing of the Plan, as the active to retiree ratio has declined from 93.9 in 1960 (HOOPP's inception) to 3.0 at the end of December 31, 1996 to 2.2 at the end of December 31, 2016 and is forecasted to decline further to 1.8 by December 31, 2026. New entrants to the Plan are a key contributor in slowing the maturity of the Plan; however, all pension plans naturally age over time due to the ever growing population of retirees.

## Ratio of Active Members to Retirees

| | 1960 | 1996 | 2006 | 2016 | 2026 (projected) |
|---|---|---|---|---|---|
| Active to Retiree Ratio* | 93.9 | 3.0 | 2.5 | **2.2** | 1.8 |

** As at December 31, except for 1960 which is as at November 30.*

HOOPP is a slowly maturing, relatively young pension plan. We currently benefit from the flexibility that this provides us, however, we remain mindful of the need to adapt and grow our investment strategies in the coming years as the Plan continues to mature.

# Investments

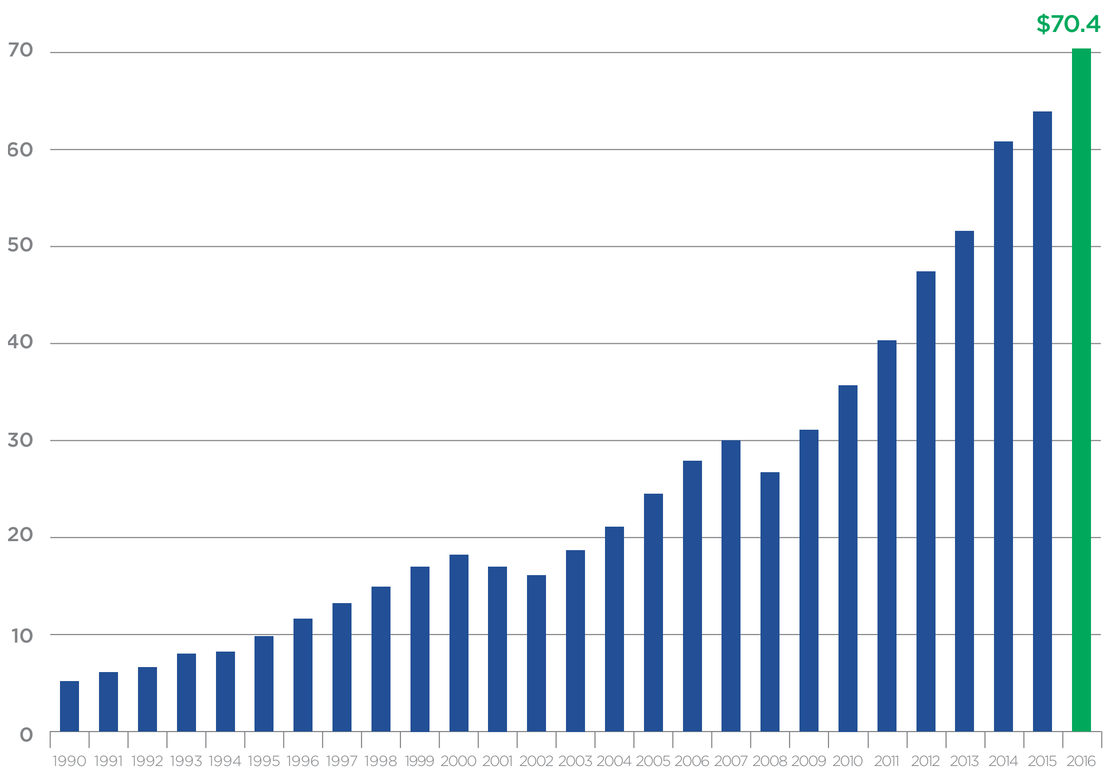
In order to ensure that it can fulfill its mission to deliver on the pension promise, HOOPP employs a Liability Driven Investment (LDI) approach. In LDI the Plan's liabilities and the Fund's assets are considered together and, with the focus on the risk of having insufficient assets to provide funding for members' retirements, this approach helps to ensure that the Plan remains fully funded even in a very challenging environment.

In implementing LDI at HOOPP, the Fund's assets are allocated between two broad portfolios: the Liability Hedge Portfolio and the Return Seeking Portfolio. The Liability Hedge Portfolio is designed to hedge the major risks that can increase the value of the pension obligations – namely, 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 deliver incremental return to the Fund and provide diversification benefits.

*The chart below shows the growth in HOOPP's net assets from $6.1 billion in 1990 to $70.4 billion at the end of 2016.*

## Net Assets

($ billions)



## 2016 Results

*The table below shows investment performance for 2016 and 2015 as well as the 10-year and 20-year performance of the Fund (Registered Pension Plan):*

| | 2016 | 2015 | 10-Year | 20-Year |
|---|---|---|---|---|
| Total Return | **10.35%** | 5.12% | 9.08% | 9.12% |
| Benchmark* | **6.12%** | 3.95% | 7.01% | 7.61% |
| Value-Added Return | **4.23%** | 1.17% | 2.07% | 1.51% |

** 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.*

For the year, HOOPP produced the following results:

- on a net assets basis, a funded ratio of 129% as of December 31, 2016 compared to 128% as of December 31, 2015;
- net investment income of $6.6 billion (compared to $3.1 billion in 2015);
- investment return of 10.35% (compared to 5.12% in 2015), of which 6.12% represented benchmark return and 4.23% return from active management strategies; and
- growth in net assets to $70.4 billion from $63.9 billion in 2015.

2016 was yet another year of modest and somewhat disappointing growth in the global economy. Concerns remained around stagnation in Europe, decelerating growth in China, and the inability of U.S. economic growth to break above the modest levels experienced in recent years. On the political front, the year was full of surprising and significant events, from a vote in favour of Britain withdrawing from the European Union (Brexit) at mid-year to the election of Donald Trump as U.S. President later in the year.

With challenging global economic growth prospects and heightened political uncertainty, central banks in general, maintained their extremely accommodative stance. In the U.S., market participants watched closely for signs of an improving economy which might lead the U.S. Federal Reserve (the Fed) to begin to raise interest rates. At its December meeting, the Fed finally raised rates modestly and signaled that more increases were likely in 2017.

Equity markets entered the year close to fully valued and finished the year with a mixed performance for 2016. Canada's S&P/TSX Composite Index returned 21.05% and was one of the top performing indices globally as it benefited from rising commodity prices, and in particular rising energy prices which were up almost 50% in 2016. The S&P 500 Index in the United States returned 11.96% while Japan's Nikkei Index returned 2.11%, Frankfurt's DAX Index returned 6.87%and London's FTSE 100 Index returned 18.59%.

With respect to interest rates, 2016 saw some major moves during certain periods within the year, but overall rates were only up modestly from the end of 2015. For example, the 10-year Government of Canada bond yield declined from 1.39% at the beginning of the year to 0.96% at mid-year and then rose to 1.72% at year-end; and, the 30-year Government of Canada bond yield declined from 2.15% to 1.56% at mid-year and then rose to 2.31% at year end. In the U.S., government bonds exhibited a similar pattern, with the 10-year yield moving from 2.27% to 1.37% at mid-year and then rising to 2.44% at year end and the 30-year yield moving from 3.02% to 2.14% and ending the year at 3.07%.

Credit spreads, the difference in yield between a "risk-free" government benchmark and a corporate borrower, spiked early in 2016 but ended the year lower, with the five-year CDX. NA.IG index declining from 88 basis points at the beginning of the year to 67 basis points by year end.

## Major Drivers in the Change in Funded Position

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:

| ($ millions) | 2016 Change | 2015 Change |
|---|---|---|
| **Liability Hedge Portfolio** | | |
| Short-Term | **347** | (167) |
| Nominal Bonds | **771** | 1,441 |
| Real Return Bonds | **538** | 167 |
| Real Estate | **824** | 473 |
| ***Total Liability Hedge Portfolio*** | **2,480** | 1,914 |
| **Return Seeking Portfolio** | | |
| Public Equities | **2,320** | (130) |
| Private Equity | **714** | 614 |
| Corporate Credit | **217** | 54 |
| Long-Term Option Strategy | **90** | 334 |
| Other Return Seeking Strategies | **758** | 317 |
| ***Total Return Seeking Portfolio*** | **4,099** | 1,189 |
| **Changes due to Net Investment Income** | **6,579** | 3,103 |
| Change due to Operations | **(144)** | (27) |
| ***Total Change in Net Assets*** | **6,435** | 3,076 |
| **Change in Pension Obligation** | **(4,617)** | (2,921) |
| **Net Change in Surplus on a Net Asset Basis** | **1,818** | 155 |
| **Funded Ratio on a Net Asset Basis** | **129%** | 128% |
| Change in Smoothing Adjustment* | **(12)** | 3,049 |
| **Regulatory Funded Ratio** | **122%** | 120%[3] |

* *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.*

[3] *Revised from 122% to 120% to reflect assumption of full inflation protection when calculating future commuted values (CVs).*

The Liability Hedge Portfolio produced a return of $2,480 million in 2016, up from a return of $1,914 million in 2015. The Liability Hedge Portfolio benefited from returns in Short-Term at $347 million (2015: -$167 million), Real Return Bonds at $538 million (2015: $167 million) and Real Estate at $824 million (2015: $473 million). Details of the performance of individual strategies within the Liability Hedge Portfolio follow below, in the *Liability Hedge Portfolio Discussion*.

The Return Seeking Portfolio posted a gain of $4,099 million in 2016 which was up sharply from a gain of $1,189 million in 2015. All strategies in the Return Seeking Portfolio posted positive results, with the largest contributions coming from Public Equities at $2,320 million (2015: -$130 million), Private Equity at $714 million (2015: $614 million) and Other Return Seeking Strategies at $758 million (2015: $317 million). Details of the performance of individual strategies within the Return Seeking Portfolio follow below in the *Return Seeking Portfolio Discussion*.

The total pension obligation increased by $4,617 million in 2016 compared to an increase of $2,921 million in 2015. A more detailed discussion follows in the *Plan Liabilities* section.

Overall in 2016, the investment return of 10.35%, higher than the growth in the Plan's liabilities, resulted in an increase in the funded status of the Plan. The funded status of the Plan on a net assets basis was up 1% in 2016 to 129%, while on a smoothed value of assets basis the regulatory funded ratio ended 2016 at 122%, up from 120% in 2015.

## Active Management and Relative Performance

In 2016, the total return of 10.35% exceeded the benchmark return of 6.12% by 4.23% or $2.7 billion. This active management return, or "value-added," came from a variety of sources in 2016 within both the Liability Hedge and Return Seeking Portfolios. The Liability Hedge Portfolio generated 2.47% of value-added, with a significant contribution coming from short-term and real estate, while the Return Seeking Portfolio generated 1.76% of value-added with large contributions from private equity and absolute return strategies.

| | 2016 | | 2015 | |
|---|---|---|---|---|
| | **($ millions)** | **Percent** | ($ millions) | Percent |
| **VALUE-ADDED** | | | | |
| Liability Hedge Portfolio | **1,565** | **2.47%** | 81 | 0.13% |
| Return Seeking Portfolio | **1,118** | **1.76%** | 627 | 1.04% |
| **Total** | **2,683** | **4.23%** | 708 | 1.17% |

# Liability Hedge Portfolio Discussion

## Short-Term and Cash

In 2016, the portfolio returned $347 million, compared to -$167 million in 2015.

After a rough couple months to start the year, which was the continuation of the trend from 2015, the revenue streams in the portfolio started to track positive performance. The general theme for the year was "risk back on" from the end of February for the rest of the year. We had added risk at wider credit spreads which we held for most of the year and started to unwind and take profits in the 4th quarter. The selling of securities created "realized profits" which crystallized some of our marked-to-market profits.

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

It was a tale of two halves for the Canadian bond market in 2016 with global forces rallying it into late summer before the sharp sell-off, but by a larger magnitude in the fourth quarter.

Mid- to long-term bonds rallied to all-time highs all the way into September, driven by:

1. downside risks to inflation due to a China-led risk sell-off early in the year;
2. extreme (including further negative interest rate) policy in Europe and Japan; and
3. a Brexit-led risk aversion which stretched valuations even more.

We took this opportunity to sell nominal bonds.

Once the market decided to question these extreme levels and extreme central bank policies, the stage was set for some degree of normalization following some improved macro-economic fundamentals, especially in the U.S. where stocks rallied to new highs. This normalization turned into a full blown sell-off following the U.S. Presidential election of Mr. Trump with expectations of easier fiscal policy coupled with a Fed willing to tighten on the monetary policy side.

The net result was that – following some big moves both ways – the Canadian bond market ended the year with slightly higher yields, year-over-year.

The average yield on the wider FTSE TMX All Government Universe Bond index rose by 20 basis points (bps) from 1.74% to 1.94%.

The average yield on the Long Term All Government Bond index (measuring the performance of government bonds with maturities greater than 10 years) rose by 13 bps from 2.82% to 2.95%.

HOOPP's Liability Hedge nominal Fixed Income portfolios returned about $771 million.

## Real Return Bonds (RRB)

Real interest rates were left virtually unchanged by the end of 2016. The average yield on the FTSE TMX Real Return Bond Index declined only 1 basis point, from 0.45% to 0.44%.

HOOPP's RRB portfolio, however, returned $538 million (2015: $167 million) largely due to the purchase of inflation breakevens at opportune levels. Inflation expectations and inflation breakevens collapsed into the early part of 2016 (due to reasons mentioned in the Nominal Bonds section of the commentary) and we decided to "lock in" low assumed inflation for the Plan by buying RRBs and U.S. Treasury Inflation-Protected Securities (TIPs) vs shorting Nominals at very favourable levels.

Canadian 30-year breakevens began the year at approximately 1.55%, sank to a low of 1.30% in mid-February and ended the year above 1.80%, propelled mainly by increased inflation expectations in November following the U.S. election results.

## Real Estate

In 2016 the HOOPP real estate portfolio produced a return of 12.19% on a currency hedged basis compared to 7.96% in 2015. This represents an outperformance of 6.79% relative to the Canadian Investment Property Databank (IPD) benchmark and a continuation of the trend of stable, attractive returns over the past several years – despite the political and economic uncertainty that characterized 2016.

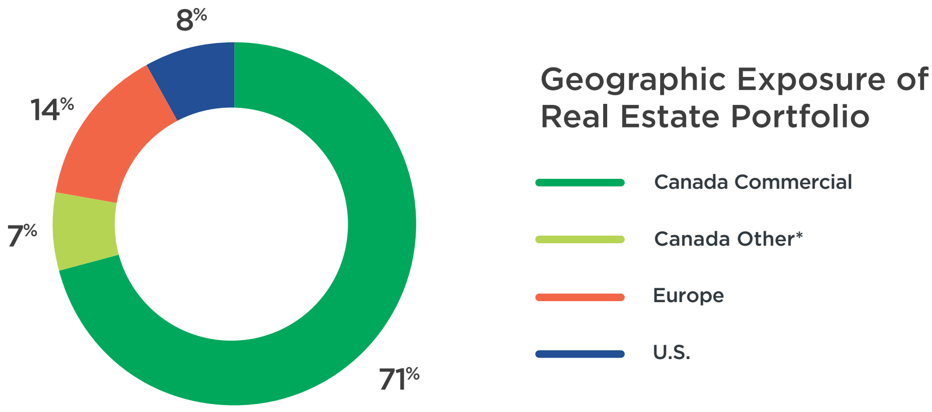
At year-end, the portfolio was valued at $11.5 billion on a gross market value basis (versus $10.4 billion at the end of 2015), reflecting a year of active investment in Canada and abroad. A total of more than $1.5 billion in investments or investment commitments were made during the year, offset by just under $0.5 billion of selective property sales.

Major highlights of 2016 included:

- the successful completion of eight development projects during the year, bringing onstream an additional $580 million of new income producing properties, including One York Street in Toronto, Marine Gateway in Vancouver, two other office projects in Canada and four industrial projects in Europe;
- commitment to new developments totaling $575 million, including five industrial projects in Europe and the U.K., as well as three large residential, industrial and mixed use projects in the U.S.; and
- the commitment of $470 million to real estate investment funds globally, with the majority of the new investment targeted at opportunities in the U.S.

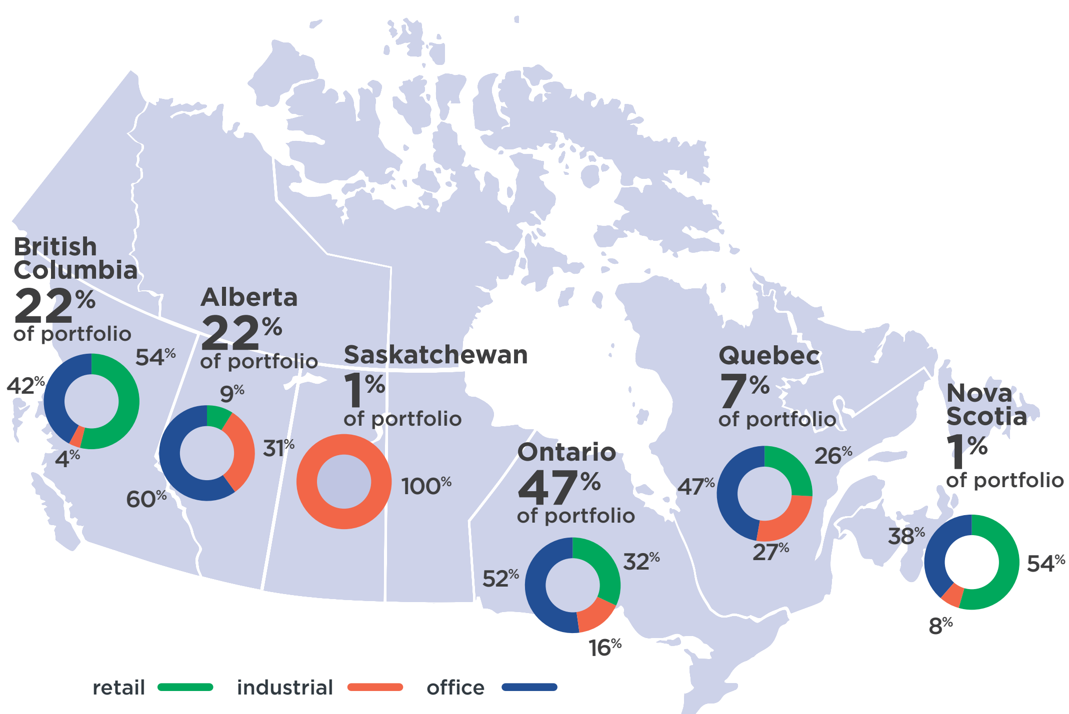
While HOOPP's investment strategy has increasingly focused on real estate investments in Europe and the U.S., the Canadian income producing commercial property portfolio continues to represent the core of our real estate holdings. Valued at $8.1 billion, these office, industrial and retail properties account for 71% of our total real estate investments on a gross market value basis.

*The graphics below illustrate the global diversification of HOOPP's real estate portfolio, and the diversification of its Canadian income producing commercial property portfolio.*




* *Residential and fund investments*

## HOOPP's 2016 Canadian Commercial Real Estate Portfolio Composition



# Return Seeking Portfolio Discussion

## Public Equities

In general, 2016 was a rewarding year for global equities. Aided by accommodative monetary policy on multiple continents, most developed markets generated positive returns. In North America, despite one of the worst early year starts in history, equity markets recovered nicely through mid-year and then finished the year in very strong fashion. In Canada, equities as represented by the S&P/TSX 60 Index returned a very satisfying 21.32%. In the U.S., equities generated about half the Canadian return, returning 11.96%, as represented by the S&P 500 Index.

In 2016, HOOPP's overall equity performance was generally in-line with market returns. Our disciplined fundamental approach to equity analysis, and overall attention to valuation, allowed the portfolio to ride out the early year volatility and stay the course.

### *Canadian Equities*

During the past year, almost all sectors of the Canadian market performed well. Only one of the eleven sector groups generated a negative return. Fueled by generalized commodity strength and a recovery in the price for oil, the best performance came from the Materials and Energy groups. The worst performance came from the Healthcare sector, led by very poor returns from biotechnology and pharmaceutical stocks, fell a very painful 78.4%.

In 2016, HOOPP's Canadian equity portfolio returned 21.4% (2015: -7.9%).

### *U.S. Equities*

In the U.S., investors turned aside pre-election fears with a powerful post election rally, providing the broad equity market with virtually across-the-board positive sector performance. The Healthcare sector was the only underperforming group, generating a mild negative return. The Energy and Financial sectors led the way with a strong year-end push on the strength of a pro-growth presidential platform. As in Canada, the commodity groups also had a very good year.

HOOPP's U.S. equity portfolio generated a total return of 9.1% this past year (2015: 1.5%).

### *Non-North American Equities*

In Europe, the U.K. market returned a handsome 18.59%, whereas other continental markets on average generated a mix of low to mid-single digit positive and negative returns. In Japan, the Nikkei performed poorly, returning 2.11%. The traditionally more varied and volatile Emerging Markets had a profitable year in 2016, appreciating 8.6% as measured by MSCI.

The 2016 total return for HOOPP's International equity portfolio was 7.2% (2015: 5.6%).

## Private Equity

HOOPP Capital Partners (HCP) invests in (i) private equity funds; (ii) privately-held businesses directly; and (iii) other private capital opportunities.

At the end of 2016, HCP had $5.3 billion invested, with a further $4.7 billion committed to private investments. The invested portfolio generated a currency-hedged return of 15.0% for the year compared to 17.7% in 2015 (the return on an unhedged basis was 13.1% compared to 28.7% in 2015), exceeding its benchmark by $445 million. The portfolio has increased by over $3 billion in the past few years and now includes credit and structured investments with lower risk/return attributes.

The fair market value of the invested portfolio represents 7.5% of the total Fund, meaning there is considerable scope for managed growth and for considering significant investment opportunities.

## Corporate Credit

HOOPP has a derivative benchmark for Credit Portfolios that rolls to a new contract every 6 months. CDX IG25 was the on-the-run index till Mar 20, 2016, with IG26 being the benchmark for the next six months and finally IG27 from Sept 20, 2016 till year end. There was a significant rally in the benchmark index in the last fiscal year with IG25 opening the year at 90 basis points (bps) (reaching a high of 124 bps, in early Feb) and closing the year at of 67.5 bps. The Barclay's Aggregate U.S. Credit Index Options Adjusted Spread for corporate bonds also had a similar rally tightening from 155 bps at the start to 118 bps at year end. The post crisis low for the index was 93 bps in June 2014.

Credit generally had a constructive performance for the year. There were notable events throughout the year resulting in material intra-year volatility with the notable ones being: European Central Bank (ECB) purchase program of Corporate Bonds, Brexit and the new Bank of England (BOE) QE program, U.S. Election, and the Fed's second rate hike.

HOOPP has four return seeking credit sub-portfolios with the fifth being the benchmark index portfolio. These Credit portfolios generated a cumulative value-added return of $113 million for fiscal year 2016:

1. The General Asset active credit portfolio was positioned short after Brexit and the U.S. election, and generated value-added of negative $34 million for the year. Most of the losses were the result of the post-Brexit rally.

2. U.S. Corporate Bond portfolio generated a positive value-added of $11 million for the year. This portfolio is long biased with some hedges.

3. The Canadian Credit and Collateralized Loan Obligation Structured Credit Active Portfolio is positioned with a long bias and generated a positive return of $71 million for the year.

4. The Securitized Asset Structured portfolio generated a value-added of $50 million for the year. The portfolio is positioned with a long bias in Commercial Mortgage-Backed Securities (CMBS) assets.

5. The Corporate Beta portfolio generated a value-added of $15 million for the year. The value-added was generated by positioning the portfolio with a long bias using credit curves.

### Long-Term Option Strategy

This strategy, in which equity index exposure is combined with equity index options, was a contributor to the Return Seeking Portfolio, increasing in value by $90 million during the year, compared to $334 million in 2015. This strategy is part of the benchmark.

### Other Return Seeking Strategies

*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 2016, this program generated a gain of $103 million, compared to $107 million in 2015. Value was added during the year by selling U.S. and Canadian government bonds; buying inflation-linked bonds; and buying U.S. equities in January. All gains or losses on these strategies contribute to the value-added of the Fund.

*Absolute Return Strategies*

HOOPP engages in absolute return strategies designed to earn positive returns with minimal sensitivities to interest rates, credit or equities. These strategies made $503 million in 2016, compared to $188 million in 2015.

## Responsible Investing

The integration of Environmental, Social and Governance (ESG) factors forms an integral part of the investment decision-making process at HOOPP, providing valuable additional insight into the risks and opportunities inherent in each investment. Greater details on our approach to responsible investing are available on our website, under the Responsible Investing section of www.hoopp.com.

Our preferred approach to encouraging positive change with respect to ESG matters entails directly engaging with companies, or via collaborative engagements through organizations such as the Canadian Coalition for Good Governance (CCGG).

The following are examples of direct ESG engagement efforts throughout the year:

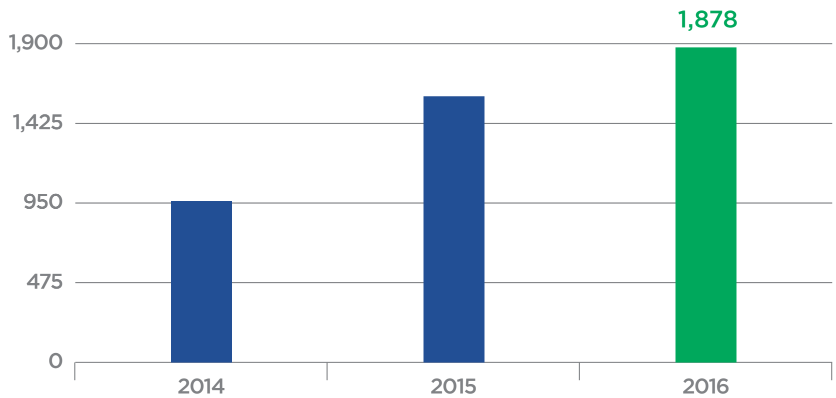
- a discussion with a large Canadian financial institution to establish a greater link between corporate performance and compensation programs, and compensation programs that are simpler and more transparent; and

- a dialogue with a U.S. chemicals company inquiring about the impact of potential carbon pricing and encouraging them to report carbon information to the CDP.

As responsible owners, we encourage better management of ESG matters by companies by exercising our influence as owners and we take seriously our right to exercise our proxy votes. On ESG issues, given the increasingly complex nature of these issues and the rapid evolution of available ESG information, matters are voted on after thorough analysis on a case-by-case basis.

During the year, we voted on 1,878 total proxy proposals, up from 1,584 proposals in 2015.

## Proxy Proposals




Proxies are voted in accordance with our Proxy Voting Guidelines, available on our website. We engage an external proxy advisor but actively review each issue internally and may override their recommendations. For example, in 2016 we voted against the advice of our proxy advisor on a say-on-pay resolution at a Canadian financial institution. We may also vote against management on shareholder proposals, as we did in 2016 citing the need for increased disclosure of company lobbying activities at a U.S. chemicals company.

HOOPP's real estate group has adopted responsible investment practices across its core processes – portfolio management, property acquisition, and development. The team and its management company partners work in close collaboration on an annual program to ensure sustainability is systematically embedded.

The sustainability program includes initiatives to reduce energy, water, waste and greenhouse gas emissions and engage with tenants and other key stakeholders. It is anchored by the Pillar Scorecard, which measures the portfolio's annual progress on 13 key performance indicators. The Scorecard is published annually in HOOPP's Real Estate Sustainability Report, available on our website.

HOOPP real estate has achieved the following responsible investing accomplishments in the year:

- convening more than 100 of our management company partners at the 2016 Leadership In Environmental Advancement Program (LEAP) Conference and Awards to discuss leading real estate sustainability practices and celebrate our properties' achievements;
- receiving Investment & Pensions Europe (IPE) Real Estate Global Award for Sustainable Strategy for two consecutive years (2015 and 2016). The award recognizes HOOPP as an industry leader with an established sustainability strategy to protect and enhance the value of its real estate assets; and
- increasing our score on the Global Real Estate Sustainability Benchmark (GRESB) by 6% over 2015 and being named as 'Green Star' for the fourth consecutive year.

# Plan Liabilities

The process of estimating the value of the Plan's pension liabilities, or future benefit payments, relies upon 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 the various investment strategies.

Key demographic assumptions include the retirement age of our members and their life expectancy. All of the assumptions made in the estimation of the total pension obligation 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 our actual member data, we project the benefits owed to plan members for each future year out over 80 years.

The valuation of these future pension benefits depends upon the financial assumption of the future expected return of our investment portfolio, also known as the discount rate (see more detailed discussion of the discount rate below). To calculate the total value of these future pension benefits today, these estimated future payments are *"discounted"* by the estimated expected return of our investment portfolio.

The actual future outcomes, both of financial and economic and demographic assumptions, will almost certainly differ from the assumptions made, and 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.*

A summary of the estimated plan liabilities or pension obligation as at the end of December 31, 2016 and 2015 is presented below. The 2015 Pension Obligation has been revised to reflect an additional liability which assumes future commuted value (CV) calculations will reflect full inflation protection for all service. This level of indexation is higher than the minimum guaranteed under HOOPP's plan provisions. The CV calculations and the degree of inflation protection provided reflects current administrative practice although HOOPP may elect to change this practice in the future.

| | 2016 | 2015 | % Change |
|---|---|---|---|
| ($ millions) | | | |
| **Pension Obligation per Financial Statements** | **54,461** | 49,151 | |
| Recognition of full inflation protection for future CV calculations | | 693 | |
| **Revised Pension Obligation** | **54,461** | 49,844 | 9.3% |

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

Firstly, 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 obligation.

Secondly, 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 obligation. In 2016, no changes in these assumptions were made in the determination of the Plan's pension obligation.

Most importantly, the discount rate or the future expected return on the investment portfolio can have a significant impact on the change in the total pension obligation. In 2016, the reduction in the discount rate from 5.65% to 5.45%, a 20 basis point decline, resulted in a $1.5 billion increase in the estimated pension obligation.

*The table below shows the change in the Plan's pension obligation from 2015 to 2016.*

| ($ millions) | |
|---|---|
| Pension Obligation at December 31, 2015 | 49,844[4] |
| Increases in benefits due to members | 3,108 |
| Changes in assumptions | 0 |
| Change in discount rate (expected return) | 1,509 |
| **Pension Obligation at December 31, 2016** | **54,461** |

## Discount Rate

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 assumption, also referred to as the discount rate. The expected return is driven to a significant extent by interest rates; that is, 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 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 Investing approach.

At the end of 2016, the discount rate was decreased to 5.45% from 5.65% in 2015, even though interest rates rose slightly, due to reductions in the expected risk premiums of some of the Fund's investment strategies.

| | 2016 | 2015 |
|---|---|---|
| Inflation Rate | **2.00%** | 2.00% |
| Real Discount Rate | **3.45%** | 3.65% |
| Discount Rate | **5.45%** | 5.65% |

*The table below highlights the sensitivity of the estimated pension obligation to changes in the discount rate:*

| Change | Discount Rate | Pension Liability ($ millions) | Change as % |
|---|---|---|---|
| +1.00% | 6.45% | 47,381 | (13%) |
| | **5.45%** | **54,461** | - |
| -1.00% | 4.45% | 63,425 | 16% |

[4] *Revised to reflect assumption of full inflation protection when calculating future commuted values (CVs).*

# Operating Expenses

To address the operational challenges of the Plan's continued growth and the ever changing regulatory environment and to ensure we continue to meet the needs of our members, we are continuing to make investments in technology and human capital.

HOOPP's 2016 operating expenses were $212 million, an $11 million or 5.5% increase over 2015 operating expenses of $201 million, and represent 0.30% of net assets (2015: 0.31%).

*The table below shows 2016 and 2015 operating expenses in absolute amounts and expressed as a percentage of net assets.*

| ($ millions) | 2016 | 2015 |
|---|---|---|
| Investment Expenses | **$ 134** | $ 126 |
| Plan Administration | **78** | 75 |
| **Total** | **$ 212** | $ 201 |
| **Total Expenses as % of Net Assets** | **0.30%** | 0.31% |

# Member and Employer Services

## Investing for Our Future

As HOOPP continues to grow with new members and employers, we are committed to making investments in our service, systems and technology to ensure we can continue to deliver on the pension promise.

In 2016, we launched our redesigned website, hoopp.com, along with our updated logo and brand. Our enhanced website features additional content and is easier to access and navigate from all devices. These changes to our website and logo ensure that HOOPP is compliant with the legislative requirements set out in the *Accessibility for Ontarians with Disabilities Act*, 2005, and will help us better serve all our members, now and in the future.

Our redesigned website is the first step in the evolution of the HOOPP online experience. In 2016, we made significant progress in our multi-year project to upgrade our online services and pension administration system. In preparation for its full rollout in 2018, approximately 10,000 members are now participating in the pre-launch of this system. A small group of employers is also taking part. We are working closely with these groups, gathering valuable feedback and making refinements to our system that will ultimately benefit all our members and employers.

This system upgrade will provide HOOPP with added flexibility to adapt to changes in the future, enhancing our ability to serve our clients in the coming years. In the coming 12 to 18 months, there will be more improvements to our secure online site for members, "HOOPP Connect", and to our secure site for employers.

Also, by increasingly bringing systems and expertise in-house, we have the opportunity to lower our costs, benefitting members and employers and improving the long-term stability and sustainability of the Plan.

### Inflation Protection

In 2016, the Board made a decision to provide retired and deferred HOOPP members with the maximum inflation adjustment offered by the Plan. Effective April 1, HOOPP paid a cost of living adjustment equal to 100% of the increase in the 2016 consumer price index (CPI). This was made possible by the strong funded position of the Plan.

### Contribution Rates

Recognizing that our Plan must be sustainable and stable for the long term, the Board approved a measure to keep contribution rates unchanged through the end of 2018. Our contribution rates, already much lower than those of many of our peer plans, have been unchanged since 2004.

# Our Commitment to Service Excellence

Responding to feedback from our members, we made service improvements in 2016.

Our new payment service now provides direct deposits to retired HOOPP members who live in the U.S., Australia, Singapore, and European countries that use the euro. Like our retirees who reside in Canada, these members living abroad can now experience the convenience and peace of mind of knowing that they will receive their pension payment electronically in their bank account, in their local currency, on the first business day of each month.

Looking to the changing landscape of Canada's healthcare system, we made a change to our policy on the way HOOPP administers disability benefits. We now accept documentation from nurse practitioners, in addition to primary care physicians. In addition to providing added convenience and flexibility for members who are applying for disability benefits, this change recognizes the growing number of nurses in our Plan and their expertise.

As our membership continues to grow, we remain committed to providing excellent service to help our members understand and make important, timely decisions about their pension. We provide service over the phone, online and in person so members can reach out to us in the ways that are most convenient and comfortable for them. For instance, our internal research shows that an increasing number of members now use their mobile phone to reach our website, which is why the new hoopp.com is responsive on tablets and smartphones.

We also continue with our efforts to communicate with our members in targeted ways according to their preferences. For instance, our Client Services team responded to over 16,700 email inquiries.

As we introduce more self-serve options to access information, we are mindful that the human touch remains a vital feature for our members, particularly on a subject as personal and important as their retirement and their pension. We are proud that in 2016, our team:

- answered 137,000 telephone calls;
- presented to more than 16,500 members at HOOPP information sessions;
- held 3,200 individual one-on-one sessions; and
- met with 560 members for walk-in meetings at our office.

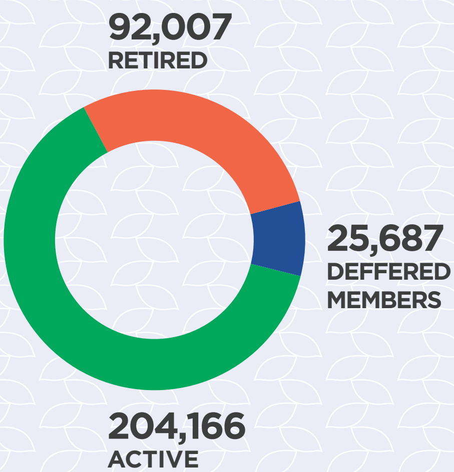
We continue to receive positive feedback about our information sessions, which include an opportunity for members to speak personally with a representative from HOOPP to get more information about their pension. We expect that our move to 1 York Street will provide additional opportunities for personal meetings with members. Our new office space includes a dedicated space for members where they can speak with a Client Services representative in a quiet, comfortable setting.

Our client satisfaction surveys, conducted on a quarterly basis, tell us that, overall, our members and employers remain very satisfied with the service and communication that we provide. We use this research to monitor how clients feel about the accuracy, consistency and timeliness of the service they receive from HOOPP. We are pleased that our overall client satisfaction rate held steady at the record high that it reached in 2015.

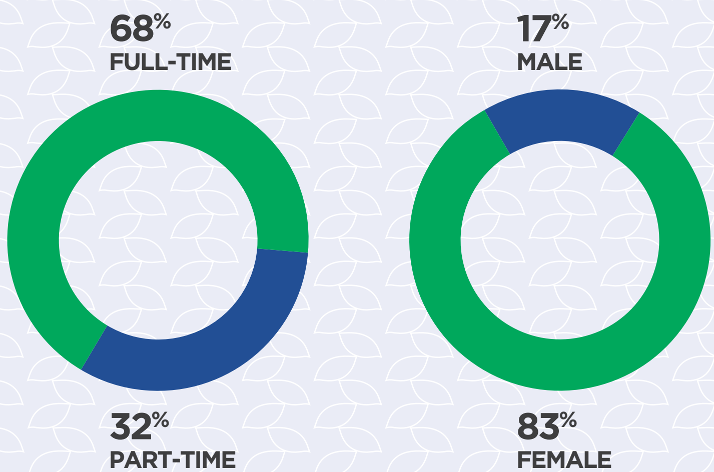
# Our Members

# 321,860

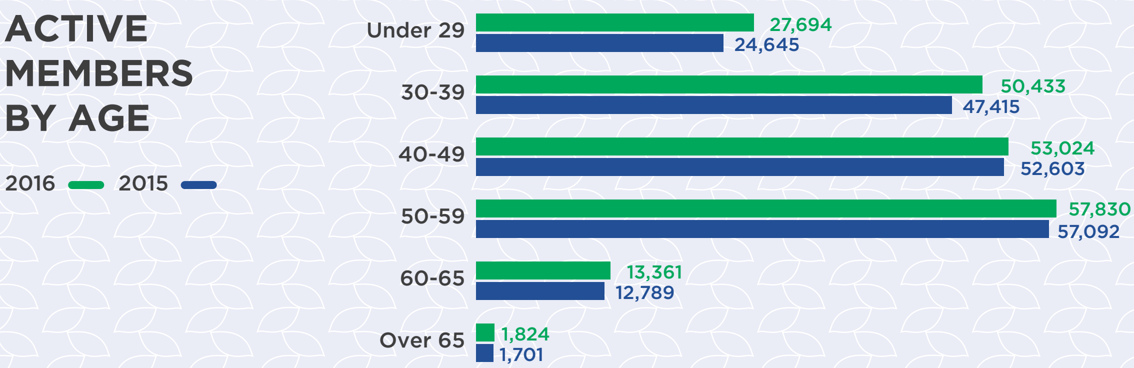
**TOTAL MEMBERS**




## ACTIVE MEMBERS



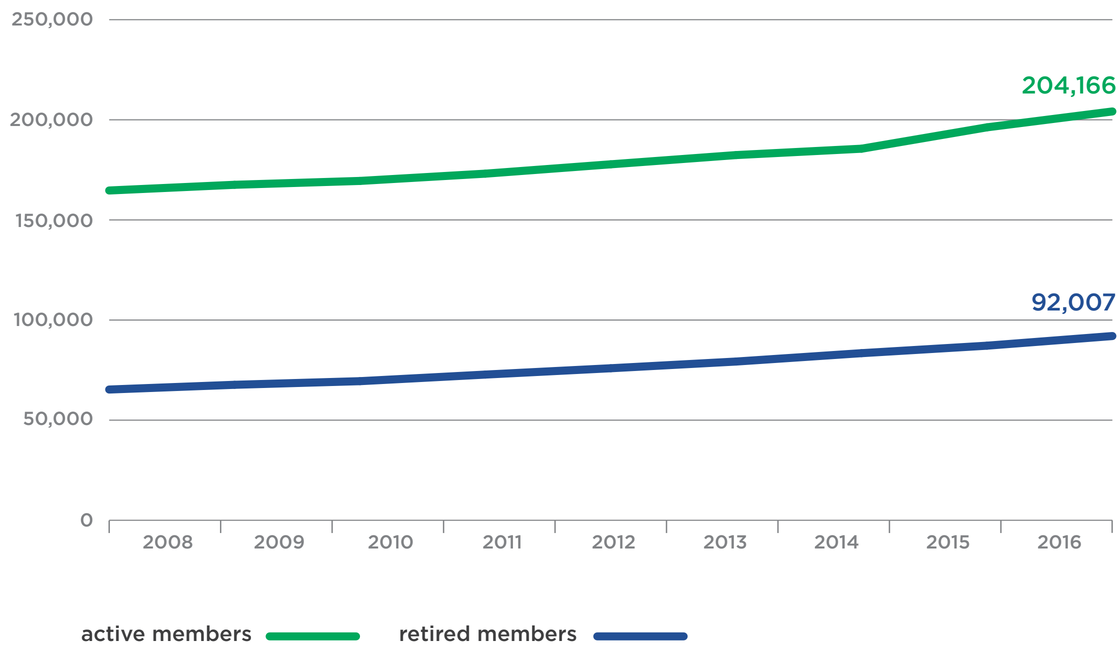

## ACTIVE MEMBERS BY AGE




# $24,600

**AVERAGE NEW UNREDUCED ANNUAL PENSION**

## Active and Retired Membership Growth




By the end of 2016, total Plan membership exceeded 321,000 members, including more than 92,000 retired members and 25,000 deferred members. On average, our new members are 34 years old when they join the Plan, and our retired members are age 61 when they choose to begin receiving their pension.

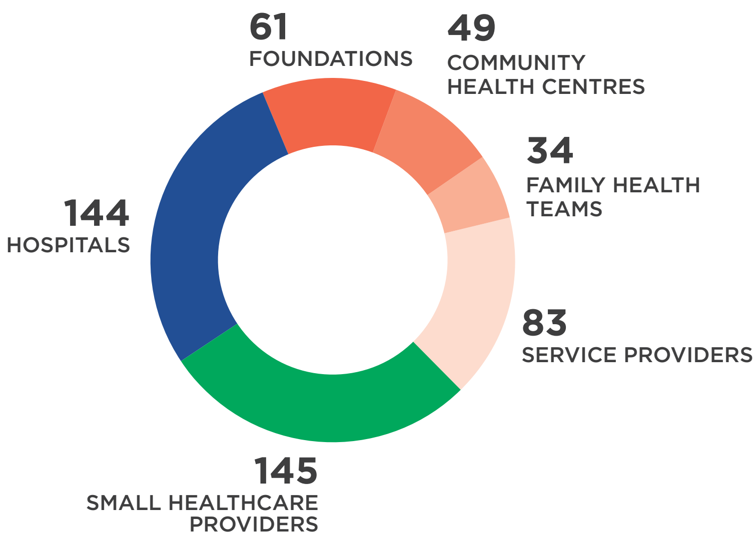
It has now been more than one year since HOOPP's Board made a significant decision to remove eligibility requirements for part-time and non-full-time employees. Now, with their employer's approval, these workers have the option to join the Plan as soon as they begin working. Of our active members, approximately 32% work part-time.

Our membership is diverse and reflects the ongoing evolution of healthcare in Ontario. It includes registered nurses, registered practical nurses, home care workers, dieticians, geriatric specialists, physical therapists and medical technicians. It also includes employees who work in food services and housekeeping services and administrative staff. While about half of our current members work at hospitals, our membership also includes an increasing number of employees who work at Local Health Integration Networks (LHINs) and family health teams, as well as service providers for the healthcare industry.

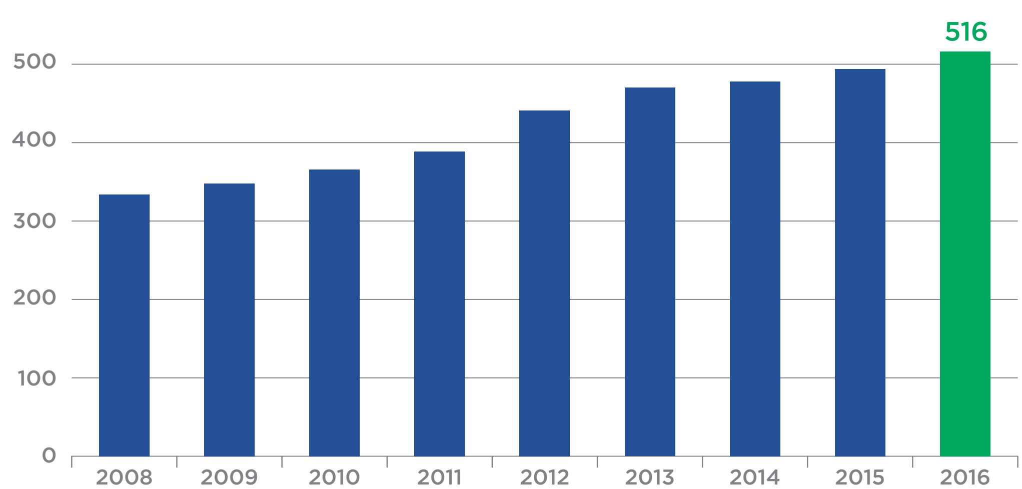
### Our Employers

There are 516 employers across the province that offer the HOOPP Plan to their employees. They include hospitals and hospital foundations, small healthcare providers, community health centres, and family health teams and service providers. We are proud to have employers in every corner of the province, from Kenora in the west to Cornwall in the east, and from Windsor in the south to Moosonee in the north.

## Employer Breakdown




## Total HOOPP Employers



Our employers play a vital role in the administration of our Plan. They remit contributions, provide service data and help educate their employees about their pension. We appreciate this ongoing dedication and commitment, and we make it a priority to provide support. In 2016, HOOPP provided 2,200 employer contacts with education about the Plan.

There are a small number of healthcare providers that are not currently part of the Plan but are interested in joining; HOOPP continues to work with them.

## Looking Ahead

As we continue to grow our Plan and our membership, our commitment to deliver excellent service also grows stronger. We look forward to the rollout of upgrades to our pension administration system, and we will communicate regular updates to our members and employers as this project continues.

We make these improvements in our systems and technology knowing that our members and employers will be able to rely on their pensions and the Plan for many decades to come. With confidence, we are investing in our future.

# Plan Governance

## 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 sole function and focus, from the authority it derives from the ADT, is the administration of the HOOPP Plan and the management and investment of the assets of the HOOPP Fund.

The Board is made up of 16 individual Trustees. Eight Trustees are appointed by the OHA and the other eight by the four Settlor Unions, each nominating two Trustees. Authority for the day-to-day administration of the Plan and management of the Fund is delegated by the Board to a Plan Manager, who holds the title "President & Chief Executive Officer" (CEO).

## Standing Committees

The work of the HOOPP Board is supported by its four standing committees:

- the Asset-Liability Management Committee;
- the Audit & Finance Committee;
- the Governance & HR Committee, and
- the Plan Committee.

For each of these Committees and for the Board itself, there are documented mandates along with documented descriptions of the roles and responsibilities of the Board Chair and Vice Chair and of the four Committee Chairs. Processes and protocols have also been established and are maintained 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

The Board's delegation of management authority to the CEO, made in accordance with the ADT, is clearly documented and regularly reviewed. In turn, HOOPP's President & CEO also clearly documents and regularly reviews further delegations of authority to designated HOOPP employees covering significant day-to-day operations: the investment of Fund assets, the procurement of goods and services, the making of payments including electronic funds transfers and the accessing of critical HOOPP data and IT systems.

HOOPP also negotiates written agreements with its agents, advisors and other service providers to clearly document in each case the service providers' roles, responsibilities and accountabilities in relation to HOOPP in addition to the applicable business terms. Examples of 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 necessarily involves a dedication to the principle of continuous improvement. This dedication is particularly important in relation to organizational change management. As the HOOPP organization undergoes change (for example, when new technology is adopted), good governance requires periodic reviews of the organization's structures, mandates, policy documents and its practices and procedures to test whether they are still appropriate or whether they too should be changed. HOOPP's Board and management both follow such periodic review processes.

## Risk Management

HOOPP has a number of risks it must manage well to achieve its objectives. However, as a defined benefit (DB) pension plan with a mission to deliver on the pension promise for its members, the paramount risk HOOPP must manage is "funding risk": the risk that Fund asset growth will be insufficient to cover Plan liabilities, resulting in unfunded liabilities. A failure to manage this risk well could prevent HOOPP from paying its promised pension benefits to its beneficiaries.

The other risks HOOPP must manage, while not of the same magnitude as funding risk, are considered very important nonetheless. These other risks fall into the category of either entity-level risks or operational risks. The entity-level risks which HOOPP faces are identified, assessed and managed as part of the organization's enterprise risk management (ERM) framework which, among other things, identifies the roles and responsibilities for risk identification, mitigation, reporting and oversight. An overall assessment of entity-level risks is undertaken and the results are documented annually. The annual assessment report is presented to the Audit & Finance Committee and made available for Board members. The report is also shared with certain HOOPP staff involved in risk management.

The management of operational risks is also considered very important. Members of HOOPP's senior management promote a risk-conscious culture throughout the organization.

HOOPP's governance and risk management programs and processes continue to include:

- programs and processes for managing the recruitment, retention, performance and development of HOOPP employees, its 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;
- an efficient and effective board and committee reporting and decision-making process;
- robust "stress testing" tools custom designed and maintained 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, 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 to management and the Audit & Finance Committee independent assurance 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;
- 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 CEO and its Senior Vice-President and Chief Financial Officer (CFO) 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 its ICFR is properly designed and operating effectively to provide reasonable assurance regarding the reliability of financial reporting as at December 31, 2016.

# 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 were prepared in accordance with Canadian generally accepted accounting principles (GAAP) and 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 7, 2017

# Actuaries' Opinion

Towers Watson Canada Inc. (Towers Watson) was retained by the Board of Trustees of the Healthcare of Ontario Pension Plan to perform an actuarial valuation of the Plan as at December 31, 2016. The purpose of this valuation is to determine pension obligations of the Plan as at December 31, 2016, 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.

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 $54,461 million in respect of service accrued to December 31, 2016 and a smoothed value of net assets of $66,421 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, 2016 and members' pay data provided as at December 31, 2015, all of which was projected to December 31, 2016, using management's estimates of experience for the intervening periods;
- the benefits specified by the terms of the Plan including the 100% of 2016 CPI adjustment (1.50%) which will become effective April 1, 2017 in respect of all pensioners' and deferred vested members' benefits and the expected ad hoc inflation protection intended to be granted on April 1, 2018 (75% of increase in CPI) which the Board approved in 2012; 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 Towers Watson 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, 2015, 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.

**Towers Watson Canada Inc.**

| | |
|---|---|
| Ian Markham | Laura Newman |
| **Ian Markham** | **Laura Newman** |
| Fellow, Canadian Institute of Actuaries | Fellow, Canadian Institute of Actuaries |

March 7, 2017

# Independent Auditor's Report

## To the Board of Trustees of Healthcare of Ontario Pension Plan (HOOPP)

We have audited the accompanying financial statements of HOOPP, which comprise the statements of financial position as at December 31, 2016 and 2015 and the statements of changes in net assets available for benefits and changes in pension obligations for the years then ended, and the related notes, which comprise a summary of significant accounting policies and other explanatory information.

## Management's Responsibility for the Financial Statements

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

## Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

## Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of HOOPP as at December 31, 2016 and 2015 and the changes in its net assets available for benefits and changes in its pension obligations for the years then ended in accordance with Canadian accounting standards for pension plans.

PricewaterhouseCoopers LLP

**Chartered Professional Accountants, Licensed Public Accountants**

Toronto, Ontario
March 7, 2017

# Statements of Financial Position

| As at December 31 ($ millions) | 2016 | 2015 |
|---|---|---|
| **NET ASSETS AVAILABLE FOR BENEFITS** | | |
| **Assets** | | |
| Investment assets (note 2) | **$ 163,789** | $ 147,336 |
| Contributions receivable | | |
| Employers | **95** | 87 |
| Members | **76** | 69 |
| Other assets (note 7) | **205** | 165 |
| ***Total assets*** | **164,165** | 147,657 |
| **Liabilities** | | |
| Investment liabilities (note 2) | **93,661** | 83,616 |
| Other liabilities | **145** | 117 |
| ***Total liabilities*** | **93,806** | 83,733 |
| **Net assets available for benefits** | **70,359** | 63,924 |
| **Pension obligations** (note 11) | **54,461** | 49,151 |
| **Surplus** (note 11) | **$ 15,898** | $ 14,773 |

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

## ON BEHALF OF THE BOARD OF TRUSTEES

**Helen Fetterly**
Chair of the Board

**Bryce Walker**
Vice Chair of the Board

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

# Statements of Changes in Net Assets Available for Benefits

| Year ended December 31<br>($ millions) | 2016 | 2015 |
|---|---|---|
| **Net assets available for benefits, beginning of year** | **$ 63,924** | $ 60,848 |
| **Investment operations** | | |
| Net interest and dividend income (note 4a) | **5,960** | 5,385 |
| Net gain (loss) on investments (note 4a) | **619** | (2,282) |
| Operating expenses - investment (note 10) | **(134)** | (126) |
| ***Total investment operations*** | **6,445** | 2,977 |
| **Plan operations** | | |
| Contributions (note 8) | | |
| Employers | **1,173** | 1,108 |
| Members | **1,022** | 991 |
| Benefit payments (note 9) | **(2,023)** | (1,835) |
| Refunds and transfers (note 9) | **(104)** | (90) |
| Operating expenses - plan (note 10) | **(78)** | (75) |
| ***Total plan operations*** | **(10)** | 99 |
| **Change in net assets available for benefits** | **6,435** | 3,076 |
| **Net assets available for benefits, end of year** | **$ 70,359** | $ 63,924 |

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

# Statements of Changes in Pension Obligations

| Year ended December 31<br>($ millions) | 2016 | 2015 |
|---|---|---|
| **Pension obligations, beginning of year** | **$ 49,151** | $ 46,923 |
| **Changes in pension obligations** | | |
| Interest accrued on benefits | **2,775** | 2,746 |
| Benefits accrued | **2,047** | 1,947 |
| Amendments to the plan (note 11) | **108** | 115 |
| Changes in actuarial assumptions (note 11) | **2,509** | (134) |
| Estimated experience gains (note 11) | **(2)** | (521) |
| Benefits paid (note 9) | **(2,127)** | (1,925) |
| ***Total changes in pension obligations*** | **5,310** | 2,228 |
| **Pension obligations, end of year** | **$ 54,461** | $ 49,151 |

*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 three-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. An early retirement transition benefit, which provides an additional supplement payable until age 65, is also available to retiring members who met certain eligibility requirements by the end of 2005.

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.

## 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, a disabled member may elect to continue to accrue service at no cost until age 65 or until they have accrued 35 years of contributory service, whichever occurs first.

## 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. Funds 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, prepared in accordance with accounting standards for pension plans and compliant with the requirements of Part IV of the CPA Canada Handbook, 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 (referred to herein as "Canadian GAAP").

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.

Certain comparative amounts have been reclassified to conform to the current year's presentation. 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, all of which mature within 90 days, 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 investments are valued using quoted market prices, or through the use of other appropriate valuation techniques. 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).

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.

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) Recognition

### Net Investment Income (loss)

Net investment income (loss) generally consists of net interest and 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, which includes net real estate operating income, is recognized on an accrual basis and net dividend income is recognized on the ex-dividend date. 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. Realized gains and losses on investments are recognized upon disposition and are calculated based on average cost.

### 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 methods 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 accruals not paid are reflected in the pension obligations.

## Fixed Assets

Fixed 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 CPA Canada Handbook, Section 3840, Related Party Transactions. 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 5.94%.

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 repurchased 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 2016 or 2015.

Investments that are classified as Level 3 include investments in real estate, private equity and special situations, 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:

| | 2016 | | | | | |
|---|---|---|---|---|---|---|
| ($ millions) | Level 1 | Level 2 | Level 3 | No Level[1] | Total Fair Value | Total Cost |
| **INVESTMENT ASSETS** | | | | | | |
| **Cash** | $ 19 | $ - | $ - | $ - | **$ 19** | **$ 19** |
| **Fixed income** | | | | | | |
| Short-term securities | - | 6,214 | - | - | **6,214** | **6,214** |
| Bonds | | | | | | |
| Canadian | - | 96,036 | - | - | **96,036** | **91,903** |
| Non-Canadian | - | 11,548 | 863 | - | **12,411** | **11,527** |
| Commercial loans | | | | | | |
| Canadian | - | - | 648 | - | **648** | **647** |
| Non-Canadian | - | - | 163 | - | **163** | **162** |
| ***Total fixed income*** | - | 113,798 | 1,674 | - | **115,472** | **110,453** |
| **Securities purchased under resell agreements** (note 5) | - | 6,283 | - | - | **6,283** | **6,267** |
| **Public equity** | | | | | | |
| Canadian | 116 | - | 603 | - | **719** | **711** |
| Non-Canadian | 15,387 | - | - | - | **15,387** | **14,639** |
| ***Total public equity*** | 15,503 | - | 603 | - | **16,106** | **15,350** |
| **Equity-oriented** | | | | | | |
| Real estate | | | | | | |
| Canadian | - | - | 8,124 | - | **8,124** | **6,220** |
| Non-Canadian | - | - | 1,929 | - | **1,929** | **1,595** |
| Private equity and special situations | | | | | | |
| Canadian | - | - | 1,409 | - | **1,409** | **666** |
| Non-Canadian | - | - | 3,560 | - | **3,560** | **3,153** |
| ***Total equity-oriented*** | - | - | 15,022 | - | **15,022** | **11,634** |
| **Derivative instruments** (note 3) | 8 | 7,176 | 68 | - | **7,252** | **1,935** |
| **Investment receivables** | | | | | | |
| Cash collateral pledged (note 5) | 2,284 | - | - | - | **2,284** | **2,284** |
| Pending trades[1] | - | - | - | 311 | **311** | **310** |
| Accrued investment income[1] | - | - | - | 1,040 | **1,040** | **1,040** |
| ***Total investment receivables*** | 2,284 | - | - | 1,351 | **3,635** | **3,634** |
| **Total investment assets** | 17,814 | 127,257 | 17,367 | 1,351 | **163,789** | **149,292** |
| **INVESTMENT LIABILITIES** | | | | | | |
| **Equities sold short** (note 5) | (40,001) | - | - | - | **(40,001)** | **(35,280)** |
| **Bonds sold short** (note 5) | - | (9,620) | - | - | **(9,620)** | **(9,994)** |
| **Derivative instruments** (note 3) | (44) | (18,725) | (19) | - | **(18,788)** | **(7,619)** |
| **Securities sold under repurchase agreements** (note 5) | - | (22,386) | - | - | **(22,386)** | **(22,278)** |
| **Cash collateral received** (note 5) | (2,173) | - | - | - | **(2,173)** | **(2,173)** |
| **Pending trades**[1] | - | - | - | (550) | **(550)** | **(551)** |
| **Accrued investment liabilities**[1] | - | - | - | (143) | **(143)** | **(143)** |
| **Total investment liabilities** | (42,218) | (50,731) | (19) | (693) | **(93,661)** | **(78,038)** |
| **Net investments** | **$ (24,404)** | **$ 76,526** | **$ 17,348** | **$ 658** | **$ 70,128** | **$ 71,254** |

*[1] These are investment assets or investment liabilities for which a fair value hierarchy classification is not required.*

| ($ millions) | Level 1 | Level 2 | Level 3 | No Level[1] | Total Fair Value | Total Cost |
|---|---|---|---|---|---|---|
| | | | **2015** | | | |
| **INVESTMENT ASSETS** | | | | | | |
| **Cash** | $ 57 | $ - | $ - | $ - | $ 57 | $ 57 |
| **Fixed income** | | | | | | |
| Short-term securities | - | 357 | - | - | 357 | 357 |
| Bonds | | | | | | |
| Canadian | - | 103,675 | - | - | 103,675 | 96,515 |
| Non-Canadian | - | 10,669 | 1,229 | - | 11,898 | 10,493 |
| Commercial loans | | | | | | |
| Canadian | - | - | - | - | - | - |
| Non-Canadian | - | - | - | - | - | - |
| ***Total fixed income*** | - | 114,701 | 1,229 | - | 115,930 | 107,365 |
| **Securities purchased under resell agreements** (note 5) | - | 2,498 | - | - | 2,498 | 2,452 |
| **Public equity** | | | | | | |
| Canadian | 121 | - | 607 | - | 728 | 717 |
| Non-Canadian | 8,422 | - | - | - | 8,422 | 8,219 |
| ***Total public equity*** | 8,543 | - | 607 | - | 9,150 | 8,936 |
| **Equity-oriented** | | | | | | |
| Real estate | | | | | | |
| Canadian | - | - | 7,451 | - | 7,451 | 5,673 |
| Non-Canadian | - | - | 1,612 | - | 1,612 | 1,139 |
| Private equity and special situations | | | | | | |
| Canadian | - | - | 1,314 | - | 1,314 | 752 |
| Non-Canadian | - | - | 3,025 | - | 3,025 | 2,641 |
| ***Total equity-oriented*** | - | - | 13,402 | - | 13,402 | 10,205 |
| **Derivative instruments** (note 3) | - | 5,127 | 109 | - | 5,236 | 1,163 |
| **Investment receivables** | | | | | | |
| Cash collateral pledged (note 5) | - | - | - | - | - | - |
| Pending trades[1] | - | - | - | 80 | 80 | 60 |
| Accrued investment income[1] | - | - | - | 983 | 983 | 983 |
| ***Total investment receivables*** | - | - | - | 1,063 | 1,063 | 1,043 |
| **Total investment assets** | 8,600 | 122,326 | 15,347 | 1,063 | 147,336 | 131,221 |
| **INVESTMENT LIABILITIES** | | | | | | |
| **Equities sold short** (note 5) | (36,278) | - | - | - | (36,278) | (35,648) |
| **Bonds sold short** (note 5) | - | (2,130) | - | - | (2,130) | (1,907) |
| **Derivative instruments** (note 3) | (110) | (20,360) | (72) | - | (20,542) | (7,284) |
| **Securities sold under repurchase agreements** (note 5) | - | (21,520) | - | - | (21,520) | (21,219) |
| **Cash collateral received** (note 5) | (2,729) | - | - | - | (2,729) | (2,729) |
| **Pending trades**[1] | - | - | - | (299) | (299) | (299) |
| **Accrued investment liabilities**[1] | - | - | - | (118) | (118) | (118) |
| **Total investment liabilities** | (39,117) | (44,010) | (72) | (417) | (83,616) | (69,204) |
| **Net investments** | **$ (30,517)** | **$ 78,316** | **$ 15,275** | **$ 646** | **$ 63,720** | **$ 62,017** |

[1] *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. In accordance with Canadian GAAP, 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. 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:

| 2016 | | | | |
|---|---|---|---|---|
| | | Related Amounts Not Set Off in the Statements of Financial Position | | |
| ($ millions) | Gross Amounts of Financial Instruments Presented (note 2a) | Amounts Subject to an Enforceable Master Netting Arrangement or Similar Agreements[1] | Cash and Securities Collateral Pledged (Received)[2] | Net Amount |
| **Financial assets** | | | | |
| Securities purchased under resell agreements | $ 6,283 | $ (5,423) | $ (856) | $ 4 |
| Securities on loan[3] | 9,009 | - | (9,002) | 7 |
| Derivative instruments[4] | 7,310 | (5,971) | (1,290) | 49 |
| **Total financial assets** | **22,602** | **(11,394)** | **(11,148)** | **60** |
| **Financial liabilities** | | | | |
| Securities sold under repurchase agreements | (22,386) | 5,423 | 16,963 | - |
| Derivative instruments[4] | (18,828) | 5,971 | 12,620 | (237) |
| **Total financial liabilities** | **$ (41,214)** | **$ 11,394** | **$ 29,583** | **$ (237)** |

*[1] Refer to note 6 for additional information on master netting arrangements.*
*[2] Refer to note 5 for additional information on cash and securities collateral.*
*[3] These securities are included within fixed income and public equity investment assets in note 2a.*
*[4] Includes pending trade receivables and payables of $58 million and $40 million, respectively.*

| 2015 | | | | |
|---|---|---|---|---|
| | | Related Amounts Not Set Off in the Statements of Financial Position | | |
| ($ millions) | Gross Amounts of Financial Instruments Presented (note 2a) | Amounts Subject to an Enforceable Master Netting Arrangement or Similar Agreements[1] | Cash and Securities Collateral Pledged (Received)[2] | Net Amount |
| **Financial assets** | | | | |
| Securities purchased under resell agreements | $ 2,498 | $ (2,304) | $ (193) | $ 1 |
| Securities on loan[3] | 8,306 | - | (8,306) | - |
| Derivative instruments[4] | 5,264 | (4,487) | (763) | 14 |
| **Total financial assets** | **16,068** | **(6,791)** | **(9,262)** | **15** |
| **Financial liabilities** | | | | |
| Securities sold under repurchase agreements | (21,520) | 2,304 | 19,214 | (2) |
| Derivative instruments[4] | (20,569) | 4,487 | 15,664 | (418) |
| **Total financial liabilities** | **$ (42,089)** | **$ 6,791** | **$ 34,878** | **$ (420)** |

*[1] Refer to note 6 for additional information on master netting arrangements.*
*[2] Refer to note 5 for additional information on cash and securities collateral.*
*[3] These securities are included within fixed income and public equity investment assets in note 2a.*
*[4] Includes pending trade receivables and payables of $28 million and $27 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, 2016.

| ($ millions) | Fair Value Dec. 31, 2015 | Total Gains (Losses) Included in Net Income[1] | Purchases and Issues | Sales and Settlements | Transfers In[2] | Transfers Out[2] | Fair Value Dec. 31, 2016 |
|---|---|---|---|---|---|---|---|
| | | | 2016 | | | | |
| **Bonds** | | | | | | | |
| Non-Canadian | $ 1,229 | $ (39) | $ 2 | $ (329) | $ - | $ - | **$ 863** |
| **Equities** | | | | | | | |
| Canadian | 607 | (4) | - | - | - | - | **603** |
| **Commercial loans** | | | | | | | |
| Canadian | - | 1 | 647 | - | - | - | **648** |
| Non-Canadian | - | - | 163 | - | - | - | **163** |
| **Real estate**[3] | | | | | | | |
| Canadian | 7,451 | 336 | 435 | (98) | - | - | **8,124** |
| Non-Canadian | 1,612 | (94) | 511 | (100) | - | - | **1,929** |
| **Private equity and special situations** | | | | | | | |
| Canadian | 1,314 | 214 | 17 | (136) | - | - | **1,409** |
| Non-Canadian | 3,025 | 334 | 929 | (728) | - | - | **3,560** |
| **Assets from derivative instruments** | 109 | 37 | 53 | (131) | - | - | **68** |
| **Liabilities from derivative instruments** | (72) | (4) | (2) | 59 | - | - | **(19)** |
| **Total** | **$ 15,275** | **$ 781** | **$ 2,755** | **$ (1,463)** | **$ -** | **$ -** | **$ 17,348** |

[1] *For those investment assets and investment liabilities held at the end of the year, the total losses were $31 million.*
[2] *Transfers into and transfers out of Level 3 are assumed to occur at the end of the year.*
[3] *For real estate, additional mortgage debt borrowings of $236 million are netted in Purchases and Issues and mortgage debt repayments of $350 million are netted in Sales and Settlements.*

| ($ millions) | Fair Value Dec. 31, 2014 | Total Gains (Losses) Included in Net Income[1] | Purchases and Issues | Sales and Settlements | Transfers In[2] | Transfers Out[2] | Fair Value Dec. 31, 2015 |
|---|---|---|---|---|---|---|---|
| | | | 2015 | | | | |
| **Bonds** | | | | | | | |
| Non-Canadian | $ 516 | $ 135 | $ 583 | $ (5) | $ - | $ - | **$ 1,229** |
| **Equities** | | | | | | | |
| Canadian | - | 7 | 600 | - | - | - | **607** |
| **Commercial loans** | | | | | | | |
| Canadian | - | - | - | - | - | - | - |
| Non-Canadian | 30 | 2 | - | (32) | - | - | - |
| **Real estate**[3] | | | | | | | |
| Canadian | 6,922 | (26) | 520 | 35 | - | - | **7,451** |
| Non-Canadian | 795 | 296 | 438 | 83 | - | - | **1,612** |
| **Private equity and special situations** | | | | | | | |
| Canadian | 988 | 414 | 76 | (164) | - | - | **1,314** |
| Non-Canadian | 2,287 | 568 | 860 | (690) | - | - | **3,025** |
| **Assets from derivative instruments** | 140 | 29 | 78 | (138) | - | - | **109** |
| **Liabilities from derivative instruments** | (81) | (9) | (44) | 62 | - | - | **(72)** |
| **Total** | **$ 11,597** | **$ 1,416** | **$ 3,111** | **$ (849)** | **$ -** | **$ -** | **$ 15,275** |

[1] *For those investment assets and investment liabilities held at the end of the year, the total gains were $1,319 million.*
[2] *Transfers into and transfers out of Level 3 are assumed to occur at the end of the year.*
[3] *For real estate, additional mortgage debt borrowings of $395 million are netted in Purchases and Issues and mortgage debt repayments of $306 million are netted in Sales and Settlements.*

For individual direct investments included in Level 3, management's judgment is that changing one or more of the inputs to a reasonably possible alternative assumption would not change the fair value of the overall Plan significantly. For investments in private equity limited partnership funds, HOOPP has limited access to specific underlying investment information. As a result, HOOPP is not able to determine a change in the fair values derived from a reasonably possible alternative assumption.

### d. 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 $710 and $700 million respectively, as at December 31, 2016, are as follows:

| ($ millions) | Maturity Date | Coupon Rate % | Fair Value | Cost Value |
|---|---|---|---|---|
| **Fixed income** | | | | |
| Canadian federal bonds | 2019-2037 | 0.86-8.00 | $ 10,294 | $ 9,944 |
| United States treasury bonds | 2045 | 2.88-3.00 | 3,550 | 3,371 |
| Canadian provincial and municipal bonds | 2019-2045 | 3.45-11.00 | 13,706 | 13,491 |
| Canadian real return bonds | 2021-2047 | 0.75-4.55 *Plus CPI** | 11,683 | 10,574 |
| **Public Equity** | | | | |
| S&P 500 ETF trust | | | $ 2,319 | $ 2,194 |
| **Other** | | | | |
| Private Equity | | | $ 776 | $ 18 |

** CPI - Canadian Consumer Price Index*

## Note 3 – DERIVATIVE FINANCIAL INSTRUMENTS

Derivatives are financial instruments whose values change as a result of an 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.

| | 2016 | | |
|---|---|---|---|
| ($ millions) | Notional Value[1] | Fair Value[2] Assets | Liabilities |
| **Credit derivatives** | | | |
| Credit default swap options | $ 8,197 | $ 5 | $ (1) |
| Credit default swaps[3] | 17,320 | 68 | (98) |
| **Currency derivatives** | | | |
| Forwards | 6,190 | 33 | (10) |
| Options | 1,767 | 29 | (2) |
| Swaps | 11,376 | 190 | (2,092) |
| **Equity derivatives** | | | |
| Futures contracts | 8,193 | 7 | (42) |
| Options | 103,597 | 5,574 | (13,270) |
| Swaps | 76,357 | 958 | (414) |
| **Interest rate derivatives** | | | |
| Futures contracts | 2,068 | - | (2) |
| Options | 308 | - | - |
| Swaps | 33,757 | 362 | (2,855) |
| Swaptions | 24,973 | 26 | (2) |
| **Total** | **$ 294,103** | **$ 7,252** | **$ (18,788)** |

*[1] 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.*
*[2] 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.*
*[3] 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 $9,350 million and $13 million, respectively. These contracts mature between 2017 and 2023.*

| | 2015 | | |
|---|---|---|---|
| ($ millions) | Notional Value[1] | Fair Value[2] Assets | Liabilities |
| **Credit derivatives** | | | |
| Credit default swap options | $ 3,529 | $ 8 | $ (5) |
| Credit default swaps[3] | 23,792 | 125 | (157) |
| **Currency derivatives** | | | |
| Forwards | 8,232 | 51 | (32) |
| Options | 1,262 | 30 | (7) |
| Swaps | 16,937 | 487 | (4,240) |
| **Equity derivatives** | | | |
| Futures contracts | 13,435 | - | (109) |
| Options | 80,175 | 3,781 | (11,612) |
| Swaps | 58,459 | 282 | (679) |
| **Interest rate derivatives** | | | |
| Futures contracts | 828 | - | (1) |
| Options | 317 | - | - |
| Swaps | 35,326 | 430 | (3,695) |
| Swaptions | 20,624 | 42 | (5) |
| **Total** | **$ 262,916** | **$ 5,236** | **$ (20,542)** |

*[1] 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.*
*[2] 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.*
*[3] 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 $12,613 million and $49 million, respectively. These contracts mature between 2016 and 2023.*

## 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.

| 2016 | | | | |
|---|---|---|---|---|
| ($ millions) | Within 1 Year | 1 to 5 Years | Over 5 Years | Total |
| **Credit derivatives** | | | | |
| Credit default swap options | $ 8,197 | $ - | $ - | **$ 8,197** |
| Credit default swaps | 436 | 14,758 | 2,126 | **17,320** |
| **Currency derivatives** | | | | |
| Forwards | 6,190 | - | - | **6,190** |
| Options | 1,027 | 269 | 471 | **1,767** |
| Swaps | 3,355 | 7,743 | 278 | **11,376** |
| **Equity derivatives** | | | | |
| Futures contracts | 8,193 | - | - | **8,193** |
| Options | 46,473 | 54,660 | 2,464 | **103,597** |
| Swaps | 46,491 | 29,866 | - | **76,357** |
| **Interest rate derivatives** | | | | |
| Futures contracts | 2,068 | - | - | **2,068** |
| Options | - | - | 308 | **308** |
| Swaps | 8,760 | 18,889 | 6,108 | **33,757** |
| Swaptions | 23,629 | 538 | 806 | **24,973** |
| **Total** | **$ 154,819** | **$ 126,723** | **$ 12,561** | **$ 294,103** |

| 2015 | | | | |
|---|---|---|---|---|
| ($ millions) | Within 1 Year | 1 to 5 Years | Over 5 Years | Total |
| **Credit derivatives** | | | | |
| Credit default swap options | $ 3,529 | $ - | $ - | $ 3,529 |
| Credit default swaps | 2,171 | 17,227 | 4,394 | 23,792 |
| **Currency derivatives** | | | | |
| Forwards | 8,232 | - | - | 8,232 |
| Options | 277 | 847 | 138 | 1,262 |
| Swaps | 6,936 | 9,223 | 778 | 16,937 |
| **Equity derivatives** | | | | |
| Futures contracts | 13,435 | - | - | 13,435 |
| Options | 18,960 | 61,111 | 104 | 80,175 |
| Swaps | 31,536 | 26,923 | - | 58,459 |
| **Interest rate derivatives** | | | | |
| Futures contracts | 828 | - | - | 828 |
| Options | - | - | 317 | 317 |
| Swaps | 7,655 | 17,002 | 10,669 | 35,326 |
| Swaptions | 17,810 | 1,984 | 830 | 20,624 |
| **Total** | **$ 111,369** | **$ 134,317** | **$ 17,230** | **$ 262,916** |

# 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, reported based on investment assets and investment liabilities, is as follows:

| | 2016 | | |
|---|---|---|---|
| ($ millions) | Net Interest and Dividend Income[1][2] | Net Gain (Loss) on Investments[3] | Net Investment Income |
| **Cash and pending trades** | $ 21 | $ 101 | $ 122 |
| **Fixed income** | | | |
| Short-term securities | 27 | - | 27 |
| Net bonds | | | |
| Canadian | 3,091 | (1,759) | 1,332 |
| Non-Canadian | 332 | (90) | 242 |
| Commercial loans | | | |
| Canadian | 4 | 1 | 5 |
| Non-Canadian | 1 | - | 1 |
| ***Total fixed income*** | 3,455 | (1,848) | 1,607 |
| **Net repurchase agreements** | (106) | 164 | 58 |
| **Net public equity** | | | |
| Canadian | (900) | (5,422) | (6,322) |
| Non-Canadian | 3,053 | (4,770) | (1,717) |
| ***Total public equity*** | 2,153 | (10,192) | (8,039) |
| **Equity-oriented** | | | |
| Net real estate operating income | | | |
| Canadian | 383 | 336 | 719 |
| Non-Canadian | 50 | (94) | (44) |
| Private equity and special situations | | | |
| Canadian | 39 | 214 | 253 |
| Non-Canadian | (35) | 334 | 299 |
| ***Total equity-oriented*** | 437 | 790 | 1,227 |
| **Derivative instruments** | - | 11,622 | 11,622 |
| ***Total investment income*** | 5,960 | 637 | 6,597 |
| **Transaction costs** | - | (18) | (18) |
| **Net investment income** | **$ 5,960** | **$ 619** | **$ 6,579** |

*[1] Includes net operating income (loss) from investments in real estate and private equity.*
*[2] Includes management fees incurred on investments in real estate and private equity of $101 million.*
*[3] Includes realized gains from investments of $3,465 million and change in unrealized losses from investments of $2,828 million before allocating the effect of transaction costs.*

| ($ millions) | 2015<br>Net Interest and Dividend Income[1][2] | Net Gain (Loss) on Investments[3] | Net Investment Income |
|---|---|---|---|
| **Cash and pending trades** | $ (1) | $ (616) | $ (617) |
| **Fixed income** | | | |
| Short-term securities | 6 | - | 6 |
| Net bonds | | | |
| Canadian | 3,237 | 1,609 | 4,846 |
| Non-Canadian | 199 | 1,203 | 1,402 |
| Commercial loans | | | |
| Canadian | 1 | - | 1 |
| Non-Canadian | 1 | 2 | 3 |
| ***Total fixed income*** | 3,444 | 2,814 | 6,258 |
| **Net repurchase agreements** | (95) | (174) | (269) |
| **Net public equity** | | | |
| Canadian | (1,030) | 3,408 | 2,378 |
| Non-Canadian | 2,693 | (2,497) | 196 |
| ***Total public equity*** | 1,663 | 911 | 2,574 |
| **Equity-oriented** | | | |
| Net real estate operating income | | | |
| Canadian | 349 | (26) | 323 |
| Non-Canadian | 19 | 296 | 315 |
| Private equity and special situations | | | |
| Canadian | 26 | 414 | 440 |
| Non-Canadian | (20) | 536 | 516 |
| ***Total equity-oriented*** | 374 | 1,220 | 1,594 |
| **Derivative instruments** | - | (6,418) | (6,418) |
| ***Total investment income*** | 5,385 | (2,263) | 3,122 |
| **Transaction costs** | - | (19) | (19) |
| **Net investment income** | **$ 5,385** | **$ (2,282)** | **$ 3,103** |

*[1] Includes net operating income (loss) from investments in real estate and private equity.*
*[2] Includes management fees incurred on investments in real estate and private equity of $73 million.*
*[3] Includes realized gains from investments of $4,407 million and change in unrealized gains from investments of $2,144 million before allocating the effect of transaction costs.*

## b. Real estate income

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

| ($ millions) | 2016 | 2015 |
|---|---|---|
| Rental revenue | $ 871 | $ 779 |
| Property operating and other expenses | (390) | (362) |
| Operating income | 481 | 417 |
| Mortgage interest | (48) | (49) |
| **Net real estate operating income** | **$ 433** | **$ 368** |

## c. Net investment income based on investment strategies

The Plan's net investment income for the year ended December 31, reported based on the underlying investment strategies of HOOPP's portfolios, is as follows:

| | 2016 | | |
|---|---|---|---|
| ($ millions) | Net Interest and Dividend Income[1] | Net Gain (Loss) on Investments | Net Investment Income |
| **Liability hedge portfolio** | | | |
| Short term | $ 1,282 | $ (935) | $ 347 |
| Nominal bonds | | | |
| Mid-term bonds | 440 | (303) | 137 |
| Long-term bonds | 629 | (384) | 245 |
| Transition strategy | 321 | 68 | 389 |
| *Total nominal bonds* | 1,390 | (619) | 771 |
| Real return bonds | 131 | 407 | 538 |
| Real estate | 404 | 420 | 824 |
| ***Total liability hedge portfolio*** | 3,207 | (727) | 2,480 |
| **Return seeking portfolio** | | | |
| Public equities | | | |
| Canadian equities | 59 | 1,297 | 1,356 |
| United States equities | 40 | 536 | 576 |
| International equities | 1 | 387 | 388 |
| *Total public equities* | 100 | 2,220 | 2,320 |
| Private equities | 21 | 693 | 714 |
| Corporate credit | 162 | 55 | 217 |
| Long-term option strategy | 188 | (98) | 90 |
| Other return seeking strategies | | | |
| Asset allocation strategies | - | 103 | 103 |
| Absolute return strategies | 2,278 | (1,775) | 503 |
| Foreign exchange hedges | - | 140 | 140 |
| Other | 4 | 8 | 12 |
| *Total other return seeking portfolio* | 2,282 | (1,524) | 758 |
| ***Total return seeking portfolio*** | 2,753 | 1,346 | 4,099 |
| **Net investment income** | **$ 5,960** | **$ 619** | **$ 6,579** |

[1] *Includes net operating income (loss) from investments in real estate and private equity.*

| ($ millions) | 2015 Net Interest and Dividend Income[1] | Net Gain (Loss) on Investments | Net Investment Income |
|---|---|---|---|
| **Liability hedge portfolio** | | | |
| Short term | $ 1,339 | $ (1,506) | $ (167) |
| Nominal bonds | | | |
| Mid-term bonds | 420 | 12 | 432 |
| Long-term bonds | 594 | 70 | 664 |
| Transition strategy | 363 | (18) | 345 |
| *Total nominal bonds* | 1,377 | 64 | 1,441 |
| Real return bonds | 168 | (1) | 167 |
| Real estate | 341 | 132 | 473 |
| ***Total liability hedge portfolio*** | 3,225 | (1,311) | 1,914 |
| **Return seeking portfolio** | | | |
| Public equities | | | |
| Canadian equities | 59 | (538) | (479) |
| United States equities | 24 | 40 | 64 |
| International equities | 12 | 273 | 285 |
| *Total public equities* | 95 | (225) | (130) |
| Private equity | 6 | 608 | 614 |
| Corporate credit | 63 | (9) | 54 |
| Long-term option strategy | 198 | 136 | 334 |
| Other return seeking strategies | | | |
| Asset allocation strategies | - | 107 | 107 |
| Absolute return strategies | 1,793 | (1,605) | 188 |
| Foreign exchange hedges | - | 13 | 13 |
| Other | 5 | 4 | 9 |
| *Total other return seeking portfolio* | 1,798 | (1,481) | 317 |
| ***Total return seeking portfolio*** | 2,160 | (971) | 1,189 |
| **Net investment income** | **$ 5,385** | **$ (2,282)** | **$ 3,103** |

[1] *Includes net operating income (loss) from investments in real estate and private equity.*

# 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.

## 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, 2016, the fair value of total collateral rehypothecated by the Plan is $1,945 million (2015: $2,004 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:

| | 2016 | | |
|---|---|---|---|
| ($ millions) | Repurchase Agreements | Securities Lending/Borrowing and Other Transfers | Derivatives |
| Fair value/carrying amount of financial assets transferred out[1] | $ - | $ 17,341 | $ - |
| Fair value/carrying amount of collateral pledged[2] | 22,526 | 45,799 | 14,173 |
| Fair value/carrying amount of financial assets received[3] | - | (8,047) | - |
| Fair value/carrying amount of collateral received[4] | (6,224) | (4,267) | (1,613) |
| Fair value/carrying amount of associated receivables (note 2) | 6,283 | - | 7,252 |
| Fair value/carrying amount of associated liabilities[5] | (22,386) | (49,759) | (18,788) |
| **Net position** | **$ 199** | **$ 1,067** | **$ 1,024** |

*(1) Includes securities lent, both directly and through a third party, of $9,009 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 $8,332 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.*
*(2) Includes cash collateral pledged of $2,284 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.*
*(3) These securities have not been recognized on HOOPP's statements of financial position as the risks and rewards remain with the counterparty.*
*(4) Includes cash collateral received of $2,173 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.*
*(5) Includes $138 million of accrued investment liabilities relating to investments sold short. Amounts for repurchase agreements and derivatives are presented in note 2.*

| | 2015 | | |
|---|---|---|---|
| ($ millions) | Repurchase Agreements | Securities Lending/Borrowing and Other Transfers | Derivatives |
| Fair value/carrying amount of financial assets transferred out[1] | $ - | $ 13,633 | $ - |
| Fair value/carrying amount of collateral pledged[2] | 21,667 | 37,026 | 17,285 |
| Fair value/carrying amount of financial assets received[3] | - | (4,978) | - |
| Fair value/carrying amount of collateral received[4] | (2,582) | (5,835) | (873) |
| Fair value/carrying amount of associated receivables (note 2) | 2,498 | - | 5,236 |
| Fair value/carrying amount of associated liabilities[5] | (21,520) | (38,523) | (20,542) |
| **Net position** | **$ 63** | **$ 1,323** | **$ 1,106** |

*(1) Includes securities lent, both directly and through a third party, of $8,306 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 $5,327 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.*
*(2) 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.*
*(3) These securities have not been recognized on HOOPP's statements of financial position as the risks and rewards remain with the counterparty.*
*(4) Includes cash collateral received of $2,729 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.*
*(5) Includes $115 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 investment assets - which HOOPP manages and measures in concert. The risk that the imbalance between the net investment assets and pension obligations becomes a deficit is referred to as funding risk.

The Plan's net investment assets 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 assets 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 assets 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 assets 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 A*greement and Declaration of Trust*, and the *Plan Text*.

The Board provides a framework for the investment of Plan assets 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 team provides advice and recommendations to the Board about the investing of Plan assets 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 team, 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 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.

The Board's Asset Liability Management Committee oversees the management and investment of the Plan's assets 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.

## Funding Risk

The primary risk that HOOPP faces is funding risk - the risk that the Plan's investment asset 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 investment assets or pension obligations, which may result in a mismatch between the Plan's assets 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, 2016, the Plan had a surplus for financial statement purposes of $15,898 million (2015: $14,773 million) based on the difference between the market value of net assets available for benefits and the pension obligations. On a regulatory filing basis at December 31, 2016, the Plan had a regulatory filing surplus of $11,960 million, compared to $10,847 million as at December 31, 2015 (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 period ended December 31, 2015. 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 (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 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.

| | 2016 | | | | |
|---|---|---|---|---|---|
| ($ millions) | Within 1 Year | 1 to 5 Years | 5 to 10 Years | Over 10 Years | Total |
| **Short-term securities** | $ 6,214 | $ - | $ - | $ - | **$ 6,214** |
| **Public equities - preferred shares** | - | 603 | - | - | **603** |
| **Canadian bonds**(1)(2) | | | | | |
| Federal bonds | 14,718 | 4,060 | (1,627) | 4,193 | **21,344** |
| Provincial and municipal bonds | 2,009 | 21,037 | 11,270 | 16,048 | **50,364** |
| Real return bonds | - | 992 | 1,496 | 8,117 | **10,605** |
| Corporate bonds | 6,438 | 285 | 282 | 115 | **7,120** |
| **Non-Canadian bonds**(1)(2) | 3,044 | 547 | 413 | 6,052 | **10,056** |
| **Canadian commercial loans**(3) | 161 | 490 | - | - | **651** |
| **Non-Canadian commercial loans**(3) | - | 164 | - | - | **164** |
| **Derivative instruments** | (13,551) | (33,475) | (6,012) | 223 | **(52,815)** |
| **Repurchase agreements** | (16,103) | - | - | - | **(16,103)** |
| **Total** | **$ 2,930** | **$ (5,297)** | **$ 5,822** | **$ 34,748** | **$ 38,203** |

*(1) Net of Canadian bonds sold short of $7,207 million and non-Canadian bonds sold short of $2,412 million.*
*(2) Includes accrued interest of $604 million on Canadian bonds and $57 million on non-Canadian bonds.*
*(3) Includes accrued interest of $3 million on Canadian commercial loans and $1 million on non-Canadian commercial loans.*

| | 2015 | | | | |
|---|---|---|---|---|---|
| ($ millions) | Within 1 Year | 1 to 5 Years | 5 to 10 Years | Over 10 Years | Total |
| **Short-term securities** | $ 357 | $ - | $ - | $ - | $ 357 |
| **Public equities - preferred shares** | - | 607 | - | - | 607 |
| **Canadian bonds**(1)(2) | | | | | |
| Federal bonds | 17,016 | 4,507 | 2,456 | 8,292 | 32,271 |
| Provincial and municipal bonds | 4,737 | 16,820 | 17,889 | 15,814 | 55,260 |
| Real return bonds | - | - | 781 | 6,938 | 7,719 |
| Corporate bonds | 4,982 | 2,442 | 247 | 263 | 7,934 |
| **Non-Canadian bonds**(1)(2) | 3,865 | 837 | 333 | 5,971 | 11,006 |
| **Canadian commercial loans** | - | - | - | - | - |
| **Non-Canadian commercial loans** | - | - | - | - | - |
| **Derivative instruments** | (11,548) | (28,389) | (12,614) | 224 | (52,327) |
| **Repurchase agreements** | (19,022) | - | - | - | (19,022) |
| **Total** | **$ 387** | **$ (3,176)** | **$ 9,092** | **$ 37,502** | **$ 43,805** |

*(1) Net of Canadian bonds sold short of $1,167 million and non-Canadian bonds sold short of $963 million.*
*(2) Includes accrued interest of $676 million on Canadian bonds and $71 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, 2016, a 1% increase/decrease in interest rates would have decreased/increased the Plan's net assets available for benefits by $6,072 million (2015: $6,650 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 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 obligation. 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.

| | 2016 | | | 2015 | | |
|---|---|---|---|---|---|---|
| ($ millions) | Local Currency | Canadian Dollar Equivalent | Impact of +/- 5% Change | Local Currency | Canadian Dollar Equivalent | Impact of +/- 5% Change |
| Japanese Yen | **165,494** | **1,902** | **95/(95)** | - | - | - |
| Euros | **1,056** | **1,494** | **75/(75)** | (37) | (60) | (3)/3 |
| United States Dollars | **(1,995)** | **(2,682)** | **(134)/134** | 33 | 46 | 2/(2) |
| British Pounds | **(63)** | **(104)** | **(5)/5** | 27 | 54 | 3/(3) |

*Risk measurement*

The exposures to foreign currency are measured daily and reported on a monthly basis 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, 2016, 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 $6.1 million (2015: decrease/increase of approximately $0.4 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 $2,249 million (2015: $687 million) through its investments in an index that is proprietary to another financial institution and through dividend derivatives. The 1% increase/decrease in the index and dividends would have resulted in an increase/decrease in the Plan's net assets available for benefits of $22 million (2015: $7 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.

| | 2016 | | | |
|---|---|---|---|---|
| ($ millions) | Effective Equity Exposure | % of Net Assets Available for Benefits | Benchmark | Impact of a 10% Increase/ (Decrease) |
| **Canadian** | $ 6,924 | 9.9% | S&P/TSX 60 Total Return Index | 696/(696) |
| **United States** | | | | |
| Equity | 7,359 | | S&P 500 Total Return Index | 736/(736) |
| Long option strategy | (621) | | S&P 500 Futures with 10-Year Options | 66/312 |
| | 6,738 | 9.6% | | 802/(424) |
| **International** | 6,255 | 8.9% | Blend of International Indices[1] | 626/(626) |
| | **$ 19,957** | | | **2,124/(1,746)** |

*[1] 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.*

| 2015 | | | | |
|---|---|---|---|---|
| ($ millions) | Effective Equity Exposure | % of Net Assets Available for Benefits | Benchmark | Impact of a 10% Increase/ (Decrease) |
| **Canadian** | $ 6,611 | 10.4% | S&P/TSX 60 Total Return Index | 661/(661) |
| **United States** | | | | |
| Equity | 5,014 | | S&P 500 Total Return Index | 501/(501) |
| Long option strategy | (1,136) | | S&P 500 Futures with 10-Year Options | 104/298 |
| | 3,878 | 6.1% | | 605/(203) |
| **International** | 5,436 | 8.5% | Blend of International Indices[1] | 544/(544) |
| | **$ 15,925** | | | **1,810/(1,408)** |

*[1] 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, 2016, a 1% increase/decrease in equity markets would have resulted in an increase/decrease in the Plan's net assets available for benefits of $200 million (2015: $159 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 lending program, 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:

| | 2016 | | 2015 | |
|---|---|---|---|---|
| ($ millions) | Total Credit Exposure | % of Total | Total Credit Exposure | % of Total |
| **Sovereign securities AAA**[1] | $ 23,428 | 20.0% | $ 31,243 | 23.1% |
| **Fixed income instruments** | | | | |
| AAA | 19,315 | 16.5% | 20,375 | 15.1% |
| AA | 10,985 | 9.4% | 12,627 | 9.3% |
| A | 47,872 | 41.0% | 47,456 | 35.1% |
| BBB | 1,833 | 1.6% | 1,734 | 1.3% |
| BB or below | 1,632 | 1.4% | 915 | 0.7% |
| **Credit derivatives** | 4,451 | 3.8% | 13,191 | 9.8% |
| **Counterparty credit risk exposure** | | | | |
| Derivatives | 1,338 | 1.1% | 777 | 0.6% |
| Repurchase agreements | 1,055 | 0.9% | 258 | 0.2% |
| Securities lending program | 4,978 | 4.3% | 6,539 | 4.8% |
| **Maximum credit risk exposure** | **116,887** | **100%** | **135,115** | **100%** |
| Credit risk protection (credit derivatives) | (4,299) | | (10,797) | |
| Collateral received | (4,323) | | (5,249) | |
| **Total** | **$ 108,265** | | **$ 119,069** | |

[1] *As at December 31, 2016, includes securities issued by the governments of Canada, Germany, and the United States (2015: 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 also 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 fixed income investments and securities which can be easily converted to cash, and through the use of investment income and contributions received, to meet liquidity requirements. 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:

| ($ millions) | 2016 | 2015 |
|---|---|---|
| Liquid fixed income investments and securities[1] | **$ 86,080** | $ 99,446 |
| Less: net liquid fixed income investments and securities transferred[2] | **(65,499)** | (69,296) |
| **Fixed income investments and securities available for liquidity needs** | **$ 20,581** | **$ 30,150** |

*[1] Sovereign bonds of Canada, USA, Germany, France, and the UK, bonds issued by provinces of Canada, Canadian mortgage bonds, and supranational bonds.*

*[2] Securities purchased under resell agreements and securities sold under repurchase agreements, bonds lent and borrowed, collateral pledged and received.*

## Note 7 – OTHER ASSETS

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

| ($ millions) | 2016 | 2015 |
|---|---|---|
| Refundable withholding tax on contributions | $ 141 | $ 140 |
| Fixed assets | 52 | 19 |
| Other | 12 | 6 |
| **Total** | **$ 205** | **$ 165** |

## 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 overpayments are refunded.

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

| ($ millions) | 2016 | 2015 |
|---|---|---|
| **Employers** | | |
| Current service contributions | $ 1,173 | $ 1,108 |
| **Members** | | |
| Current service contributions | 931 | 879 |
| Past service contributions from members | 39 | 32 |
| Transfers from other plans | 52 | 80 |
| | 1,022 | 991 |
| **Total** | **$ 2,195** | **$ 2,099** |

## Note 9 – BENEFITS

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

| ($ millions) | 2016 | 2015 |
|---|---|---|
| **Benefit payments** | | |
| Retirement pension and bridge benefits[1] | $ 1,678 | $ 1,544 |
| Commuted value transfers and death benefits | 345 | 291 |
| | 2,023 | 1,835 |
| **Refunds and transfers** | | |
| Refunds | 77 | 57 |
| Transfers to other plans | 27 | 33 |
| | 104 | 90 |
| **Total** | **$ 2,127** | **$ 1,925** |

[1] *Includes disability payments of $81 million (2015: $81 million)*

## Note 10 – OPERATING EXPENSES

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

| ($ millions) | 2016 | 2015 |
|---|---|---|
| **Investment**[1] | | |
| Administration | **$ 125** | $ 118 |
| Legal, actuarial and other professional fees[2] | **6** | 6 |
| Custodial | **3** | 2 |
| | **134** | 126 |
| **Plan**[1] | | |
| Administration | **71** | 69 |
| Legal, actuarial and other professional fees[2] | **7** | 6 |
| | **78** | 75 |
| **Total** | **$ 212** | **$ 201** |

*[1] 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.*

*[2] Includes amounts paid or payable to the auditors pertaining to statutory audit services of $1,061,300 (2015: $936,100), and non-audit services of $328,750 (2015: $116,200). Also includes amounts paid or payable to the actuary pertaining to actuarial services of $460,000 (2015: $634,800).*

## 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, 2016 actuarial valuation, the Board approved a decrease to the discount rate as indicated below.

To determine the pension obligations as at December 31, 2016, and December 31, 2015, 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:

| | 2016[3] | 2015[3] |
|---|---|---|
| December 31 | | |
| Discount rate[1] | **5.45%** | 5.65% |
| Rate of price inflation | **2.00%** | 2.00% |
| Real discount rate | **3.45%** | 3.65% |
| Salary escalation rate[2] | **3.50%** | 3.50% |

(1) *Net of allowance for investment expenses of 0.25% (2015: 0.25%).*

(2) *For 2016, a two-tiered rate of 3.20% per annum for the first two years following the valuation date and 3.50% thereafter is assumed (2015: two-tiered rate of 3.20% per annum for the first three years following the valuation date and 3.50% thereafter was assumed).*

(3) *Impact from change to the discount rate was an actuarial loss of $1,509 million (2015: Net impact from changes to the discount rate, rate of price inflation, salary escalation rate and all other assumption changes resulted in an actuarial gain of $134 million) .*

The pension obligations as of December 31, 2016 includes the additional liabilities of $1,000 million assuming future commuted value (CV) calculations will reflect full inflation protection for all service. This level of indexation is higher than the minimum guaranteed inflation protection under HOOPP's plan provisions. The CV calculations and the degree of inflation protection provided reflects current administrative practice although HOOPP may elect to change this practice in future. The total impact of assumption changes for 2016 (discount rate and assumed inflation protection reflected in CVs) results in an actuarial loss of $2,509 million.

## Actuarial Methodology for Financial Reporting

For the determination of the actuarial present value of the pension obligations as at December 31, 2016, an actuarial valuation was conducted by Towers Watson Canada Inc. 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, 2016 and members' pay data provided as at December 31, 2015, all of which were projected to December 31, 2016 using management's estimates of experience for the intervening periods. The pensionable earnings estimates were determined based on 2015 experience and estimate assumptions.

Using this method and data, the pension obligations (or going concern actuarial pension obligations) as at December 31, 2016, were $54,461 million (2015: $49,151 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 2016, there was an estimated experience gain of $2 million (2015: gain of $521 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 2015, the Board confirmed 100% of the 2015 CPI increase as an ad hoc increase effective April 1, 2016. As at December 31, 2015, the additional impact to the pension obligations for this ad hoc inflation protection adjustment is $115 million. During 2016, the Board confirmed 100% of the 2016 CPI increase as an ad hoc increase effective April 1, 2017. As at December 31, 2016, the additional impact to the pension obligations for this ad hoc inflation protection adjustment is $108 million. Also included in the pension obligations is the ad hoc CPI inflation increase at 75% of CPI, intended to be granted effective April 1, 2018, which the Board approved in 2012.

## Surplus

According to CPA Canada Handbook Section 4600, Pension Plans, 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, 2016, was $15,898 million (2015: $14,773 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. This is a common actuarial practice for long-term valuations filed with the regulators and has the effect of stabilizing the contribution rates of the Plan during periods of short-term market volatility. The regulatory filing surplus on December 31, 2016, was $11,960 million (2015: $10,847 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 $3,938 million at December 31, 2016 (2015: $3,926 million).

A reconciliation of the surplus is presented in the table below:

| ($ millions) | 2016 | 2015 |
|---|---|---|
| Surplus for financial statement purposes | **$ 15,898** | $ 14,773 |
| Regulatory filing surplus | **11,960** | 10,847 |
| **Difference** | **$ 3,938** | $ 3,926 |

## 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. prepared the last actuarial valuation for regulatory filing purposes, as at December 31, 2015, and a copy of that valuation was filed with FSCO and CRA. The effective date of the next required valuation is December 31, 2018.

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.

The external actuary, in consultation with management, recommended the actuarial assumptions to be used for the regulatory filing valuation. The economic assumptions used for the December 31, 2015 regulatory filing valuation were as follows:

| Economic Assumptions | Rates |
|---|---|
| Discount rate(1) | **5.65%** |
| Rate of price inflation | **2.00%** |
| Real discount rate | **3.65%** |
| Salary escalation rate(2) | **3.50%** |

*(1) Net of allowance for investment expenses of 0.25%*

*(2) A two-tiered rate of 3.20% per annum for the first three years following the valuation date and 3.50% thereafter is assumed.*

The most recent regulatory filing valuation conducted as at December 31, 2015, disclosed a smoothed value of net assets of $59,998 million with accrued going concern pension obligations of $49,151 million, resulting in a going concern surplus of $10,847 million. In accordance with Regulation 1.3.1 (3) of the PBA, the solvency deficiency at December 31, 2015, 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, 2016 was $287 million (2015: $294 million).

## Note 14 – RELATED PARTY TRANSACTIONS – LEASE COMMITMENT

As at December 31, 2016, a wholly-owned subsidiary of the Plan held a significant ownership interest in a commercial office building. The Plan's commitment to the construction of this office building is included in the commitments to invest in real estate investments in note 15.

The Plan entered into a lease agreement to become a tenant at this office building. The term of the lease is for 15 years with two renewal options, each for 5 years. Rental payments commenced in 2016, as construction of the office building was complete. The future minimum lease payments by year, and in aggregate, are as follows:

| ($ millions) | Minimum Lease Payments |
|---|---|
| 2017 | **$ 5** |
| 2018 | **6** |
| 2019 | **6** |
| 2020 | **6** |
| 2021 | **6** |
| Thereafter | **96** |
| **Total mininum lease payments** | **$ 125** |

## 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, 2016, these commitments totalled $1,889 million related to real estate investments and $4,748 million related to private equity investments (2015: $2,305 million and $3,496 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 entered into 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, 2016, the amount recorded as a liability for claims under these arrangements was $nil (2015: $nil).

### Contingencies

As at December 31, 2016, the Plan was involved in defending against certain 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.

# Ten Year Review

**(unaudited)**
For the year ended December 31

| ($ millions) | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 |
|---|---|---|---|---|---|---|---|---|---|---|
| **CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS** | | | | | | | | | | |
| **Net assets available for benefits, beginning of year** | **$ 63,924** | $ 60,848 | $ 51,626 | $ 47,414 | $ 40,321 | $ 35,717 | $ 31,116 | $ 26,732 | $ 30,002 | $ 27,914 |
| Net investment income (loss) | **6,579** | 3,103 | 9,105 | 4,046 | 6,857 | 4,327 | 4,245 | 4,040 | (3,591) | 1,748 |
| Contributions | | | | | | | | | | |
| Employers | **1,173** | 1,108 | 1,075 | 1,033 | 1,003 | 954 | 921 | 890 | 840 | 782 |
| Members | **1,022** | 991 | 929 | 880 | 860 | 797 | 793 | 744 | 713 | 737 |
| Benefit payments | **(2,127)** | (1,925) | (1,702) | (1,587) | (1,486) | (1,335) | (1,229) | (1,159) | (1,143) | (1,079) |
| Operating expenses | **(212)** | (201) | (185) | (160) | (141) | (139) | (129) | (131) | (89) | (100) |
| Change in net assets available for benefits | **6,435** | 3,076 | 9,222 | 4,212 | 7,093 | 4,604 | 4,601 | 4,384 | (3,270) | 2,088 |
| **Net assets available for benefits, end of year** | **$ 70,359** | $ 63,924 | $ 60,848 | $ 51,626 | $ 47,414 | $ 40,321 | $ 35,717 | $ 31,116 | $ 26,732 | $ 30,002 |
| **NET ASSETS AVAILABLE FOR BENEFITS** | | | | | | | | | | |
| **Assets** | | | | | | | | | | |
| Investment assets | | | | | | | | | | |
| Cash | **$ 19** | $ 57 | $ 2 | $ 8 | $ (1) | $ 3 | $ 14 | $ - | $ 35 | $ 38 |
| Fixed income | **115,472** | 115,930 | 106,200 | 86,694 | 74,669 | 71,241 | 60,322 | 49,121 | 46,125 | 42,875 |
| Public equity | **16,106** | 9,150 | 2,182 | 4,596 | 1,705 | 931 | 773 | 889 | 1,904 | 4,612 |
| Equity-oriented | **15,022** | 13,402 | 10,992 | 9,588 | 7,853 | 6,896 | 5,941 | 5,040 | 4,836 | 4,290 |
| Securities purchased under resell agreements | **6,283** | 2,498 | 3,286 | 3,046 | 3,117 | 3,188 | 1,134 | 336 | - | 348 |
| Derivative instruments | **7,252** | 5,236 | 5,808 | 5,053 | 1,624 | 3,041 | 1,831 | 1,019 | 1,754 | 1,566 |
| Investment receivables | **3,635** | 1,063 | 934 | 1,438 | 1,276 | 1,538 | 1,322 | 1,566 | 1,333 | 557 |
| Contributions receivable | **171** | 156 | 156 | 150 | 150 | 142 | 135 | 133 | 124 | 111 |
| Other assets | **205** | 165 | 151 | 146 | 150 | 148 | 142 | 142 | 148 | 127 |
| **Total assets** | **164,165** | 147,657 | 129,711 | 110,719 | 90,453 | 87,128 | 71,614 | 58,246 | 56,259 | 54,524 |
| **Liabilities** | | | | | | | | | | |
| Investment liabilities | **(93,661)** | (83,616) | (68,753) | (58,999) | (43,046) | (46,722) | (35,825) | (27,071) | (29,502) | (24,493) |
| Other liabilities | **(145)** | (117) | (110) | (94) | (83) | (85) | (72) | (59) | (25) | (29) |
| **Total liabilities** | **(93,806)** | (83,733) | (68,863) | (59,093) | (43,129) | (46,807) | (35,897) | (27,130) | (29,527) | (24,522) |
| **Net assets available for benefits** | **70,359** | 63,924 | 60,848 | 51,626 | 47,414 | 40,321 | 35,717 | 31,116 | 26,732 | 30,002 |
| **Pension obligations** | **54,461** | 49,151 | 46,923 | 41,478 | 39,919 | 36,782 | 34,897 | 32,020 | 31,244 | 28,683 |
| **Surplus (deficit)** | **$ 15,898** | $ 14,773 | $ 13,925 | $ 10,148 | $ 7,495 | $ 3,539 | $ 820 | $ (904) | $ (4,512) | $ 1,319 |
| **Investment Performance** | | | | | | | | | | |
| Investment rate of return-net | **10.35%** | 5.12% | 17.72% | 8.55% | 17.10% | 12.19% | 13.68% | 15.18% | -11.96% | 6.23% |
| Benchmark return | **6.12%** | 3.95% | 15.62% | 6.46% | 14.29% | 9.87% | 10.31% | 9.77% | -8.98% | 4.78% |
| Long-term return target | **5.94%** | 6.04% | 6.93% | 6.34% | 6.50% | 6.50% | 6.63% | 6.50% | 6.50% | 6.75% |

# GOVERNANCE

**FIRST ROW (SEATED LEFT TO RIGHT):** Linda Haslam-Stroud, James Sanders, Anthony Dale, Jon Clark **SECOND ROW (STANDING LEFT TO RIGHT):** Marlene Puffer, Terry McCarthy, Yves Shank, Louis Rodrigues, Adrian Foster, Dr. Kevin Smith, Helen Fetterly, Bryce Walker, R. Wayne Gladstone, Dan Anderson, Bonnie Adamson, Jim Flett, Marie Kelly

In 1993, HOOPP's five Settlor organizations signed an Agreement of 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 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


David Long


Steven McCormick


David L. Miller


Barbara Thomson


Jeff Wendling

Lead 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.

The HOOPP 2016 Annual Report was produced by the Healthcare of Ontario Pension Plan.

HOOPP
Healthcare of Ontario Pension Plan

1 York Street. Suite 1900
Toronto, ON  M5J 0B6



AR-01