# Providing pension peace of mind

2020 Annual Report

HOOPP

# Thank you

We at the Healthcare of Ontario Pension Plan would like to take this opportunity to express our gratitude to our province's frontline healthcare and hospital workers. You are truly heroes, and we cannot thank you enough for your courage and sacrifice through the pandemic. We are committed to providing you with the pension you've earned and the peace of mind you deserve.

HOOPP
Healthcare of Ontario Pension Plan

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# 2020 Highlights

# Plan performance

as at Dec. 31, 2020

We entered 2020 in a robust position and continued to perform well through a challenging year, thanks in part to our liability-driven investing (LDI) strategy, growing member and employer base, and ability to smoothly transition to a remote work environment. This success is reflected in our strong investment return and funded status, and increase in net assets, all of which help us continue delivering on our pension promise to members.

Funded status

**119%**

Net assets

**$104 billion**

Rate of return

**11.42%**

10-year annualized return

**11.16%**

All reported figures in this document are as at Dec. 31, 2020, unless otherwise noted.

# Investments

By evolving our liability-driven investing (LDI) approach and finding innovative ways to diversify and protect our portfolios, our investment team successfully navigated the shutdown of the global economy and, near the end of the first quarter of 2020, one of the biggest stock market declines in history. The result? A strong investment return and strategies that are well-positioned to face ongoing market uncertainty.

2020 highlights included:

We continued to update our LDI strategy to adapt to changing market conditions and the low-interest-rate environment.

Our bond holdings helped protect the Fund as interest rates declined, and, along with other investment strategies, contributed to returns.

Our liquidity management capabilities and strong cash position helped our investment team seize significant buying opportunities to further strengthen the Fund.

We hired our first Chief Risk Officer and further enhanced our risk management systems with advanced technology to help us continue to prudently manage risk as the Fund grows in size and complexity.

For more information, see pages 37-48 of the *2020 Annual Report*.

**The simple act of caring is heroic.**

- Edward Albert, *actor*

## Sustainable investing

We remain committed to sustainable growth by integrating environmental, social and governance (ESG) factors into our strategies and investment decisions. This allows us to deliver on our pension promise in a way that aligns with our values. Here are a few of our key accomplishments:

- We released a joint statement with eight of Canada's leading pension plan investment managers, calling on companies to provide relevant and consistent ESG information that enables us to allocate capital to deliver long-term sustainable value.
- At the Reuters Events Responsible Business Awards 2020, HOOPP was recognized with a special mention for our transformative approach to embed climate change risk exposure assessment into the management of our real estate portfolio.

For more information, see pages 49-52 of the *2020 Annual Report*.

**To know even one life has breathed easier because you have lived. This is to have succeeded.**

- Ralph Waldo Emerson, *poet/essayist*

# Members and employers

To help support our members and employers through an unprecedented year, we aimed to provide them with assurance and peace of mind related to their pension and the health of the Plan. While making the most of technology, we used our personal-service model to provide information, education, and support to our members — how and when they needed it.

We also made Plan changes to help provide flexibility to our members as they dealt with challenges resulting from the pandemic. These changes included:

- providing service in the Plan, at no cost, for members on a new unpaid provincial emergency leave
- extending deadlines related to buybacks of service and disability benefits
- extending the timeline to make pension contributions following a leave of absence

In addition, we made a Plan change to how commuted values are calculated to help ensure our Plan's long-term sustainability.

To help our retired and deferred members' pensions keep up with inflation, we provided a cost-of-living adjustment that increased their pensions by 2.25% (which became effective April 1, 2020).

For more information, see pages 54-58 of the *2020 Annual Report*.


One of the deep secrets of life is that all that is really worth doing is what we do for others.
- Lewis Carroll, *writer*

During the year, our membership and the number of employers that offer the Plan increased.

**398,324**
**Total members**
(an increase of 17,243 from the end of 2019)

**248,260**
**Active members**

**114,300**
**Retired members**

**35,764**
**Deferred members**

## Total number of employers:

# 614

*(an increase of 20 from the end of 2019)*

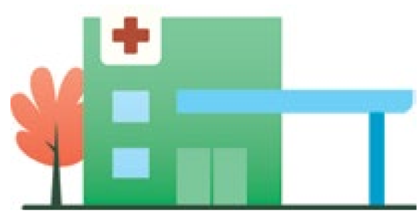
**167** small healthcare organizations

**141** hospitals

**85** service providers

**84** family health teams

**72** foundations



**65** community health centres


**Compassion brings us to a stop, and for a moment we rise above ourselves.**
- Mason Cooley, *professor*

# People and culture

> We foster and maintain a diverse, high-performance workplace culture that inspires our employees to do their best in support of our members and employers. Our core values – professional, accountable, collaborative, compassionate, and trustworthy – are the foundation for the service we provide.

In 2020, we found ways to foster that culture while supporting the transition to a remote-work environment. We also proudly made progress on several initiatives related to diversity and inclusion that will help continue to strengthen our organization:

## Diversity and inclusion

- Our CEO signed the BlackNorth Initiative pledge, which is dedicated to removing systemic barriers and increasing Black representation at senior management and executive levels in corporate Canada.
- We launched a range of Employee Resource Groups (ERGs) to help us connect, support and learn from staff members with shared interests and life experiences, toward fostering an equitable, diverse and inclusive workplace.
- We continued to build on relationships with recruitment organizations that work with diverse communities.

### Top employer award

HOOPP is proud to be recognized as one of Greater Toronto's Top Employers of 2021 by Canada's Top 100 Employers.

GREATER TORONTO'S TOP 2021 EMPLOYERS

For more information, see pages 59-62 of the *2020 Annual Report*.

**They may forget your name, but they will never forget how you made them feel.**

- Maya Angelou, *poet / civil rights activist*

# 2020 Annual Report

**DAN ANDERSON**
Board Chair

**ADRIAN FOSTER**
Vice Chair

Last year was anything but typical, but service and solidarity with our members were still top of mind.

# Chairs' message

For HOOPP, the vital role that our members play in providing healthcare to people across Ontario has always been clear. Our members represent every facet of the province's diverse healthcare community, from frontline care to administrative support to organizational leadership. In 2020, as the COVID-19 pandemic spread and the situation intensified, our members faced unprecedented challenges. We are grateful for their dedication and commitment under such stressful working conditions. In return, HOOPP is proud to provide services related to their pension, and above all else, the confidence and peace of mind that comes from knowing their retirement income is secure.

In a typical year, HOOPP's focus is set squarely on providing our members with the exceptional service they have come to expect. Last year was anything but typical, but service and solidarity with our members were still top of mind. To assist members during the pandemic, we extended deadlines for contribution payments for leaves of absence and on applications for buybacks and disability benefits. For members on new unpaid provincial emergency leave, we provided free service in the Plan.

## Our responsibilities to members

Plan changes are one example of our responsibilities as Board trustees. Others include establishing investment policy, monitoring investment performance, and approving annual operating budgets. Our Board has 16 voting members, half of whom are appointed by the Ontario Hospital Association (OHA). The other eight are appointed by the Ontario Nurses' Association (ONA), the Canadian Union of Public Employees (CUPE), the Ontario Public Services Employees Union (OPSEU), and the Service Employees International Union (SEIU). As we work together to oversee all aspects of HOOPP, we always keep our fiduciary duty to Plan members front and centre.

This is especially true when it comes to ensuring the HOOPP Fund is sustainable and equipped to pay pensions over the long term. We are pleased that in an exceptionally challenging year in the financial markets, the Fund continued its long track record of strong investment performance with an annual return of 11.42% in 2020. This return helped keep the Plan's funded status at a healthy 119%.

In addition, we are proud that we were able to keep member and employer contribution rates stable. We will continue to do so until at least the end of 2022 while maintaining the Plan's funded status. These rates have been unchanged since 2004, ensuring that the pension remains affordable to employers and healthcare workers.

To make sure the Plan remains healthy for our members today and in the future, we need to continually adapt and evolve with the changing investment landscape.

Our Board understands the importance of making sure HOOPP pensions keep up with the rising cost of living. For many years, we approved an annual cost-of-living adjustment that matches the rate of inflation reflected in the consumer price index, and we have continued to do so. Retired and deferred members received a 2.25% increase to their pensions effective April 1, 2020, and another increase of 0.73%, effective April 1, 2021.

## Ensuring HOOPP is well-positioned for the future

To make sure the Plan remains healthy for our members today and in the future, we need to continually adapt and evolve with the changing investment landscape. In addition to actively monitoring performance, our Board is providing oversight on enhancements to HOOPP's investment strategy, including the evolution of its signature liability-driven investment approach. In 2020, HOOPP also continued to improve and refine its already-robust risk management practices and systems by enhancing technology and hiring a Chief Risk Officer who will head a new division focused on assessing, measuring, modelling, and reporting on risk. Taken together, these measures will help ensure that the Plan is properly positioned to generate the returns needed to pay pensions for the long term.

## Delivering on the pension promise

In 2020, President & CEO Jeff Wendling assumed leadership of HOOPP while continuing as the organization's Chief Investment Officer. He has worked diligently and tirelessly to steer the HOOPP Fund through these uncharted financial markets. He and his executive team have ensured that staff have remained on track to deliver on the core functions of investing and paying pensions. They have also focused on other important areas, including diversity and inclusion initiatives, which will help keep the organization strong. As HOOPP staff continue to work remotely, he has emphasized the importance of health and well-being. Jeff's tremendous skill as a leader, coupled with his compassion, has been a bright light during these challenging times.

We thank our Board members for coming together to work efficiently and effectively in this new remote working environment. In 2020, we welcomed new appointments to the Board: Beverly Mathers (ONA appointee) and Nick Zelenczuk (OHA appointee), as well as our new pension observers, Cathryn Hoy (ONA appointee) and Karim Mamdani (OHA appointee). We acknowledge the departure of Linda Clayborne, who was appointed Observer by CUPE and completed her three-year term. Linda is a Registered Practical Nurse who retired in 2016 after 42 years from St. Joseph's Hospital in Hamilton. We thank Linda for her service.

Last, we would like to thank HOOPP staff and management for their hard work and commitment through a year unlike any other in recent memory. A special note of appreciation goes to Board Secretary Lesley Togawa for her superb support.

As we move forward together, we are proud to continue in our mission to deliver on our pension promise.

Dan Anderson

**DAN ANDERSON**
Board Chair

**ADRIAN FOSTER**
Vice Chair

The Fund's net assets rose to an all-time high of $104 billion, as at Dec. 31, 2020, representing an annual rate of return of 11.42%.

# President & CEO's message

The past year has been a challenging time for all of us, particularly our HOOPP members. Healthcare workers faced the staggering public health crisis resulting from the COVID-19 pandemic with courage and unwavering commitment, and we want to express our deepest appreciation for all they have done and continue to do.

We have always taken great pride in helping those who do so much to help each of us, and these events have only reinforced the strength of our commitment. We have focused on ensuring our members' pensions are kept safe and secure, and on providing service in a seamless way. It is our privilege to be able to support our members by keeping HOOPP operating smoothly at all levels.

Our first priority in this regard is to ensure that HOOPP delivers on our pension promise to you.  We are pleased to report that as at Dec. 31, 2020, the Plan remains more than fully funded, with a funded status of 119%. In other words, the Plan has $1.19 in assets for every $1 that is owed in pensions.

## A history of solid investment performance

The Fund's net assets rose to an all-time high of $104 billion, as at Dec. 31, 2020, representing an annual rate of return of 11.42%. Being able to generate this investment return in such a tumultuous year highlights the strength of our liability-driven investment (LDI) approach and the resilience of the Fund. Through the course of the year, our investment team successfully navigated large and sudden swings in the markets, including one of the steepest declines ever in mid-March as investors around the world reacted to the impact of the COVID-19 pandemic.

In its latest report for 2019, external consulting firm CEM Benchmarking found that HOOPP's 10-year results were among the highest of pension plans worldwide. At the same time, our investment costs and overall risk profile continue to be among the lowest of our peers. Our long track record of positive returns and low costs helps set a solid foundation to ensure that the Plan can pay pensions to members today and in the future.

## Positioning HOOPP for the future

To continue delivering on our pension promise, we need to ensure that we invest for the long term. This includes adapting our investment strategies as the market environment changes. In 2019, we began the process of evolving our LDI strategy, which has served HOOPP extremely well since it was launched in 2007. LDI is usually defined as matching Plan assets to pensions owed in the future or, in other words, the Plan's liabilities. This approach keeps our focus on our members and helps ensure that we are generating the returns needed to pay pensions without taking on unnecessary risk.

Bonds have traditionally played a key role in our LDI strategy, providing reliable returns while protecting the Fund against sharp corrections in equities. However, as interest rates have declined sharply, we have made changes to our Fund's investment portfolio, and continued to add new assets and strategies. This includes infrastructure investments, which we think will serve us better in this low-interest-rate environment. This is an ongoing process that also includes evaluating opportunities to diversify the Fund's international holdings, particularly in high-growth parts of the world. We will work to ensure that our LDI strategy continues to evolve and adapt to changing markets and investment environments.

As global markets and investing become more complex, it is vital that we ensure our risk management practices continue to grow along with our Fund. In 2020, we began implementing a new risk system that will offer several benefits, including modelling for multiple asset classes, additional tools to calculate risk measurements, the ability to rapidly test the impact of market changes and respond to them, and more flexible and enhanced reporting.

Along with this enhanced technology, we have centralized our risk functions by introducing a new Risk division and hiring Saskia Goedhart as our first Chief Risk Officer. This division will ensure our risk systems, practices, and monitoring continue to evolve to meet our future needs while providing expertise and comprehensive risk reporting to the Board. This marks a very important milestone for HOOPP. While we have always managed risk effectively, adding Saskia to the team and building out our risk function will enable us to expand and improve our capabilities as the Fund continues to grow in size and complexity. With these changes, we will be well-positioned going forward.

Sustainable investing (SI) at HOOPP is also about delivering on our pension promise in a way that aligns with our values and promotes strong relationships with our stakeholders. This includes investing practices that integrate Environmental, Social & Governance (ESG) factors into our analysis, strategy, and asset management practices. In 2020, our ESG internal advisory group developed a comprehensive framework to ensure consistency with the responsible investing approach that we have followed and applied in our organization for many years: integration, stewardship, and fostering the sustainability of our communities and capital markets.

> As global markets and investing become more complex, it is vital that we ensure our risk-management practices continue to grow along with our Fund.

We also released a joint statement with eight of Canada's leading pension plan investment managers, representing $1.6 trillion in assets under management, calling on companies to provide relevant and consistent ESG information that enables us as an investor to allocate capital to investment best placed to deliver long-term sustainable value creation. We are enthusiastic about these first formal steps, and we will undoubtedly have more to share about our SI efforts as this area continues to grow in importance in the coming years.

## Supporting equity, diversity and inclusion

Similarly, all around us we see an urgent push for change in the area of diversity and inclusion. We know that we don't have all the answers today, but our leadership is committed to learning, growing and doing what's right for all our employees, members and broader community.

In July 2020, I signed a CEO pledge on behalf of HOOPP to support the BlackNorth Initiative. This initiative is committed to removing systemic barriers negatively affecting the lives of Black Canadians in corporate Canada. The pledge includes commitments such as fostering an open environment, increasing Black representation within our organization (including at senior levels) and creating a diversity leadership council. As part of this pledge, I reached out to many of our vendors and partners to encourage them to consider joining us in this initiative.

More broadly, we want to ensure that HOOPP's diversity efforts help promote a respectful and inclusive workplace culture for everyone regardless of race, ethnicity, gender, age, religion, disability, and sexual orientation. In 2020, we launched Employee Resource Groups to provide employees with a way to participate in and engage with this important effort to better our organization. Many employees have signed up, and we are excited to have these groups help guide our diversity efforts at a grassroots level going forward.

We have also enhanced our recruitment practices and developed a new Equity, Diversity and Inclusion policy to formalize our longstanding practices. In addition to ensuring that everyone at HOOPP feels safe, respected, and valued, these efforts make our organization stronger.

## Inspired by our members

These milestones and accomplishments come as HOOPP marks its 60th year of delivering on the pension promise for members. Since 1960, we have seen tremendous change — in the healthcare field, in financial markets and investing, and in Canadians' working lives and savings habits. Over this period, the importance and value of a defined-benefit pension such as HOOPP have become increasingly clear.

We have evolved to keep up with the times by adding employers and members to the Plan and continually adapting our investment strategies, technology, and overall operations to effectively manage the growth of the HOOPP Fund. Through it all, we have remained dedicated to our mission of providing pensions to members. This has driven our organization forward in the past and continues to do so under my leadership.

Reflecting on my first full year as leader of this organization, I am extremely pleased with the way we have been able to keep our organization moving forward smoothly in unprecedented circumstances. I would like to thank the Board of Trustees for their support and guidance, our Executive Team for their leadership, and HOOPP staff for their hard work and commitment.

We have ample reason to feel proud, and even cautiously optimistic, as we move forward from a tumultuous year. Though there is surely more uncertainty ahead, my hope is that we can continue to take our inspiration from our members in our commitment to provide them with a secure pension and peace of mind.

**JEFF WENDLING**
President & Chief Executive Officer /
Chief Investment Officer

# Management's discussion & analysis (MD&A)

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

# 2020 Plan performance

as at Dec. 31, 2020

Funded status

**119%**

Net investment income

**$10.7 billion**

Rate of return for 2020[1]

**11.42%**

10-year annualized return

**11.16%**

Net assets

**$104 billion**

[1] Registered pension plan

# Plan overview and governance

The Healthcare of Ontario Pension Plan (HOOPP or “the Plan”) has been serving Ontario healthcare workers and their employers since it was first formed in 1960. Across the province, 614 employers participate in HOOPP and offer the Plan to their employees. HOOPP had 398,324 members, including 114,300 retired members, as at Dec. 31, 2020.

In 1993, 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)
- Service Employees International Union (SEIU)

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

## Mission

HOOPP’s governance is based on our mission to deliver on the pension promise. This is our commitment to provide each member with a secure pension that starts at retirement and is paid for the rest of their life. The Board and management team administer the Plan and manage and invest the trust fund (“the Fund”) with a focus on, and dedication to, meeting this mission in the best interests of HOOPP members. This shared focus and dedication are also consistent with the fiduciary duties owed to all Plan beneficiaries by our Trustees and staff.

The Agreement & Declaration of Trust (ADT) is the foundation for the governance of the HOOPP Plan and Fund. It is the trust document entered into by the OHA, Settlor Unions and initial Board members that, among other things, constitutes and empowers the current Board.

## The Board of Trustees

The Board’s focus is on the administration of the HOOPP Plan and the investment and management of the assets of the Fund. Its duties include:

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

Members of the Board also serve on four specialized committees that are responsible for making recommendations to the Board within the scope of their mandates.

They are as follows:

- Asset-Liability Management Committee
- Audit & Finance Committee
- Governance & HR (Human Resources) Committee
- Plan Committee

More information about the committees and their mandates can be found on **hoopp.com**.

## Delegations of authority

Authority for the day-to-day administration of the Plan and management of the Fund is delegated by the Board to the Plan manager, who holds the title of President & Chief Executive Officer (President & CEO). This delegation is reviewed and approved by the Board at least once each year. In turn, the President & CEO delegates authority to select designated employee roles within HOOPP for a variety of investment and operational purposes. These delegations are also regularly reviewed and kept current and appropriate.

In addition, the roles, responsibilities and accountabilities of HOOPP's agents, advisors and other service providers are set out in agreements with each party. The Board's key agents and advisors include:

- Plan actuary
- external auditors
- custodian
- independent legal counsel
- investment advisors
- compensation advisor

## Governance review processes

Good governance requires periodic reviews of an organization's structures, mandates, policies, practices and procedures to determine whether they should be updated or changed. Both our Board and management team conduct such periodic reviews to ensure this information is kept up to date and responsive to organizational changes and HOOPP's operating environment.

# Funded status

The funded status compares the Plan's assets to its liabilities (i.e., pension obligations), and is a key measure of the current financial health of the Plan. A value of more than 100% shows that the Plan has a surplus (i.e., more assets than liabilities), while a value of less than 100% would mean the Plan is in a deficit.

At the end of 2020, the Plan reported a surplus for the 11th consecutive year, with a funded status of 130% on a net assets basis. While a decrease in the Plan's discount rate assumption increased liabilities, our 11.42% fund return drove a small net increase to the funded status. More information on the discount rate assumption and pension obligations can be found in the *Plan liabilities* section on page 34.

For regulatory filing purposes, we report our funded status on a smoothed asset value basis, which remained unchanged from the prior year at 119%. The asset smoothing approach we use gradually recognizes the Fund's investment returns over 5 years, only partially recognizing the 2020 return of 11.42%, and deferring the rest to future years.

The following table shows the Plan's funded status for 2020 and 2019, both on a net assets basis and on a smoothed asset value basis. The *Investments* section includes a graph on page 37 that illustrates the Plan's net and smoothed assets against its liabilities over time.

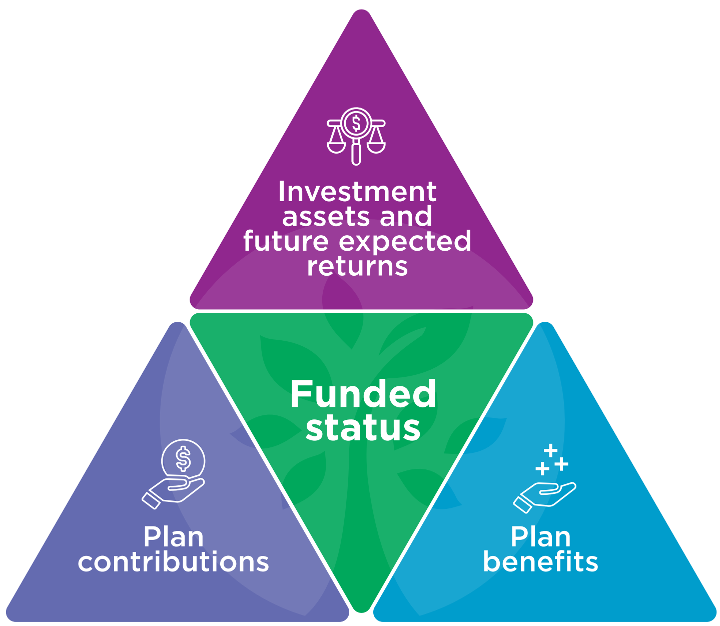
| Funded Status | 2020 | 2019 | Year-over-year change |
|---|---|---|---|
| **Net assets to regulatory pension obligations** | **130%** | 128% | 2% |
| **Smoothed asset value to regulatory pension obligations** | **119%** | 119% | 0% |

# Pension plan funding management

As history has shown and as we collectively witnessed in March 2020, the financial market environment can change rapidly; these fluctuations have the potential to affect our Plan's funded status. Delivering on the pension promise is a complex challenge that involves prudently managing risks to ensure our funded status remains at acceptable levels.

In managing our Plan, there are three main components that we balance to meet our promise to members:

- **the level of pension benefits provided at retirement**
- **contribution rates from both Plan members and their employers**
- **total investment assets and future expected investment returns**




Our Plan is designed to provide a level of benefits that, when combined with income from other sources, will offer our members a secure retirement. In managing benefit levels, our objective is to provide a stable and predictable level of pension income.

Benefit levels are determined with thoughtful consideration of contribution rates. Our Board strives to keep contribution rates stable: they have not changed since 2004, and will be maintained at the current level until at least the end of 2022.

We also consider elements related to investments, including asset allocation, current and future expected returns, and risk. Investment returns play an essential role in our mission to deliver on the pension promise, because we estimate approximately 80% of pension benefits come from investment returns. As such, HOOPP's approach to expected investment returns and risk is the component most actively managed by both our Board and management team.

The long-term sustainability of our Plan will ultimately be ensured by balancing these three components in a prudent and effective manner.

# Future funding sustainability

The greatest threat to our Plan's long-term sustainability is funding risk, which is the risk of future investment returns and growth (and to a lesser extent, contributions) not being able to fund Plan liabilities. Funding risk is also discussed in Note 6 of the Financial Statements. In general, the two broad categories of risks that contribute to total funding risk are investment risk and demographic risk.

## Investment risk

Prudent management of investment risk is key to mitigating funding risk. We take investment risk to earn sufficient returns to meet our pension obligations and to keep contribution rates stable, reasonable and affordable. Our Board's risk tolerance is an important consideration in determining how much investment risk can be taken.

Investment returns are the most significant source of funding for pension benefits paid to members and are a critical determinant of how benefit levels and contribution rates are managed. Positive and stable returns over time from Fund investment strategies are essential to the Plan's long-term sustainability. Investment returns that exceed expectations can provide flexibility in managing benefit levels and contribution rates, while returns below expectations may result in the need to make decisions to reduce benefits or increase contributions. In establishing an appropriate investment strategy, we strive to generate sufficient returns to meet our pension obligations, while accepting a level of risk that does not jeopardize our ability to meet those obligations.

The three investment risks that have the greatest impact on our Plan are related to:

**Interest rates:** interest rates affect the price of many investments, as well as their expected future rate of return. Changes in interest rates can also have an impact on Plan liabilities, if they lead to a change in the discount rate assumption. More information about the discount rate can be found on page 35.

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

**Equities:** investment returns may fall short of the levels necessary to pay future pension benefits if equities and other return seeking strategies fail to generate sufficient returns. In the case of extreme investment losses, our funded ratio may experience substantial declines, leading to adverse impacts on benefits and/or contribution levels.

## Demographic risk

Demographic risk to our Plan is important to consider, though its magnitude is difficult to anticipate because the changes associated with demographic risk occur gradually over long periods of time.

These changes include:

- life expectancy of members (i.e., longevity risk)
- changing retirement trends (e.g., earlier retirements)
- aging of members

With demographic factors, both the longer-term trend and year-over-year changes must be thoughtfully considered. Demographic trends are monitored diligently as part of our Board's annual review of all actuarial assumptions, with the support of the Board's Plan actuary. Additionally, detailed demographic experience studies are conducted from time to time to help ensure assumptions about future expectations remain appropriate. For large pension plans like HOOPP, year-over-year changes are usually minor; however, consistent variances between actual experience and assumptions may indicate patterns where changes to existing assumptions may be warranted. An increase in members' life expectancy, for example, would increase the amount of pension benefits to be paid. A mortality study was performed for 2020, resulting in a very minor increase to our longevity assumption.

# Plan maturity

The proportion of active to retired members in a pension plan naturally changes over time. This is often referred to as plan maturity. It is important to monitor plan maturity because it can affect our Plan's ability to recover from a severe decline in assets.

Newer plans have a greater proportion of working or active members contributing to the plan, relative to retired members drawing benefits from the plan. Among other factors, one key determinant of how quickly a plan matures is the rate at which new and younger members join the plan and replace newly retired members. Over longer time periods, the average age of plan participants can rise, as can the proportion of retired members. With consistent membership growth, HOOPP continues to be a relatively young pension plan, and the average age of HOOPP's active participants is virtually unchanged from 20 years ago.

Plan maturity is often measured by the ratio of active to retired members. As shown below, this ratio has declined from 3.5 in 1990 to 2.2 at the end of 2020, illustrating how our Plan is gradually maturing. It is projected to decline further to 1.8 by 2030.

**Ratio of active members to retired members over time**

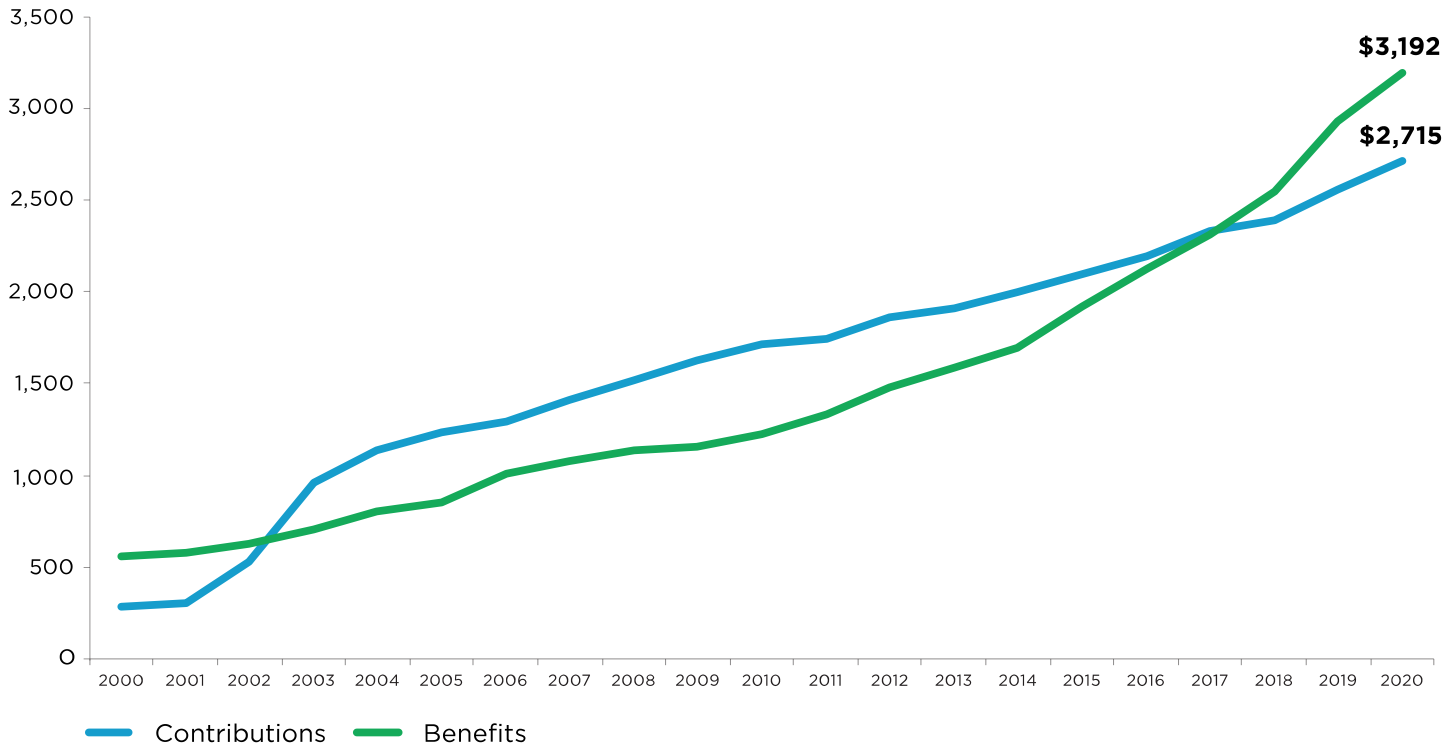
| | 1990 | 2010 | 2020 | 2030 (projected) |
|---|---|---|---|---|
| **Ratio as at December 31** | 3.5 | 2.5 | 2.2 | 1.8 |

Another measure of the relative age of a pension plan is net cash flow, which is the difference between contributions received and pension benefits paid. More mature plans pay out much more in benefits to retired members than they receive in contributions from active members. This increases a plan's sensitivity to investment market declines, because the remaining asset base with which to recover from investment losses is further reduced. Moreover, any funding deficiencies are more difficult to address, because a smaller proportion of active members means that increases in contribution rates will have a diminished impact.

The chart below reflects the ongoing maturation of the Plan: while both contributions and benefits have increased, since 2018 total benefits paid have exceeded total contributions, producing a negative cash flow on this basis. Although this trend is likely to continue, it does not mean that HOOPP is unable to pay its promised benefits. As mentioned, we estimate that contributions account for only approximately 20% of benefits. However, it is another aspect of plan maturity for which we must prepare, now and into the future.

## Contributions vs. benefits

($ millions)




Note: The chart reflects a contribution rate reduction that was in place from 1999 to 2002 to help ensure compliance with legislation that limited the maximum surplus permitted for a registered pension plan.

The chart above illustrates net cash flow using total contributions and total benefits, which include past service purchases, transfers to and from other plans, and lump-sum transfers on termination or death. However, 2020's net cash flow continued to be positive based on regular contributions (those required of members and employers) and regular benefits (monthly pensions paid to retirees and beneficiaries). Further details of all these amounts can be found in Notes 8 and 9 of the Financial Statements.

# Plan liabilities

The estimation of our Plan's liabilities is based on current and future benefit payments and relies on several economic and demographic assumptions.

Economic assumptions include:

- inflation expectations
- future growth rate of employee wages
- future expected rate of return of our investment strategies

Key demographic assumptions include:

- retirement age of our members
- member life expectancy

In estimating our Plan's total pension obligation, all assumptions are made based on the principle that the Plan will operate as a going concern for the foreseeable future. Using these and other assumptions, together with actual member data, the benefits owed to our Plan members are projected for each future year, out over almost 100 years.

The Plan's pension liabilities change for a number of reasons.

First, as our members contribute to the Plan throughout the year, they accrue or earn future benefits. Additionally, the value of previously earned benefits grows at the rate of expected return of the Fund. Offsetting this growth are the pension benefits that were paid out during the year, which reduce 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 have an impact on the pension obligation calculation. In 2020, our Board approved an inflation assumption change related to commuted values: effective April 1, 2021, commuted values will no longer include an assumption of future inflation protection on benefits where it is not guaranteed. This assumption change accounted for a $1,315 million decrease in the Plan's pension obligation. Combined with other assumption changes, the Plan's pension obligation decreased by a total of $1,443 million in 2020. Separately, on March 24, 2021, HOOPP's Board approved an increase to the Plan's benefit formula in respect of active members' service from 2018 to 2020, effective April 1, 2021. Further details can be found in Note 18 of the Financial Statements.

Of all the assumptions underlying the estimation of the Plan's liabilities, one of the most important is the Fund's long-term expected return (i.e., the discount rate assumption). To calculate the total value of future pension benefits today (i.e., the Plan's liabilities or pension obligation), these estimated future payments are discounted by the expected return of the Fund's investment portfolio.

Expected returns are significantly affected by interest rates, because expected returns are composed of a theoretical risk-free interest rate and risk premiums (i.e., incremental returns in addition to the risk-free rate). A change in the discount rate assumption causes a corresponding change in pension liability value in the opposite direction (i.e., a decrease in the discount rate assumption causes a corresponding increase in the pension liability value, and vice versa). This volatility in the discount rate assumption and the sensitivity of the Plan's pension obligations to changes in the discount rate assumption were a primary reason for HOOPP's adoption of a liability-driven investing approach, which is discussed further in the *Investments* section.

Actual future economic and demographic outcomes will almost certainly differ from the assumptions made. The difference between the actual outcomes and the assumptions made is a source of funding risk, as previously discussed in the *Future Funding Sustainability* section on page 31.

At the end of 2020, the discount rate assumption was decreased to 4.65% from 5.00% at the end of 2019, in part due to a decline in long-term interest rates. This 35-basis-point decrease in the discount rate assumption resulted in a $4,490 million increase in the estimated pension obligation.

The table below shows, at a high level, what factors contributed to changes in the Plan's pension obligation in both 2019 and 2020.

| | 2020 | 2019 |
|---|---|---|
| ($ millions) | | |
| **Pension obligation at the start of the year** | **73,547** | **65,128** |
| Increases in benefits due to members | 3,258 | 5,577* |
| Changes in assumptions | (1,443) | (802) |
| Change in discount rate assumption (expected return) | 4,490 | 3,644 |
| **Pension obligation at year end** | **79,852** | **73,547** |

* Includes $1,964 million in pension obligations from five pension plans that merged into HOOPP in 2019

**Key economic assumptions**

The sum of the inflation rate assumption and the real discount rate assumption is the discount rate assumption.

| | 2020 | 2019 |
|---|---|---|
| **Assumption** | | |
| Inflation rate | 2.00% | 2.00% |
| Real discount rate | 2.65% | 3.00% |
| Discount rate | 4.65% | 5.00% |

It is important to be aware that financial results are sensitive to changes in assumptions. The table below illustrates this sensitivity by showing how an increase or decrease of 1% in the discount rate assumption would affect pension obligations. Even with a relatively large 1% decrease in the assumption and a corresponding increase of 17% in pension obligations, HOOPP would still be fully funded at the end of 2020, all else being equal.

| Change in assumption | Discount rate assumption | Pension obligations ($ millions) | Change in pension obligations (as a %) |
|---|---|---|---|
| **+1.00%** | 5.65% | 69,136 | -13% |
| | **4.65%** | 79,852 | |
| **-1.00%** | 3.65% | 93,547 | 17% |

**The closest thing to being cared for is to care for someone else.**

\- Carson McCullers, *writer*

# Investments

Our primary approach to managing funding risk differs from more traditional investment approaches, where success is primarily based on asset growth beating an asset-based benchmark. Instead, we employ a liability-driven investing (LDI) strategy, where the Plan's liabilities are closely considered when investing Fund assets. This approach focuses on ensuring that the growth of our investment portfolio meets or exceeds the growth in the pension obligations owed to members.

In the graph below, the Plan's net and smoothed assets have been charted against its pension liabilities over time.

## 20-year history - assets and liabilities

($ billions)


LDI at HOOPP involves allocating our Fund's assets between the two broad portfolios: the liability hedge portfolio and the return seeking portfolio.

The liability hedge portfolio is designed to offset most of the risks associated with inflation and interest rates, which are the major risks that can increase the pension benefits paid to members. It contains investment assets that perform in a manner similar to those of the Plan's liabilities.

The return seeking portfolio is designed for controlled risk-taking in investment assets and strategies to generate incremental returns to the Fund to help ensure the Plan remains affordable, while providing diversification benefits for the entire portfolio.

More detail on the performance and composition of these portfolios can be found later in this section.

# 2020 results

HOOPP's 2020 investment results were strong:

- a net investment income of $10.7 billion
- a growth in net assets to $104.0 billion from $94.1 billion in 2019

The table below shows investment performance for 2020 and 2019, as well as the 10-year and 20-year performance of the Fund[1].

| | 2020 | 2019 | 10-year | 20-year |
|---|---|---|---|---|
| **Total return** | **11.42%** | 17.14% | 11.16% | 8.69% |
| **Benchmark*** | **9.80%** | 15.06% | 8.80% | 7.05% |
| **Value-added return** | **1.62%** | 2.08% | 2.36% | 1.64% |

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

HOOPP's net returns and net value-added returns have been consistently strong over the years. In its report for 2019, external consulting firm CEM Benchmarking found that HOOPP's 10-year results were the highest in CEM's Canadian dataset of 66 pension funds.

HOOPP's pension promise to our members is foundational to our investment strategy, and our LDI approach has produced strong results for 2020. Our diversified portfolio and culture of innovation, combined with the identification and management of key risks, including liability growth driven by a decline in interest rates, contributed to successfully navigating the extraordinary investment environment described below.

## The 2020 investment environment

Without question, the COVID-19 pandemic was the most significant development of 2020. Its far-reaching effects in healthcare, economies and financial markets around the world led to widespread lockdowns and the most severe global recession since the 1930s. In the five-week window between mid-February and mid-March, capital markets shifted from calm confidence to panic as a sharp equity bear market took shape. In extraordinary moves, the S&P 500 lost about 35% of its value, and the U.S. 10-year Treasury bond yield fell from 1.56% to 0.78%.

Major governments and central banks reacted – at a speed and scale never seen before – to support economies, stabilize markets and provide much needed liquidity. In addition to interest rate cuts, the U.S. Federal Reserve engaged in a new program of asset purchases, including buying corporate and municipal bonds for the first time in history, which helped to reduce borrowing costs and further stabilize markets. Later in the year, the Federal Reserve shifted to a new flexible monetary policy framework that provided extraordinary conditional guidance on future action. These aggressive policy measures lead to a decline in the 30-year U.S. Treasury bond yield, with an even larger decline in the 10-year U.S. Treasury bond yield.

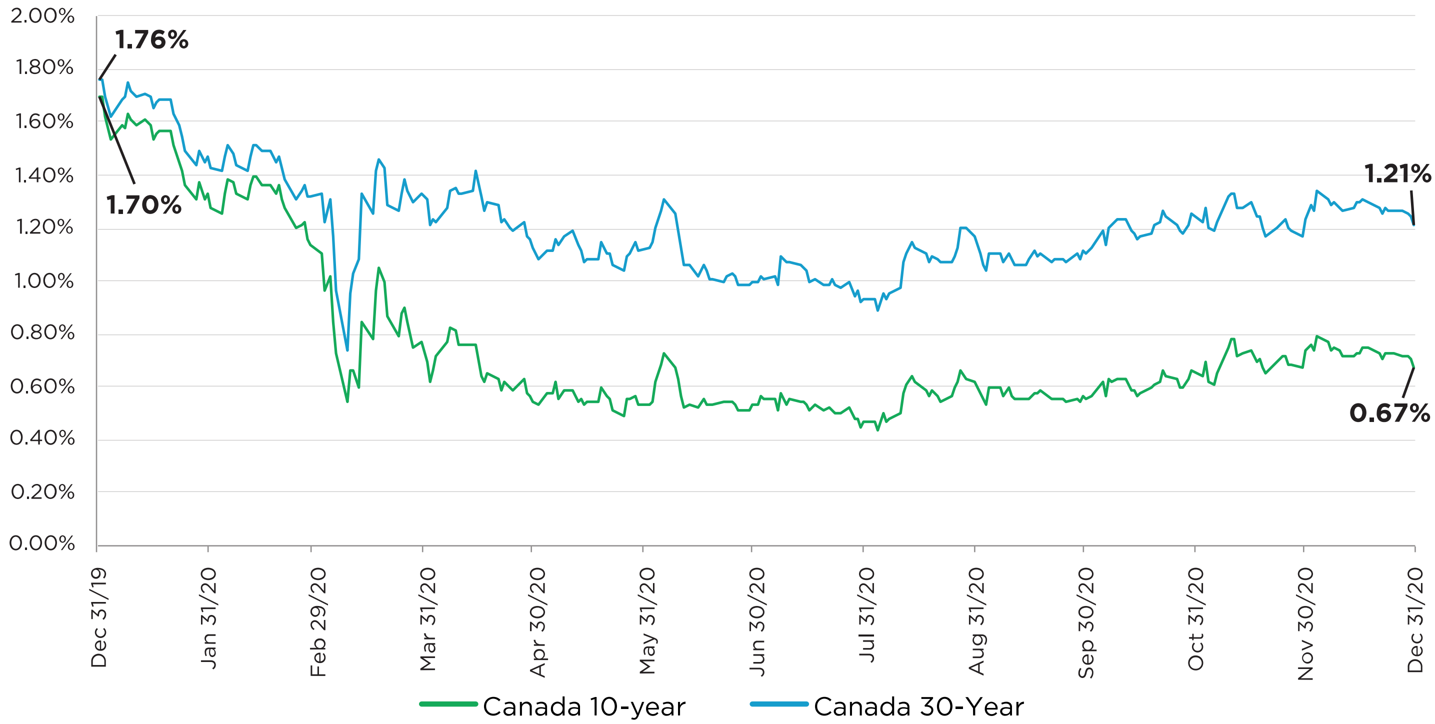
To varying degrees, the Bank of Canada and other central banks acted similarly, with major governments matching these responses by enacting massive fiscal stimulus programs to help support and reflate their economies. For example, in addition to its own policy rate cuts, the Bank of Canada's quantitative easing program included the purchase of provincial bonds for the first time ever. Like the U.S. Treasury bond yields, these measures resulted in a decline in the benchmark 30-year Government of Canada bond yield, and a larger decline in the 10-year Government of Canada bond yield, with the year-over-year changes summarized in the table below. The chart below illustrates

[1] Registered pension plan

how Canadian bond yields changed over the course of the year; the widening gap between the lines shows the effect of a steepening yield curve.

| Bond | End of 2020 | End of 2019 |
|---|---|---|
| U.S. Treasury 10-year | **0.91%** | 1.92% |
| U.S. Treasury 30-year | **1.64%** | 2.39% |
| Government of Canada 10-year | **0.67%** | 1.70% |
| Government of Canada 30-year | **1.21%** | 1.76% |

## Canadian interest rates - 1 year (2020)

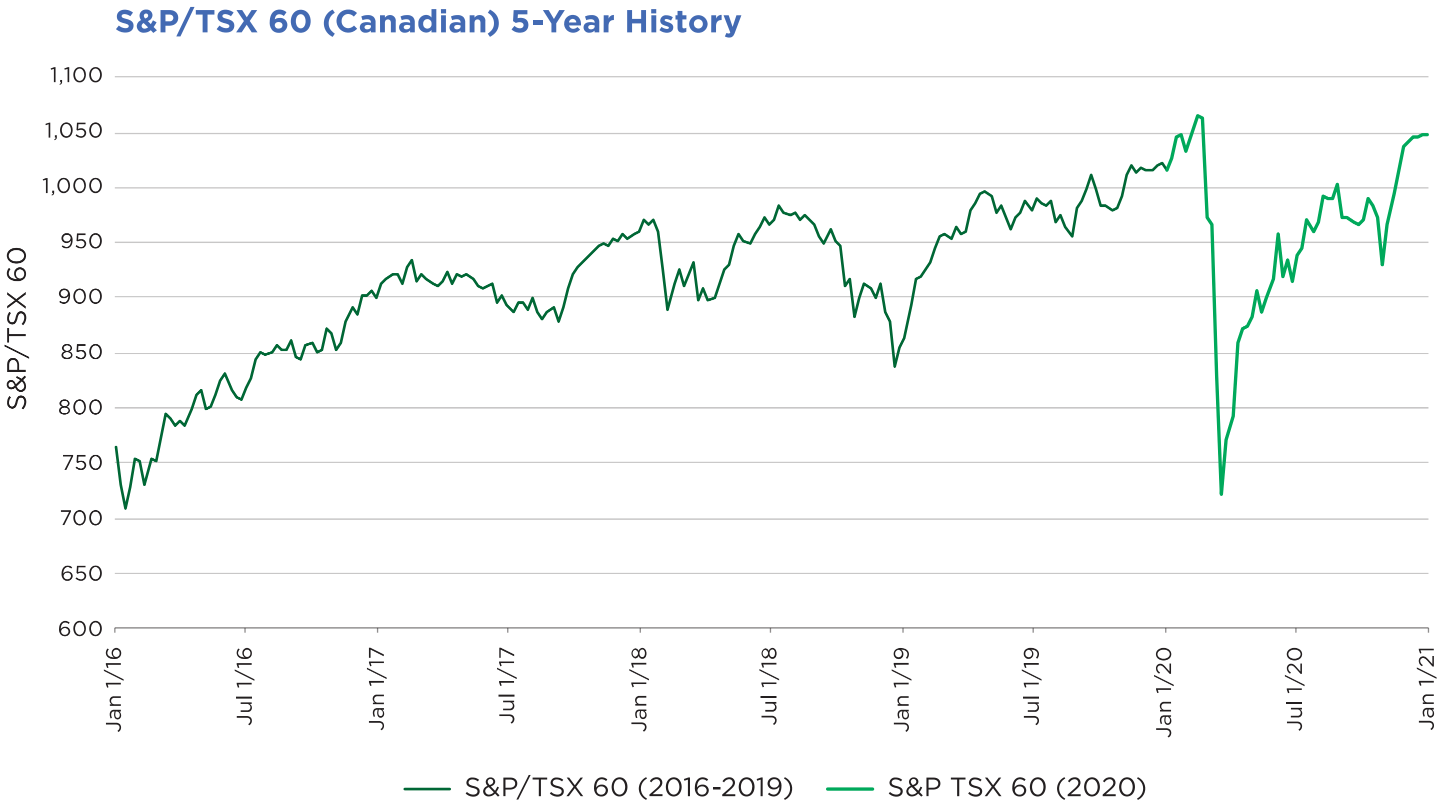


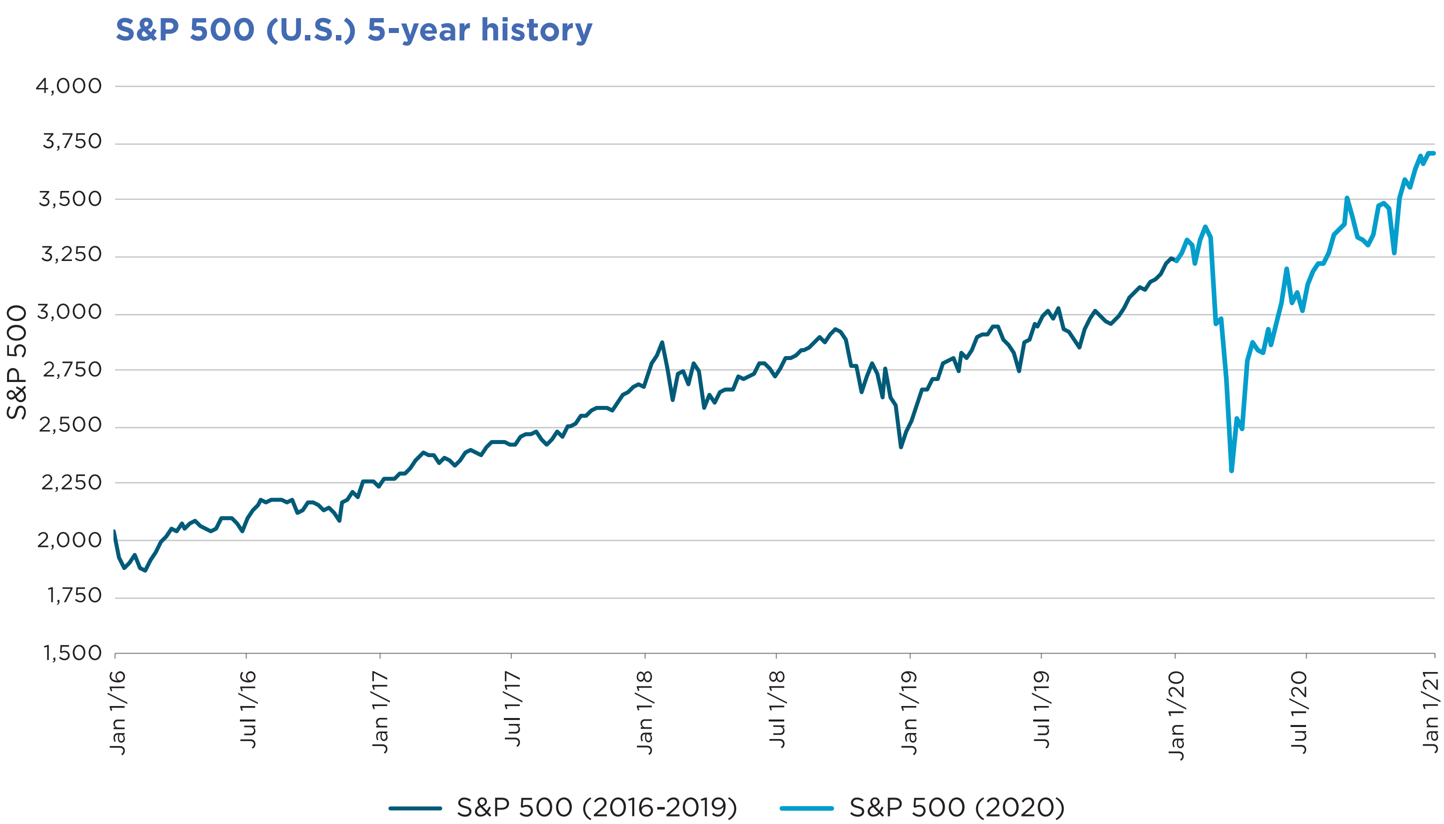

Capital markets benefited from the combined effect of these policy responses. Markets re-opened for companies to issue debt and equity, equity prices rose, credit spreads narrowed, and measures of sentiment slowly moved away from panic. Rapid progress in vaccine development in the second half of the year, a completed U.S. election, and some early vaccinations contributed to ending the year on a strong note, as investors anticipated a more normal economy in 2021. For the full year, equity market returns were relatively normal and, in some cases, quite strong. A total return summary of equity market indices is provided below.

| Index | Total returns (2020) | Annual total returns (2011-2020) |
|---|---|---|
| S&P/TSX 60 | 5.6% | 6.2% |
| U.S. S&P 500 | 18.4%[2] | 13.9%[2] |
| MSCI EAFE[3] | 8.4%[2] | 6.1%[2] |
| MSCI Emerging Markets | 18.5%[2] | 4.0%[2] |

[2] U.S. dollars
[3] Developed equity markets excluding U.S. and Canada

Price levels of the Canadian S&P/TSX 60 and the U.S. S&P 500 indices are charted below. The precipitous declines in both indices are evident in March 2020, though the U.S. index return was much higher by year's end.



In the next section, we discuss the major drivers behind our funded position, followed by investment portfolio commentary.

## Major drivers in the change in funded position

The table below summarizes the change in the Plan's funded status compared to last year, based on changes in net assets and pension obligation as well as the smoothing adjustment for each year.

| | 2020 | 2019 |
|---|---|---|
| ($ millions) | | |
| **Net investment income** | **10,661** | 13,662 |
| **Changes due to operations** | | |
| Contributions | **2,715** | 2,561 |
| Transfers from merged plans | **-** | 2,065 |
| Benefit payments | **(3,192)** | (2,934) |
| Operating expenses | **(303)** | (271) |
| ***Total changes due to operations*** | **780** | 1,421 |
| **Total change in net assets available for benefits** | **9,881** | 15,083 |
| **Change in pension obligation** | **(6,305)** | (8,419) |
| **Net change in surplus on a net assets basis** | **3,576** | 6,664 |
| **Funded ratio on a net assets basis** | **130%** | 128% |
| Change in smoothing adjustment* | **(1,865)** | (6,524) |
| **Regulatory funded ratio** | **119%** | 119% |

* 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.

As seen in the table above, net investment income is the largest driver in the change in net assets. The Liability Hedge Portfolio produced a return of $7,538 million in 2020 while the Return Seeking Portfolio posted a gain of $3,123 million, for a total net investment income of $10,661 million. In contrast, of the $13,662 million in total net investment income in 2019, the Liability Hedge Portfolio generated a return of $6,717 million and the Return Seeking Portfolio a gain of $6,945 million.

We operate in an economic environment of sustained volatility as the pandemic continues to evolve. As such, we have exercised judgment when determining the pandemic's impact on the estimated fair value of the Fund's investments. While the fair values of certain investments reflect our best estimates and assumptions, actual results could differ from those estimates. We are closely monitoring ongoing developments and related impacts, and will continue to review judgments, estimates and assumptions periodically. Further information on our use of estimates and judgments can be found in Note 1 of the Financial Statements.

Details of the performance of individual strategies within the Liability Hedge Portfolio and the Return Seeking Portfolio follow in subsequent sections. The following table shows how much each investment strategy contributed to net investment income in 2020 and 2019.

| ($ millions) | Net interest and dividend income | Net gain (loss)* | 2020 net investment income | 2019 net investment income |
|---|---|---|---|---|
| **Liability hedge portfolio** | | | | |
| Short-term | 708 | (345) | **363** | 131 |
| Nominal bonds | 1,233 | 4,625 | **5,858** | 4,762 |
| Real return bonds | 154 | 1,131 | **1,285** | 795 |
| Real estate | 366 | (334) | **32** | 1,029 |
| ***Total liability hedge portfolio*** | 2,461 | 5,077 | **7,538** | 6,717 |
| **Return seeking portfolio** | | | | |
| Public equities | 94 | 2,071 | **2,165** | 5,768 |
| Private equity | 229 | 837 | **1,066** | 1,266 |
| Infrastructure | 4 | 27 | **31** | (7) |
| Corporate credit | 239 | 112 | **351** | 385 |
| Long-term option strategy | 88 | (119) | **(31)** | (629) |
| Other return seeking strategies | 180 | (639) | **(459)** | 162 |
| ***Total return seeking portfolio*** | 834 | 2,289 | **3,123** | 6,945 |
| **Total** | **3,295** | **7,366** | **10,661** | **13,662** |

* Net of management fees and transaction costs.

# Active management and relative performance

The total Fund return of 11.42% exceeded the benchmark return of 9.80% by 1.62% or $1,513 million. This active management return, or value added, came from a variety of sources during the year within both the Liability Hedge Portfolio and Return Seeking Portfolio. The Liability Hedge Portfolio generated $1,136 million with a significant contribution coming from short-term, nominal bonds and real estate. The Return Seeking Portfolio generated the remaining $377 million, with the largest impacts coming from private equity, credit and absolute return strategies.

# Liability hedge portfolio discussion

## Short-term

This portfolio provides general funding for investment strategies employed by the Fund. In 2020, the portfolio generated returns of $363 million, compared with $131 million in 2019.

The Short-term portfolio invests in highly rated liquid securities to maintain liquidity and enhance returns. This portfolio's strong performance in 2020 was driven by two main contributors, both of which followed the market selloff in March brought on by the pandemic. First, we participated in the credit rally that followed this selloff. Second, we positioned our portfolio to benefit from the rate cuts put in place by central banks. The conditions created by the global pandemic made it particularly challenging to protect our liquidity position through the crisis in March; however, we were able to raise all required financing because of the quality of our collateral together with the systems and processes we use to manage it. The portfolio continues to be well-positioned to meet liquidity demands and to capitalize on market opportunities.

## Nominal bonds: mid-term and long-term bonds

The Fund's Universe and Long-Term Bond portfolios employ strategies that reflect our outlook on the direction of interest rates over various time horizons. These strategies may alter the portfolio's duration or the weight of certain maturity segments, as well as capitalize on changing inflation expectations or spread differentials between government fixed income products. Employing these strategies in the portfolio created over $278 million in value added during the year, and a return of $5,858 million.

The average yield on the FTSE Russell All Government Canada Universe Bond Index fell from 2.08% to 1.02% over the year. This was due to aggressive, pandemic-driven policy responses by the U.S. Federal Reserve and the Bank of Canada.

The longer end of the bond market saw less of a decline in average rates, aided by significant government bond supply in longer-duration maturities to fund historically massive fiscal deficits. The average yield on the FTSE Russell All Government Long-Term Bond Index fell to 1.80% at the end of 2020 from 2.37% at the end of 2019.

## Real return bonds (RRB)

Real return bonds pay a rate of return equal to the rate of inflation plus their real yield. For this reason, the real return bond portfolio helps provide a hedge against increases related to the Canadian consumer price index in our Plan's pension liabilities. In 2020, this portfolio generated a return of $1,285 million, compared to $795 million in 2019.

Real interest rates declined significantly in North America following declines in nominal yields as well as increased demand for inflation-linked bonds. In 2020, the average yield on the FTSE Russell RRB Overall Index declined from 0.43% to -0.42%. In the U.S., the real yield on 30-year Treasury Inflation-Protected Securities (TIPS) fell from 0.58% to -0.38%.

Break-even inflation rates (BEIRs) are a market-based measure of expected inflation, the difference between the yields of a nominal bond and an inflation-linked bond (e.g., TIPS) of the same maturity. In terms of BEIRs, 30-year RRB break-evens fluctuated massively during the year but ended 2020 roughly 6 basis points higher, from approximately 1.42% to 1.48%. U.S. inflation break-evens on 30-year TIPS closed 18 basis points higher year over year, from roughly 1.82% to 2.00%, after also fluctuating significantly during the year.

HOOPP added to its BEIR position in the second quarter at extremely favourable levels to increase its inflation-sensitive exposure.

## Real estate

At year-end, our real estate portfolio had a gross market value of $15.5 billion versus $14.6 billion at the end of 2019. Despite the pandemic causing global commercial real estate transaction volumes to decline by over 30% from 2019 levels, our transaction activity during the year included approximately $2.1 billion in new investments and commitments. Dispositions of non-core assets totaled $340 million.

Over the last five years, our real estate portfolio generated a currency-hedged return of 8.2%, $1.8 billion over the benchmark. In 2020, the portfolio produced a return of 0.2% on a currency-hedged basis, and $499 million in value added. The key factors impacting returns were:

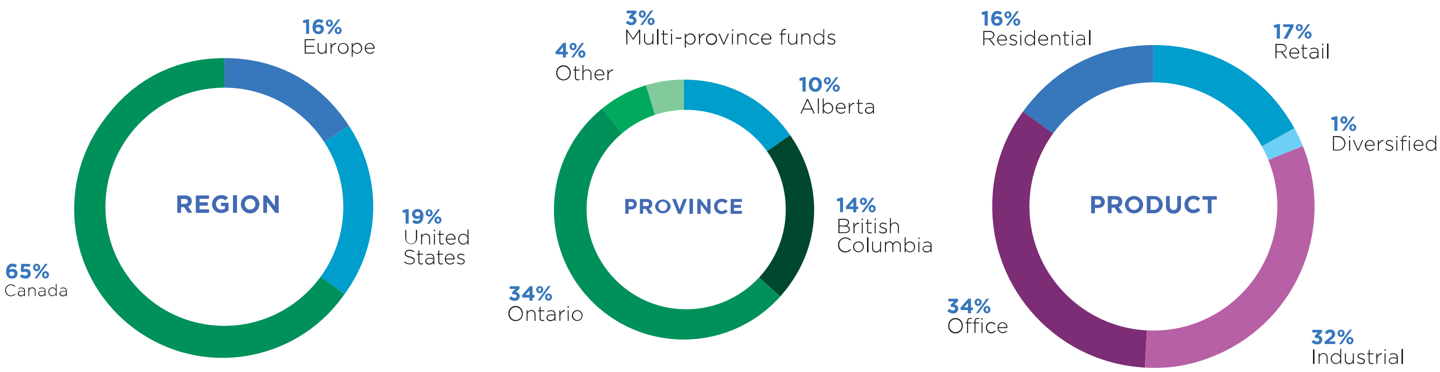
- **Negative impacts on our Canadian retail holdings:** Ongoing headwinds from e-commerce on shopping malls were exacerbated by the pandemic's impact on in-person shopping.
- **Negative impacts on our office portfolio:** The income return from this portfolio was offset by value adjustments to reflect that office users are not likely to start returning to the office in material numbers until later in 2021, which will increase near-term leasing risk. We expect this to normalize once COVID vaccinations are widely distributed.
- **Very strong performance of our industrial and logistics portfolio:** Across North America and Europe, this portfolio performed very well.
- **Increases in the value of our land holdings and developments in progress this year:** This also includes the effect of changing our fair value estimation from the cost approach to the more commonly used appraised value methodology.

In 2020 we put several building blocks in place that will drive future growth as we continue to increase the scale and scope of our real estate portfolio. Examples include:

- commencement of over 5 million square feet of new development projects, with an estimated completion value of $1 billion
- entry into strategic partnerships with leading specialists in the apartment, student housing, and industrial sectors in the U.S. to drive growth in that market

The following charts illustrate the global diversification and property type mix of HOOPP's real estate portfolio. We continue to expand our non-domestic portfolio, which grew by over $900 million and now represents 35% of our portfolio compared to 31% at year-end 2019. We also continue to expand our industrial footprint, where secular growth prospects and market fundamentals continue to be very positive. Our global industrial holdings grew by $1 billion and represent 32% of the portfolio, up from 27% at the start of the year. We also acquired key land sites in Canada, the U.S. and Europe totaling over 13 million square feet of development potential, which will drive further long-term growth in this sector.

## Real estate asset mix by region and product




# Return seeking portfolio discussion

## Public equities

Despite the sharp bear market in the first quarter, most global stock markets posted good returns for the year. The MSCI All Country World Index (ACWI) total return was 16.3%[2], and the S&P 500 total return was 18.4%[2]. Emerging markets also delivered returns in the mid-teens, supported by strong gains in the Chinese stock market. Equity returns in Europe were generally weaker, with the MSCI Europe index gaining just 5.3%[2]. Returns in Latin America were negative.

In our equity portfolios, HOOPP was able to use market weakness in early 2020 to add significant exposure to selected stocks of companies with strong businesses at attractive valuations. These stocks offered sustainable dividend yields significantly above the yields on fixed income securities. As markets normalized in the second half of the year, these equity positions delivered value to the Fund.

As we look forward, equity market valuations are particularly sensitive to increases in interest rates given the declines in rates in 2020.

**Canadian equities**

The Fund's Canadian equity portfolios returned 8.0% in 2020, versus 21.4% return in 2019.

The two strongest sectors in the Canadian market were the Technology and Materials sectors. The technology sector has become a more significant portion of the Canadian stock market over the past few years due to rapid growth at a handful of Canadian software companies. The materials sector was strong in part due to gold prices which rose through 2019 and the first half of 2020 as central banks eased policy. However, the energy sector fell 27%, as demand and prices for oil fell sharply due to economic weakness.

[2] U.S. dollars

#### U.S. equities

The Fund's U.S. equity portfolios posted a return of 18.6% in 2020, versus 30.3% in 2019.

The theme of growth and technology leadership was demonstrated in the U.S. where the Nasdaq Composite, an index dominated by stocks with strong growth potential, posted a total return of 44.9%[2], about 2.4 times the gains of the S&P 500. Financials fell as low interest rates reduced expectations for future revenue. Real estate stocks also fell with declines in rent collection, especially for retail, hotel and office properties.

#### International equities

The 2020 return for the Fund's International Equity Portfolio was 2.9%, versus 21.7% in 2019.

Returns were generally modest in Europe, though the MSCI Germany Index price return was 11.6%[2]. In Asia, the MSCI Japan index was up 14.5%[2] while the Hong Kong market posted modest gains of 5.8%[2]. Among Emerging Markets, the Chinese market was particularly strong. The MSCI China index gained 29.5%[2], reflecting China's relative success at controlling the pandemic.

## Private equity

HOOPP Capital Partners (HCP) selectively invests globally in:

- privately-held businesses that offer the potential for equity returns,
- private equity and private debt funds, and
- other private capital opportunities, including structured equity and private debt across the risk/return spectrum.

Private capital can provide an opportunity for HOOPP to earn attractive risk-adjusted returns due to the nature of the investment process. This process involves detailed due diligence of the underlying companies, better alignment of management teams to investment outcomes, and the ability to create securities with features not available in the public markets, including protections mitigating downside risk and providing for asset management rights in certain circumstances.

At the end of 2020, HCP had $11.5 billion invested, with a further $7.2 billion committed to private investments. The portfolio generated a currency-hedged return of 10.5% for the year compared to 14.0% in 2019 (the return on an unhedged basis was 10.3% in 2020 compared to 9.3% in 2019), exceeding its benchmark by $517 million. Over the prior five years, HCP generated a currency-hedged return of 14.5%, $3.2 billion over the benchmark. HCP's invested capital has increased by over $9 billion over the last decade and now includes a larger proportion of direct and co-investments as well as credit and structured equity investments with lower risk/return attributes.

The fair market value of the invested portfolio represents 11.1% of the total Fund.

[2] U.S. dollars

## Infrastructure

HOOPP Infrastructure (HI) was created in June 2019 to evolve and execute the Fund's infrastructure investing strategy. HI will invest globally in:

- privately-held infrastructure assets that offer the potential for strong risk-adjusted returns,
- a small number of private infrastructure funds, and
- other opportunities in infrastructure such as preferred equity and private debt.

HI is executing its mandate through a combination of direct deals, funds and related co-investments.

At the end of 2020, HI held:

- a portfolio of U.S. renewable power generation assets, in which HI invested $174 million of capital in 2020 with a further $57 million to be invested in 2021, and
- a $270 million interest in a European fibre optic communications infrastructure company (a co-investment held alongside one of HI's externally managed fund commitments).

Through private infrastructure funds, a further $312 million was invested along with $980 million of unfunded capital commitments.

In any new private capital strategy, HOOPP expects to experience a "J-curve" in the early phases of building the portfolio. J-curve describes the fact that early in the development of the portfolio, fees and expenses often exceed investment returns, while assets are generally held at or near their original cost early in their hold period. HI outperformed the expected J-curve in 2020, generating a positive return of $31 million or 7.3% for the year.

## Corporate credit

The Fund gains exposure to corporate credit through a combination of corporate bonds, structured products and derivatives. Overall, the credit portfolio had a benchmark return of negative $23 million and a value-add of $374 million, for a net total return of $351 million for the asset class.

The Barclays Aggregate U.S. Credit Index Options Adjusted Spread for corporate bonds started off the year at 93 basis points and ended the year essentially unchanged at 96 basis points. Over the course of the year, however, there was significant volatility, with spreads as wide as 373 basis points in late March. The five-year maturity investment-grade credit derivative index (CDX IG) performed similarly, starting the year at 45 basis points and ending the year at 50 basis points, with a wide spread of 151 basis points in March.

In 2020, like all other risk assets, credit spreads experienced a significant selloff in the first quarter due to shutdowns in response to the global pandemic. This was followed by a strong rally in risk assets for the rest of the year as a result of unprecedented fiscal and monetary stimulus programs launched by major governments and central banks. Our portfolios were positioned defensively for the second half of the year, led by hedges in the general credit portfolio.

## Long-term option strategy

The Long-Term Option Strategy combines equity index exposure with equity index options and was wound down at the end of the year. It was positioned defensively during 2020 to reduce HOOPP's aggregate equity exposure. This portfolio had a loss of $31 million in 2020, compared to a loss of $629 million in 2019.

## Other return seeking strategies

**Asset allocation strategies**

HOOPP engages in the strategic reweighting of major asset class risks (equities, fixed income and corporate credit) to manage the risk and return of the Fund. In 2020, this program generated a loss of $95 million, largely due to losses on our holdings of long-term call options on equity indices, which lost money as markets fell and market volatility rose early in the year. This program had a loss of $158 million in 2019.

**Absolute return strategies**

Absolute return strategies are designed to earn positive returns with minimal sensitivities to interest rates, credit or equities. These strategies had a loss of $487 million in 2020, compared to a gain of $233 million in 2019.

# Investment outlook

Looking forward, there is potential for significant changes to the investment environment. Lower interest rates and asset discount rates may mean higher valuations for many assets now at the expense of future expected returns. Fiscal policy will also likely play a larger role in the economy and therefore affect capital markets in the future, given the extent of accommodative measures in response to the pandemic. The pandemic's long-term effects on financial markets and economies are difficult to predict, and will depend on many things, including the duration and severity of pandemic-related restrictions, and the availability and distribution of vaccines. In these increasingly uncertain times, our liability-driven investing approach will adapt to the shifting investing environment.

In concert with our Board, HOOPP's management team seeks to thoughtfully diversify our portfolio, both geographically and through allocations to a wide array of strategies at an appropriate scale for the Fund's size. Our goal is to improve the Fund's resilience to a variety of outcomes including those that previously seemed unlikely, such as increased inflation, all while seeking to avoid excessive losses. To that end, we continue to evolve our risk management approach and all of its related aspects. Our strong historical performance helps to put us in a position of relative advantage to continue to protect our members' interests and pensions, today and for many years to come.

# Sustainable investing

Sustainable investing means investing in a way that leverages insights from environmental, social and governance (ESG) factors to enhance investment performance. ESG factors can take the form of risks or opportunities and can be relevant to an individual investment or the broader investment strategy throughout the investment life cycle. For us, the goal of sustainable investing is to help achieve our mission in a way that aligns with our values and promotes strong relationships with stakeholders.

Sustainable investing continues to be a growing area of focus. In 2020, we created an internal advisory group comprising investment management team members from a range of levels and covering our entire investment portfolio. Our ESG Advisory group meets regularly to share ESG information, resources, and practices. This advisory group also contributed to refreshing our sustainable investing approach in order to articulate a framework, as shown below:

## Our sustainable investing framework


**Integration**

When we evaluate new investment opportunities, our investment teams integrate ESG factors in their analysis and decision-making. This integration helps broaden the investment team's view of the risks and opportunities inherent in each investment. Once an investment is made, we continue our sustainable investing approach through our stewardship activities, which include proxy voting, engagements with companies and asset management activities.

**Stewardship**

As an investor in public companies, HOOPP has the right to vote on certain company matters, such as the election of directors. As an active steward, we designed our own Proxy Voting Guidelines to promote long-term shareholder value, which helps generate the investment returns needed to pay pensions. These Proxy Voting Guidelines are available on **hoopp.com**.

Beyond voting proxies, our investment teams also meet with companies to encourage positive change on ESG matters. Companies are engaged on a one-on-one basis, as well as collaboratively with other like-minded investors. While we typically engage with public companies, we also engage with private companies that may pursue initial public offerings.

ESG considerations are embedded into asset management activities for private investments. For example, the Plan's Real Estate group has developed an industry-leading sustainability program that is a core part of its portfolio management activities. The Real Estate team works closely with its partners to advance sustainability across the real estate portfolio. At the 2020 Reuters Responsible Business Awards, HOOPP was recognized with a special mention for our transformative approach to embed assessment of climate change risk exposure into the management of our property portfolio.

**Fostering sustainability**

In 2020, our CEO joined those of Canada's other leading pension plan investment managers to issue a joint statement calling for companies to provide standardized ESG data to both strengthen investment decision-making and better assess and manage their collective ESG risks. This important statement builds on our participation in several organizations focused on advancing key ESG initiatives. HOOPP is a member of the:

- **Canadian Coalition for Good Governance (CCGG)**, which promotes strong governance practices in Canadian companies
- **30% Club Canadian Investor Group**, which promotes greater diversity on company boards and management teams
- **Sustainability Accounting Standards Board (SASB) Alliance**, which promotes standardized, industry-specific and materiality-based standards that enable businesses around the world to identify, manage and communicate financially material sustainability information to their investors

HOOPP is a signatory to the:

- **Carbon Disclosure Project (CDP)**, which encourages investors, companies, and cities to build a sustainable economy by measuring and understanding their environmental impact
- **Tobacco-Free Finance Pledge**, partnering with the not-for-profit Tobacco Free Portfolios to make a public commitment to sustainable finance and global health

## Climate change

Managing risks to the investment portfolio from climate change continues to be an area of focus. We anticipate that our changing climate has the growing potential to alter the risks and opportunities our Plan faces, through physical impacts as well as social, technological, economic, legal and policy responses to climate change.

As a formal supporter of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD), which developed a voluntary framework for climate change reporting, we have begun to apply its recommendations in the following four categories: governance, strategy, risk management, and metrics and targets.

**The Task Force on Climate-related Financial Disclosures (TCFD)**

- was launched by the Financial Stability Board, which itself was established by the G20 following the global financial crisis to promote international financial stability
- consists of 1700+ supporters from 77 countries

**Governance**

- In 2020, our Board added climate change risk to our investment risk framework, which forms part of our investment policies.
- Regular updates are presented to our Board on our sustainable investing activities, including those related to climate change.
- Like all ESG considerations, our management team and investment teams integrate climate-related issues into their decision-making.

**Strategy**

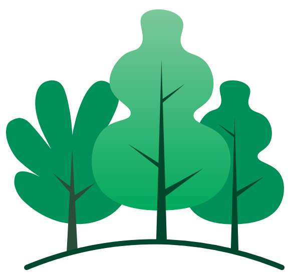
- A climate risk assessment of our Real Estate portfolio modelled on a global warming scenario called RCP8.5 — a broadly used, high baseline greenhouse gas (GHG) emission scenario — looked at the risk to properties from the physical impacts of climate change and found that flooding was a top risk. In response, we shared flood resilience best practices with our property managers.
- For 2021, we are exploring tools to conduct total portfolio climate scenario analysis across a variety of scenarios, including one that is aligned with the Paris Agreement, as well as assess climate risk to our Fund.

**Risk management**

- Climate risk has been added to HOOPP's risk framework. More information on HOOPP's risk management can be found in the *Risk management and internal controls* section beginning on page 63.
- Climate risk, along with other ESG risks, are considered when prospective investments are evaluated.

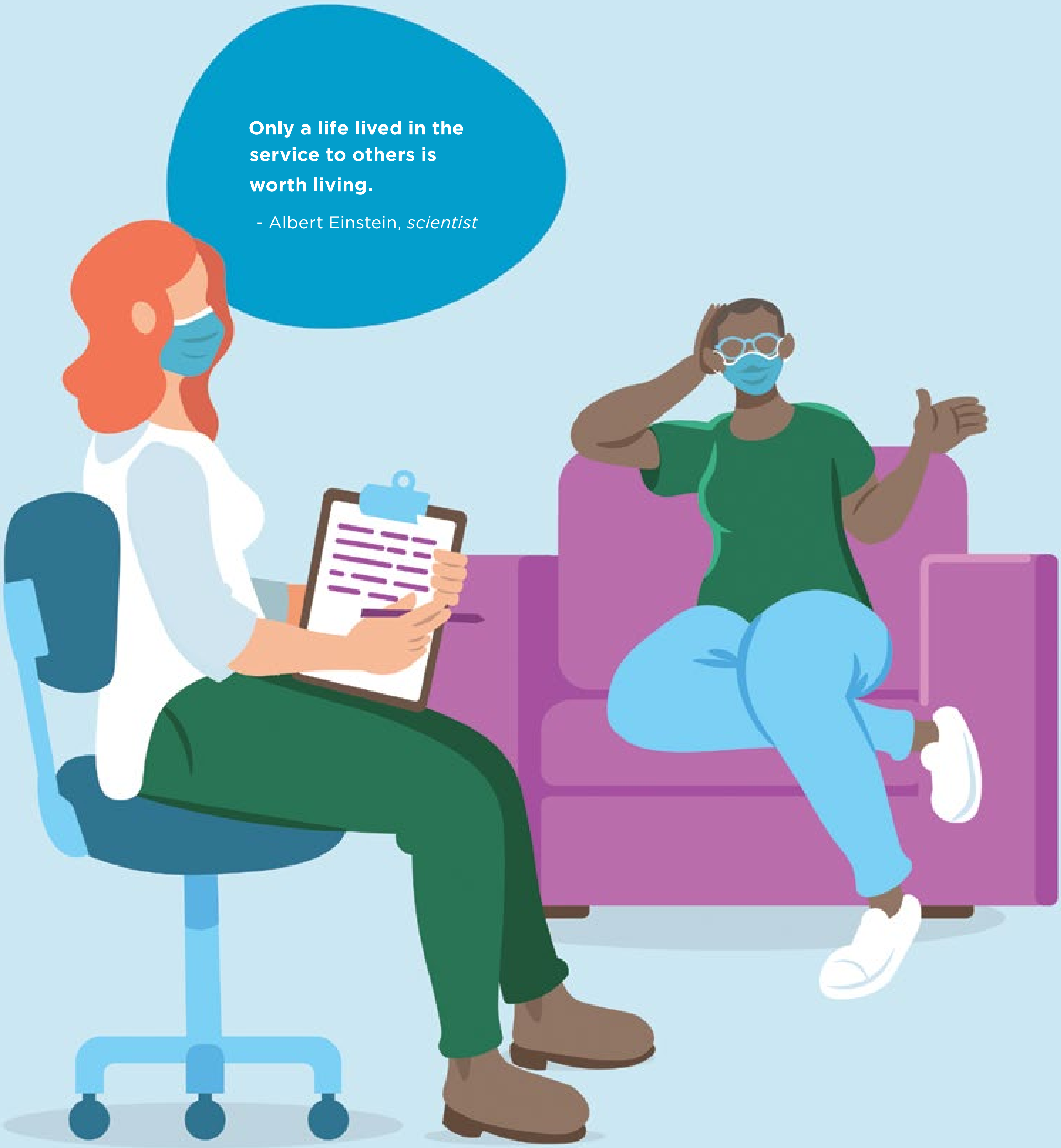
**Metrics and targets**

- We are investigating a long-term GHG emissions reduction target for our real estate portfolio and are planning to expand the scope of our carbon footprint measurement to additional asset classes over the coming years.
- HOOPP has measured GHG emissions for our real estate portfolio since 2008 and we were the first Canadian pension plan to release a GHG policy for our real estate portfolio, also in 2008.
- We have two additional climate-related indicators that we track for our real estate portfolio:
  - climate resilience, which tracks the percentage of properties managing climate risks
  - renewable energy as a percentage of property-controlled electricity
- Our latest figures for the three climate action indicators are shown on the next page.

| | Indicator | 2019 value |
|---|---|---|
|  Climate action | Climate resilience (% of properties managing risks) | 26% |
| | Greenhouse gas emissions ('000 $tCO_2e$*) | 251 |
| | Renewable energy (% of property-controlled electricity) | 3% |

* $tCO_2e$: Tonnes of carbon dioxide equivalent (expressed in thousands). The greenhouse gas value includes emissions from operated and tenant spaces in buildings that are at least 25% owned by HOOPP. All buildings owned for the entirety of 2018 and 2019 are included. Where data is not available, emissions are estimated based on industry averages for electricity and natural gas consumption.

The ESG landscape continues to change as new risks and opportunities emerge. We will continue to deepen our focus on climate change as investors, governments, companies and society work to address the climate crisis. We know that we have an important role to play as we ensure that sustainable investing is an integral part of how we invest and deliver value to our members.


**Only a life lived in the service to others is worth living.**
- Albert Einstein, *scientist*

# Member and employer services

In 2020, as the impact of the COVID-19 pandemic was felt across our province's healthcare system, we stayed focused on the needs of our members and employers. These have been extraordinary circumstances for healthcare workers and their employers, and we are grateful for their tireless commitment to our communities. Our goal in 2020 was to provide members with peace of mind in knowing that we are here for them and that HOOPP pensions are safe and secure.

We did that by continuing to offer the service and support our members need to understand their pension and make informed decisions about their benefit. We provided support in a variety of ways through the transition to a physically distanced work environment, including print and digital communications, one-on-one contact with our Member Services team and online seminars. We also worked diligently to help our employers support their staff and keep them informed through the rapidly evolving circumstances.

An important part of this effort was making Plan changes to help provide flexibility for our members as they dealt with many difficulties resulting from the pandemic. For example, for members on new unpaid provincial emergency leave, we provided service in the Plan at no cost to them or their employers. We also extended deadlines related to buybacks and disability benefits, and we extended the timeline to make pension contributions following a leave of absence. To ensure the changes were implemented seamlessly, we moved quickly to provide our employers with administrative support, as well as additional resources, such as webcasts and education.

The Plan updates, in combination with our decision in mid-March to have our staff work remotely, were designed to help us continue effectively supporting our members and employers while also following public health guidance. Knowing that many members were experiencing disruptions in their work, we wanted to assure them their pensions were protected and that we were here for them, whenever and however they needed us.

## Our 'personal service' commitment

Over the past few years, we have modernized our pension administration system and the many advantages of doing so became abundantly clear in 2020. Chief among them was our ability to further deliver on an important goal: provide personal service to our members.

We provide members with a range of robust digital tools through HOOPP Connect, our secure member site, where they can access their pension information. Our Member Services team works closely with members to help them understand the value of their pension and how it works. For members who are going through a life event such as retirement or a change in employment, we provide dedicated one-on-one assistance to help them make informed decisions about their pension. This approach helps us build a long-lasting relationship with our members. Our hope is that, during these tumultuous times, this type of personal service also provided members with a sense of security and peace of mind related to their pension.

We have seen steady progression in the use of technology by our members and this trend accelerated in 2020, driven at least partly by physical distancing restrictions. In March, we made the decision to indefinitely shift our in-person pension education seminars to online webcasts. Based on event attendance and feedback, members were very satisfied with the new format. These seminars continue to be a vital channel for us to share information, answer questions and provide members with pension education.

Our members gravitated towards the convenience and ease of digital information, with more registrations on HOOPP Connect. Members came to the site regularly to review their pension or banking information, maintain or update beneficiary information and use features like our pension estimator calculator, which provides estimates based on customizable retirement scenarios.

It is important to note that we see this growing use of technology as a complement to — rather than a replacement for — in-person service. We look forward to the day when we can resume providing an option for in-person meetings and other activities that are in keeping with our members' personal communication preferences.

We also continued to stay connected with HOOPP employers. On top of the overall value we provided by managing pensions on their members' behalf, we offered assistance with regular administrative activities, coupled with COVID-19 related support. We also engaged our employers in a review of key administrative Plan obligations to ensure that they are aware of their roles and responsibilities in successful administration of the Plan. This review helped ensure that employers could identify gaps and address any outstanding issues.

## A snapshot of the Plan and our membership

Again in 2020, the number of members and employers in the Plan continued to grow. An increase in employers offers more stability, and more options for members who are changing jobs and want to continue to build their pension.

Our current contribution rates have been in place since 2004, and they will remain unchanged until at least the end of 2022; this is one way to help keep the Plan affordable for employers. In 2020, we also made changes to how commuted values are calculated to help ensure our Plan's long-term sustainability. And through it all, HOOPP continued to pay pensions and deliver strong returns in a sustainable way, ensuring the long-term health and value of the Plan.

The key metrics on the next two pages provide a snapshot of the Plan and our membership as at Dec. 31, 2020.

**398,324**
Total members

**248,260**
Active members

**114,300**
Retired members

**35,764**
Deferred members

**Average new annual pension in 2020**

**$29,700**

**Cost-of-living adjustment (COLA) for retired and deferred members:**

**2.25%**
effective April 1, 2020

**Plan demographics**

**66%**
of active members work full-time

**34%**
of active members work part-time

## Total number of employers:

# 614

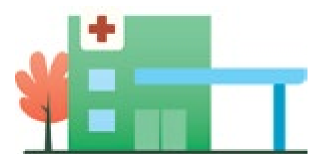
**167** small healthcare organizations

**141** hospitals

**85** service providers

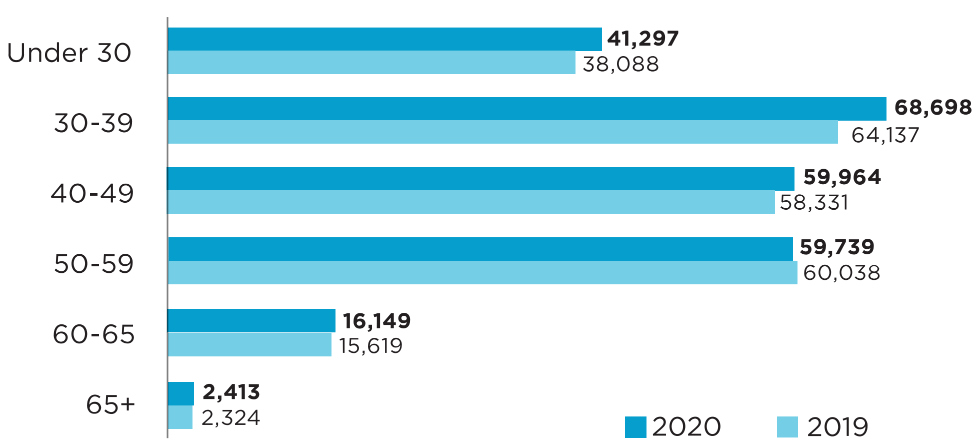
**84** family health teams

**72** foundations

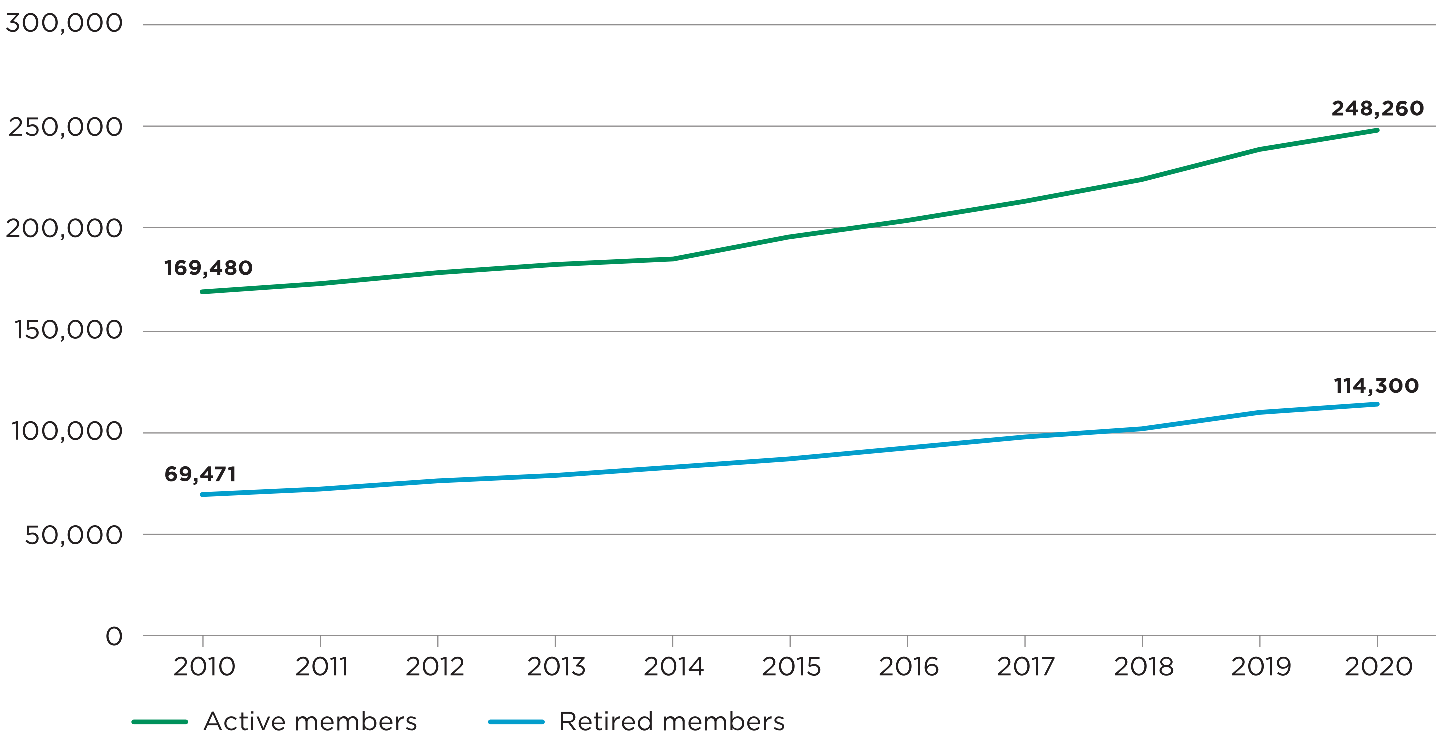


**65** community health centres

### Number of active members - 2020 vs. 2019



## Active and retired member growth




# The value of a secure pension

As part of our advocacy efforts, we continued to commission research that promotes the value of Canada-model defined benefit pension plans; these plans are shown to be the most efficient way to save for retirement. We regularly share our key findings on **hoopp.com**, as well as with governments and other key stakeholders, including our employers.

For healthcare organizations of all sizes, our ongoing research shows how offering a workplace pension as part of a compensation package is an effective way for employers to retain and help support employees, and enhance overall productivity.

From our latest research in spring 2020, we learned that improving retirement security outcomes remains a priority for Canadians. Our public opinion survey of 3,500 people, conducted by Abacus Data, showed that despite the stress caused by pandemic-related economic challenges:

- more Canadians are worried about their retirement security (55%) than their job security (44%)
- three out of four Canadians (74%) would accept a slightly lower salary in exchange for a better (or any) pension plan
- 72% of Canadians agree there is an emerging retirement income crisis

These results send a clear message that the majority of Canadians wants better retirement security and affordability. And they serve as an important reminder for HOOPP members and employers about the value of the Plan.

# People and culture

At HOOPP, we foster and maintain a diverse, high-performance workplace that inspires staff to do their best work, and bring forward innovative approaches and solutions. This environment creates opportunities for our employees to continuously learn and grow as we deliver on the pension promise.

Our core values – professional, accountable, collaborative, compassionate and trustworthy — are the foundation for what we do every day. We believe that a strong organizational culture, built on these values, is paramount to our overall success. This guiding principle served us well in 2020 as we adapted to challenging circumstances to continue to serve our members, while supporting our employees' well-being.

## The importance of equity, diversity and inclusion

We know that promoting a culture of respect, fairness and inclusivity, helps employees feel safe, respected and valued. This encourages them to confidently share their thoughts and ideas. Like many organizations, we also know that we have more to do in ensuring that our workplace is free of barriers and discrimination in all forms. We continued to make significant progress on these fronts last year.

One very important step for HOOPP was our decision to support the BlackNorth Initiative whose pledge of commitment was signed by our CEO in July 2020. This initiative is dedicated to removing systemic barriers and increasing Black representation at senior management and executive levels in corporate Canada. We are pleased to be among the more than 300 organizations that have signed on, and we have proudly encouraged suppliers and vendors to do the same. We continue to look for similar initiatives that provide the opportunity to offer our support to additional communities.

We are making significant efforts to add diverse talent to our workforce, in part by building on relationships with recruitment organizations that work with diverse communities. We continue to explore ways to better understand and track the diversity of our workforce so that we can effectively monitor our progress in this area. In 2020, we also partnered with groups such as Catalyst and Women in Capital Markets to help expand our diversity and inclusion efforts.

We continue to build on educational programs supporting an inclusive culture, including staff workshops that promote respect in the workplace and help us identify and understand unconscious bias. In 2020, we also launched a range of Employee Resource Groups (ERGs) to help us connect, support and learn from staff members with shared interests and life experiences. These groups play a central, grassroots role in our diversity and inclusion efforts empowering employees to get involved and educate others. We look forward to learning a great deal from our ERGs and believe they will help us further enhance our culture.


From caring
comes courage.
- Lao Tzu, philosopher

## Talent development

It is our goal to establish a culture of continuous learning that develops employee skills for now and in the future. Each employee has a development plan and we actively encourage staff to update their skill sets and learn new ones, giving them the ability to branch out into new areas of the organization. This culture of skill development is critical to maintaining our high-performance culture. It fosters innovation and curiosity, while contributing to high retention rates (also reducing costs). It also strengthens our organization and is a key driver of bottom-line results.

In mid-March, as the initial impacts of the COVID-19 pandemic were being felt, we announced an organization-wide mandate to work from home. We did this to protect the health of our approximately 700 staff members and to do our part to adhere to public health directives. By quickly and efficiently shifting our training and development programs from in-person to online, we were able to provide our staff with a full slate of learning opportunities through the rest of the year. We found our employees eager for these experiences and opportunities to connect.

We also increased regular internal communication and enhanced our online educational resources, with an emphasis on physical and mental health and working effectively in a virtual environment. This combined approach helped our staff stay safe, healthy and engaged in their work. It also ensured that we could keep our organization running smoothly, to provide high levels of service to members and employers.

## Giving back

Inspired by the compassion of our members, we are always looking for opportunities to give back to the communities in which we work and live. We encourage our staff to participate in charity and fund-raising events throughout the year and, despite the challenges the COVID-19 pandemic presented, 2020 was no different.

For 23 years, we have hosted an annual campaign to raise funds for the United Way of Greater Toronto. In 2020, thanks to the generosity of our employees, we raised more than $564,000 for the organization. These funds will help support those in need in our community.

We also encouraged our employees to:

- **donate to a holiday-giving campaign for Mooreland Kids**, a charity that works with children and families from low-income communities in the Greater Toronto Area. Thanks to our employees' generosity, we were able to assist 163 families in need over the holiday season.
- **volunteer with the Toronto Region Immigrant Employment Council (TRIEC) mentoring program**, which matches people who have recently immigrated to the Toronto area with mentors to help strengthen their professional networks and help with job search and career development; this was our first year of involvement with the program, and based on positive feedback from staff, we hope to expand our participation going forward.

These initiatives are an important part of our corporate culture; they align with our core values while giving employees an opportunity to reflect on their own journey and make connections with the broader community.

## Top GTA employer

In 2020, HOOPP was named as a Top Employer in the Greater Toronto Area for 2021. This recognition serves as confirmation of our progress on many internal initiatives, some long-standing and others more recent. It evaluates employers on many important areas, such as physical workplace, work and social atmosphere, benefits, and training and skills development.

We believe that being a Top Employer will help strengthen and amplify our brand, as well as attract and retain the best talent. This award also reinforces our view that having a diverse and collaborative work environment can help further our mission to deliver on the pension promise.

GREATER TORONTO'S TOP 2021 EMPLOYERS

# Risk management and internal controls

HOOPP must manage several risks well to achieve our objectives. Our paramount risk is funding risk, which is the risk that future returns and asset growth will be insufficient to fund Plan liabilities. A failure to manage funding risk effectively could prevent us from paying promised pension benefits to our Plan's beneficiaries. For this reason, this risk gets the most time and attention from both our investment management team and our Board.

As a large and growing pension plan, we also face many strategic, investment, and operational risks, such as those related to reputation, plan sustainability, liquidity, human capital, and legal and tax compliance. All of these risks are identified and managed within our firm-wide Enterprise Risk Management (ERM) policy and procedures. Within this framework, roles and responsibilities are set out for risk identification, mitigation, reporting and oversight. Our management team assesses entity-level risks at least annually. The results of these assessments are shared with all our Board members.

In 2020, we took significant steps to centralize our risk functions by introducing a new Risk division and hiring our first Chief Risk Officer. This division will ensure our risk systems, practices and monitoring continue to evolve to meet our future needs, while providing expertise and comprehensive risk reporting to the Board.

To manage the risks affecting the Plan and the Fund, we maintain governance and risk management programs and processes that include:

- **programs and processes** for managing the recruitment, retention, performance and development of HOOPP staff, our most critical resource;
- **a Code of Business Conduct, Respect in the Workplace (Harassment and Violence) Policy and supporting policies** that emphasize:
  - our commitment to members and other beneficiaries,
  - the roles and responsibilities of Board members, staff and HOOPP's agents and advisors in helping to fulfill the commitment, and
  - the responsibilities and core values expected of our staff in the workplace;
- **an efficient and effective Board and Committee reporting and decision-making process;**
- **robust stress testing tools** that are custom-designed to:
  - measure the impact of potential future economic scenarios on both Fund assets and Plan liabilities
  - best manage the risks relating to investment assets, pension obligations payable in the future, and the investment strategies employed to achieve the required risk-adjusted returns;
- **an internal audit team** that provides independent assurance to management, the Audit & Finance Committee and the Board relating to the effectiveness of operational controls;
- **an expanded financial governance and tax function** to further bolster our internal capabilities, as we continue to navigate an increasingly complex regulatory and investment environment;
- **a Privacy Office** that works with HOOPP staff members to develop and maintain appropriate policies and procedures to protect the personal information of our members and staff;
- **data security and ongoing maintenance of records and data retention schedules** in accordance with both Board and organization-level policies; and
- **disaster recovery and business continuity programs** that are mature and tested to help maintain and, where needed, improve the resiliency of our core operations and processes in the event of disruption.

## Internal controls over financial reporting

As part of our commitment to good governance, we follow 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.

Our President & CEO and Senior Vice President, Finance & Chief Financial Officer are responsible for ensuring that procedures are in place to maintain appropriate internal controls over financial reporting (ICFR) 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).

In 2020, we 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 our internal controls over financial reporting.

The results of our evaluation of the effectiveness of our ICFR confirm they are properly designed and operating effectively to provide reasonable assurance regarding the reliability of financial reporting as at Dec. 31, 2020.

# Cost management

HOOPP incurs costs to invest Fund assets and to administer Plan benefits on behalf of our membership. We ensure that we are cost-effective by:

- linking planned spending to our strategic priorities through an annual planning process
- having our budgets reviewed and approved by both our management team and our Board
- monitoring our spending continuously

## Total operating costs

Our total operating costs were $303 million, or 31 basis points of our average net assets available for benefits, similar to prior years. Based on publicly available information, HOOPP's operating costs compare favourably to similar Canadian pension plans.

Our operating costs are categorized into plan administration expenses and investment operating expenses.

## Plan administration expenses

HOOPP's cost to administer the Plan was $108 million or $299 per member in 2020, an increase of $13 per member compared to 2019. This increase was driven by investments in staff and technology to support our growing membership and to continually enhance the service that we provide. HOOPP will continue to spend prudently to deliver on the pension promise to our members in a cost-effective way.

## Investment operating expenses

In 2020, HOOPP incurred $195 million in operating expenses to support the investment of assets in-house, compared to $172 million in 2019. The year-over-year increase was a result of strategic investments in staffing and technology to support new income-generating opportunities and manage risk.

## Total cost of investing

Our total cost of investing comprises the investment operating expenses described above and direct investment costs. Direct investment costs include management fees related to external third-party managers, and transaction costs that are directly attributable to the acquisition or sale of investments. These direct investing costs are expensed as incurred and are reflected in our net investment income. In 2020, HOOPP incurred $202 million in direct investment costs.

Our total cost of investing represented 40 basis points of our average net assets available for benefits in 2020, an increase of 3 basis points compared to 2019. CEM Benchmarking, an external consulting company found that HOOPP's total cost of investing in 2019 was substantially lower than the Canadian peer median. Controlled cost growth is expected to continue over the coming years as we seek new opportunities for fund returns and mature as an organization.

# Financial statements

as at December 31, 2020

# Management's Responsibility for Financial Reporting

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

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

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

The financial statements have been prepared by management and approved by 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.

Jeff Wendling

President & Chief Executive Officer / Chief Investment Officer

Barbara Thomson

Senior Vice President, Finance & Chief Financial Officer

March 24, 2021

# Actuaries' Opinion

Mercer (Canada) Limited (Mercer) was retained by the Board of Trustees of the Healthcare of Ontario Pension Plan (the Board) to perform an actuarial valuation of the Plan as at December 31, 2020. The purpose of this valuation is to determine pension obligations of the Plan as at December 31, 2020, for inclusion in the Plan's financial statements in accordance with Section 4600, *Pension Plans*, of the Chartered Professional Accountants of Canada (CPA Canada) Handbook - Accounting.

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

The results of the valuation disclosed total going concern pension obligations of $79,852 million in respect of service accrued to December 31, 2020 and a smoothed value of net assets of $95,197 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, 2020 and members' pay data provided as at December 31, 2019, all of which was projected to December 31, 2020, using management's estimates of experience for the intervening periods;
- the benefits specified by the terms of the Plan including an estimate of the 2020 CPI adjustment which will become effective April 1, 2021 in respect of all pensioners' and deferred vested members' benefits;
- subsequent events, if any, that were known by February 24, 2021, the date when our related report was completed, and that materially impacted the valuation; and
- assumptions about future events (for example, economic factors such as future rates of inflation and returns on the pension fund, as well as demographic factors) which were developed by Plan management in consultation with Mercer and have been adopted by Plan management and approved by the Board.

Changes have been made to the actuarial assumptions affecting the pension obligations since the previous valuation for the purpose of the Plan's financial statements at December 31, 2020, as described in the notes to the financial statements.

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

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

*In our opinion,*

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

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

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

**Mercer (Canada) Limited**

Scott Clausen

Fellow, Canadian Institute of Actuaries

Joseph Fung

Fellow, Canadian Institute of Actuaries

March 24, 2021

# Independent auditor's report

To the Board of Trustees of
Healthcare of Ontario Pension Plan

## Our opinion

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of Healthcare of Ontario Pension Plan (HOOPP) as at December 31, 2020 and 2019 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.

### *What we have audited*

HOOPP's financial statements comprise:

- the statements of financial position as at December 31, 2020 and 2019;
- the statements of changes in net assets available for benefits for the years then ended;
- the statements of changes in pension obligations for the years then ended; and
- the notes to the financial statements, which include significant accounting policies and other explanatory information.

## Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the financial statements* section of our report.

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

### *Independence*

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

## Other information

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

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

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

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

## Responsibilities of management and those charged with governance for the financial statements

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

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

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

## Auditor's responsibilities for the audit of the financial statements

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

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

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

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

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

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

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

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

PricewaterhouseCoopers LLP

**Chartered Professional Accountants,**
**Licensed Public Accountants**

Toronto, Ontario

March 24, 2021

# Statements of Financial Position

| As at December 31 | 2020 | 2019 |
|---|---|---|
| ($ millions) | | |
| **Assets** | | |
| Investment assets (note 2) | **$ 191,386** | $ 180,438 |
| Contributions receivable | | |
| Employers | **131** | 109 |
| Members | **98** | 87 |
| Other assets (note 7) | **153** | 192 |
| | **191,768** | 180,826 |
| **Liabilities** | | |
| Investment liabilities (note 2) | **87,638** | 86,581 |
| Other liabilities | **147** | 143 |
| | **87,785** | 86,724 |
| **Net assets available for benefits** | **103,983** | 94,102 |
| **Pension obligations** (note 11) | **79,852** | 73,547 |
| **Surplus** (note 11) | **$ 24,131** | $ 20,555 |

*See Description of Plan and accompanying Notes to Financial Statements.*

**ON BEHALF OF THE BOARD OF TRUSTEES**

Adrian Foster

Chair of the Board

Dan Anderson

Vice Chair of the Board

Jim Flett

Chair, Audit
& Finance Committee

March 24, 2021

# Statements of Changes in Net Assets Available for Benefits

| For the years ended December 31 | 2020 | 2019 |
|---|---|---|
| ($ millions) | | |
| **Net assets available for benefits, beginning of year** | **$ 94,102** | $ 79,019 |
| **Investment operations** | | |
| Net investment income (note 4) | **10,661** | 13,662 |
| Investment operating expenses (note 10) | **(195)** | (172) |
| | **10,466** | 13,490 |
| **Plan operations** | | |
| Contributions (note 8) | | |
| Employers | **1,458** | 1,371 |
| Members | **1,257** | 1,190 |
| Transfer of assets from merged pension plans[1] | **-** | 2,065 |
| Benefit payments (note 9) | **(2,989)** | (2,737) |
| Refunds and transfers (note 9) | **(203)** | (197) |
| Plan operating expenses (note 10) | **(108)** | (99) |
| | **(585)** | 1,593 |
| **Change in net assets available for benefits** | **9,881** | 15,083 |
| **Net assets available for benefits, end of year** | **$ 103,983** | $ 94,102 |

*See Description of Plan and accompanying Notes to Financial Statements.*
*[1] During 2019, five pension plans merged into HOOPP resulting in a transfer of assets of $2,065 million to the Plan.*

# Statements of Changes in Pension Obligations

| For the years ended December 31 | 2020 | 2019 |
|---|---|---|
| ($ millions) | | |
| **Pension obligations, beginning of year** | **$ 73,547** | $ 65,128 |
| **Changes in pension obligations** | | |
| Interest accrued on benefits | **3,679** | 3,490 |
| Benefits accrued | **3,255** | 2,868 |
| Amendments to the plan (note 11) | **54** | 253 |
| Changes in actuarial assumptions (note 11) | **3,047** | 2,842 |
| Estimated experience gains (note 11) | **(538)** | (64) |
| Assumption of pension obligations from merged pension plans[1] | **-** | 1,964 |
| Benefits paid (note 9) | **(3,192)** | (2,934) |
| | **6,305** | 8,419 |
| **Pension obligations, end of year** | **$ 79,852** | $ 73,547 |

*See Description of Plan and accompanying Notes to Financial Statements.*
*[1] During 2019, five pension plans merged into HOOPP resulting in the Plan assuming pension obligations of $1,964 million.*

# Notes to Financial Statements

For the years ended December 31, 2020 and 2019

## 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 appoints 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 Regulatory Authority of Ontario (FSRA), 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 in Canada. The Plan may be subject to taxes as a result of income earned in other jurisdictions.

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 plus special payments required to amortize unfunded pension obligations less any surplus amortization amounts, if applicable.

### Retirement Pensions

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

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

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

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

## Disability Benefits

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

Alternatively, disabled members who may not qualify for an immediate disability pension may instead be eligible for a waiver of contributions and continuation of service accrual until the earlier of age 65 or 35 years of contributory service.

## Death Benefits

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

## Portability

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

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

## Inflation Protection

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

For retirements and deferred retirements occurring after 2005, the Board may approve an annual increase of up to 100% of the increase in CPI in respect of pensions earned for service after 2005. In all cases, the increases in CPI are limited to an annual maximum of 10%.

## Retirement Compensation Arrangement

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

# Note 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

## Basis of Presentation

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

The financial statements comply with the financial reporting requirements of the PBA and address certain disclosure requirements issued by FSCO[1] in 2013 and amended in 2014. The requirements are addressed by disclosures within certain notes to the financial statements.

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

## Investments

### *Valuation*

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

The quoted market price, when available, is used to measure fair value. When the quoted market price is not available, management uses appropriate valuation techniques to determine fair value. The valuation techniques include discounted cash flows, earnings multiples, prevailing market rates for comparable instruments with similar characteristics and/or in similar industries, pricing models and management's best estimates. Inputs used to determine fair values include contractual cash flows and interest rates, interest rate discount curves, credit spreads and volatilities. The output of any pricing model is an approximation of a fair value that cannot be determined with certainty and valuation techniques employed may not fully reflect all factors relevant to the investments held.

The fair values of investments are determined as follows:

i. Cash is recorded at cost, which is equivalent to fair value.

ii. Securities purchased under resell agreements and securities sold under repurchase agreements are accounted for as collateralized lending and collateralized borrowing transactions, respectively, and are recorded at cost, which together with accrued interest approximates fair value due to their short-term nature.

iii. 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.

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[1] Prior to June 8, 2019, HOOPP was registered with the Financial Services Commission of Ontario (FSCO). HOOPP is now registered with the Financial Services Regulatory Authority of Ontario (FSRA). This change is a result of the Ontario Minister of Finance decision to establish a new regulatory body, namely the Financial Services Regulatory Authority of Ontario. Until FSRA issues new regulatory direction, all existing regulatory guidance issued by FSCO remains in force.

iv. 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.

v. Commercial loans are valued using discounted cash flows based on current market yields on comparable securities.

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 private equities and special situations include investments held directly and through ownership in limited partnership funds. Directly held equity investments are valued at estimated fair value using appropriate valuation techniques such as capitalized earnings or discounted cash flow methodologies, or based on information provided by external fund managers. In the year of acquisition, cost is used as an approximation for fair value, unless there is evidence of a significant change in value. Investments in limited partnership funds are valued at estimated fair value based on financial information provided by the funds' General Partners under limited partnership agreements (unless a specific and conclusive reason exists to vary from the value provided by the General Partners). Debt investments are valued using discounted cash flows based on current market yields on comparable securities.

viii. Investments in real estate include investments held directly and through ownership in limited partnership funds. Direct investments are valued at estimated fair values based on external appraisals, which are completed by independent appraisers accredited under the locally prevailing professional governing bodies. HOOPP's semi-annual appraisal process is completed mid-year (effective June 30) and at year-end (effective October 31, November 30 and December 31). HOOPP requires external appraisers to provide a reaffirmation letter for any year-end appraisal with an effective date before December 31. The reaffirmation letter will either confirm that the value has not changed or provide an updated value at December 31. 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). Mortgages held on real estate investments are valued using discounted cash flows based on current market yields on comparable securities.

ix. Investments in infrastructure are held through ownership in limited partnership funds and co-investments with limited partnership funds. Investments in limited partnership funds and co-investments are valued at estimated fair value 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).

x. Alternative investments include investments in hedge funds, insurance funds and reinsurance funds and are recorded at fair value based on net asset values reported by the funds' administrators.

xi. 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.

xii. Investment assets and investment liabilities also include cash collateral pledged or received, pending trades, accrued investment income and accrued investment liabilities. These investments are recorded at cost or amortized cost, which approximates fair value due to their short-term nature.

### *Net Investment Income (Loss)*

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

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

### *Management Fees and Performance Fees*

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

### *Transaction Costs*

Transaction costs, which are incremental costs directly 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 and settlement of investments. Unrealized gains and losses on translation of investment assets and investment liabilities are included in the change in unrealized gains and losses on investments.

## Pension Obligations

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

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

## Contributions

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

## Benefit Payments

Benefit payments (including retirement pensions, bridge benefits, commuted value transfers and death benefits) and refunds and transfers are payments to members and pensioners, which are recorded in the period in which they are paid. Any benefit payment amounts accrued and not yet paid are reflected in the pension obligations.

## Fixed Assets and Intangible Assets

Fixed assets and intangible assets are recorded at cost and amortized on a straight-line basis over their estimated useful lives, as disclosed in note 7.

## Use of Estimates and Judgments

The preparation of the financial statements requires management to make judgments, estimates and assumptions based on information available as at the date of the financial statements. Such judgments, 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).

In March 2020, COVID-19 was declared a global pandemic by the World Health Organization. The COVID-19 pandemic continues to evolve and the economic environment in which HOOPP operates continues to be subject to sustained volatility. As a result, management exercised judgment when determining the impact of COVID-19 on the fair value estimates of its investments. Management is closely monitoring the changing conditions and their impacts. While management makes its best estimates and assumptions, actual results could differ from those estimates. Judgments, estimates and assumptions are reviewed periodically and revisions to accounting estimates are recognized prospectively.

## Related Party Transactions

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

# Note 2 – INVESTMENTS

## a. Investment fair value and cost

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

| | 2020 | | 2019 | |
|---|---|---|---|---|
| ($ millions) | Fair Value | Cost | Fair Value | Cost |
| **INVESTMENT ASSETS** | | | | |
| **Cash** | **$ 24** | **$ 24** | $ 94 | $ 94 |
| **Securities purchased under resell agreements** (note 5) | **9,464** | **9,483** | 2,179 | 2,191 |
| **Fixed income** | | | | |
| Short-term securities | **3,245** | **3,245** | 5,378 | 5,381 |
| Bonds | | | | |
| Canadian | **89,172** | **81,881** | 94,139 | 90,300 |
| Non-Canadian | **7,038** | **6,722** | 10,194 | 9,228 |
| Commercial loans | | | | |
| Non-Canadian | **353** | **394** | 388 | 397 |
| | **99,808** | **92,242** | 110,099 | 105,306 |
| **Equities** | | | | |
| Public equities | | | | |
| Canadian | **2,613** | **2,405** | 1,512 | 1,447 |
| Non-Canadian | **43,934** | **41,185** | 29,859 | 28,966 |
| Private equities and special situations | | | | |
| Canadian | **1,462** | **615** | 1,237 | 476 |
| Non-Canadian | **11,556** | **9,238** | 9,576 | 7,539 |
| | **59,565** | **53,443** | 42,184 | 38,428 |
| **Real assets** | | | | |
| Real estate | **14,477** | **11,733** | 13,601 | 10,382 |
| Infrastructure | **756** | **735** | 114 | 114 |
| | **15,233** | **12,468** | 13,715 | 10,496 |
| **Alternative investments** | **1,623** | **1,628** | 753 | 758 |
| **Derivative instruments** (notes 3 & 5) | **2,837** | **1,189** | 9,642 | 1,514 |
| **Investment receivables** | | | | |
| Cash collateral pledged (note 5) | **1,640** | **1,640** | 156 | 156 |
| Pending trades | **640** | **641** | 963 | 968 |
| Accrued investment income | **552** | **552** | 653 | 653 |
| | **2,832** | **2,833** | 1,772 | 1,777 |
| **Total investment assets** | **191,386** | **173,310** | 180,438 | 160,564 |
| **INVESTMENT LIABILITIES** | | | | |
| **Securities sold under repurchase agreements** (note 5) | **(29,857)** | **(30,035)** | (18,018) | (18,183) |
| **Bonds sold short** (note 5) | **(10,441)** | **(9,906)** | (8,695) | (8,628) |
| **Equities sold short** (note 5) | **(22,905)** | **(17,767)** | (19,992) | (16,780) |
| **Derivative instruments** (notes 3 & 5) | **(4,039)** | **(2,214)** | (22,353) | (6,331) |
| **Investment payables** | | | | |
| Cash collateral received (note 5) | **(18,910)** | **(18,910)** | (16,269) | (16,269) |
| Pending trades | **(1,129)** | **(1,132)** | (1,173) | (1,177) |
| Accrued investment liabilities | **(357)** | **(357)** | (81) | (81) |
| | **(20,396)** | **(20,399)** | (17,523) | (17,527) |
| **Total investment liabilities** | **(87,638)** | **(80,321)** | (86,581) | (67,449) |
| **NET INVESTMENTS** | **$ 103,748** | **$ 92,989** | $ 93,857 | $ 93,115 |

## b. Fair value hierarchy

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 and cash collateral are also included as Level 1.

Investments that are classified as Level 2 include securities purchased under resell agreements, securities sold under repurchase agreements, short-term securities, equity investments not actively traded, most bonds, over-the-counter derivatives, some investment receivables and some investment payables. For most of 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 2020 or 2019.

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

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

Transfers between Level 2 and Level 3, if any, are disclosed in note 2c.

The table below presents the Plan's investment assets and investment liabilities within the fair value hierarchy described in note 2a:

| | 2020 | | | |
|---|---|---|---|---|
| ($ millions) | Level 1 | Level 2 | Level 3 | Total Fair Value |
| **Investment assets** | | | | |
| Cash | $ 24 | $ - | $ - | **$ 24** |
| Securities purchased under resell agreements | - | 9,464 | - | **9,464** |
| Short-term securities | - | 3,245 | - | **3,245** |
| Bonds | - | 96,210 | - | **96,210** |
| Commercial loans | - | - | 353 | **353** |
| Public equities | 46,309 | 238 | - | **46,547** |
| Private equities and special situations | - | - | 13,018 | **13,018** |
| Real estate | - | - | 14,477 | **14,477** |
| Infrastructure | - | - | 756 | **756** |
| Alternative investments | - | - | 1,623 | **1,623** |
| Derivative instruments | 66 | 2,688 | 83 | **2,837** |
| Investment receivables | 1,640 | 1,192 | - | **2,832** |
| | 48,039 | 113,037 | 30,310 | **191,386** |
| **Investment liabilities** | | | | |
| Securities sold under repurchase agreements | - | (29,857) | - | **(29,857)** |
| Bonds sold short | - | (10,441) | - | **(10,441)** |
| Equities sold short | (22,905) | - | - | **(22,905)** |
| Derivative instruments | (37) | (3,946) | (56) | **(4,039)** |
| Investment payables | (18,910) | (1,486) | - | **(20,396)** |
| | (41,852) | (45,730) | (56) | **(87,638)** |
| **Net Investments** | **$ 6,187** | **$ 67,307** | **$ 30,254** | **$ 103,748** |

| | 2019 | | | |
|---|---|---|---|---|
| ($ millions) | Level 1 | Level 2 | Level 3 | Total Fair Value |
| **Investment assets** | | | | |
| Cash | $ 94 | $ - | $ - | $ 94 |
| Securities purchased under resell agreements | - | 2,179 | - | 2,179 |
| Short-term securities | - | 5,378 | - | 5,378 |
| Bonds | - | 103,957 | 376 | 104,333 |
| Commercial loans | - | - | 388 | 388 |
| Public equities | 30,751 | 17 | 603 | 31,371 |
| Private equities and special situations | - | - | 10,813 | 10,813 |
| Real estate | - | - | 13,601 | 13,601 |
| Infrastructure | - | - | 114 | 114 |
| Alternative investments | - | - | 753 | 753 |
| Derivative instruments | 43 | 9,539 | 60 | 9,642 |
| Investment receivables | 156 | 1,616 | - | 1,772 |
| | 31,044 | 122,686 | 26,708 | 180,438 |
| **Investment liabilities** | | | | |
| Securities sold under repurchase agreements | - | (18,018) | - | (18,018) |
| Bonds sold short | - | (8,695) | - | (8,695) |
| Equities sold short | (19,992) | - | - | (19,992) |
| Derivative instruments | (21) | (22,310) | (22) | (22,353) |
| Investment payables | (16,269) | (1,254) | - | (17,523) |
| | (36,282) | (50,277) | (22) | (86,581) |
| **Net Investments** | $ (5,238) | $ 72,409 | $ 26,686 | $ 93,857 |

## 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 years ended December 31.

| 2020 | | | | | | | |
|---|---|---|---|---|---|---|---|
| ($ millions) | Fair Value Dec 31, 2019 | Total Gains (Losses) Included in Net Income[(1)] | Purchases and Issues | Sales and Settlements | Transfers In[(2)] | Transfers Out[(2)] | Fair Value Dec 31, 2020 |
| Bonds | $ 376 | $ - | $ - | $ (376) | $ - | $ - | **$ -** |
| Commercial loans | 388 | (32) | 93 | (96) | - | - | **353** |
| Public equities | 603 | (3) | - | (600) | - | - | **-** |
| Private equities and special situations | 10,813 | 1,092 | 2,771 | (1,619) | 55 | (94) | **13,018** |
| Real estate[(3)] | 13,601 | (248) | 1,057 | 67 | - | - | **14,477** |
| Infrastructure | 114 | 24 | 678 | (60) | - | - | **756** |
| Alternative investments | 753 | 2 | 1,339 | (471) | - | - | **1,623** |
| Derivative instruments – assets | 60 | 194 | (49) | (122) | - | - | **83** |
| Derivative instruments – liabilities | (22) | (79) | 4 | 41 | - | - | **(56)** |
| **Total** | **$ 26,686** | **$ 950** | **$ 5,893** | **$ (3,236)** | **$ 55** | **$ (94)** | **$ 30,254** |

(1) *For those investment assets and investment liabilities held at the end of the year, the total gains were $84 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 $72 million are netted in Purchases and Issues and mortgage debt repayments of $347 million are netted in Sales and Settlements.*

| 2019 | | | | | | | |
|---|---|---|---|---|---|---|---|
| ($ millions) | Fair Value Dec 31, 2018 | Total Gains (Losses) Included in Net Income[(1)] | Purchases and Issues | Sales and Settlements | Transfers In[(2)] | Transfers Out[(2)] | Fair Value Dec 31, 2019 |
| Bonds | $ 1,349 | $ (46) | $ - | $ (927) | $ - | $ - | $ 376 |
| Commercial loans | 49 | (9) | 370 | (22) | - | - | 388 |
| Public equities | 603 | - | - | - | - | - | 603 |
| Private equities and special situations | 10,126 | 781 | 2,080 | (2,174) | - | - | 10,813 |
| Real estate[(3)] | 13,255 | 426 | 360 | (440) | - | - | 13,601 |
| Infrastructure | - | - | 115 | (1) | - | - | 114 |
| Alternative investments | - | (5) | 758 | - | - | - | 753 |
| Derivative instruments – assets | 16 | 139 | (39) | (56) | - | - | 60 |
| Derivative instruments – liabilities | (3) | (25) | (4) | 10 | - | - | (22) |
| **Total** | $ 25,395 | $ 1,261 | $ 3,640 | $ (3,610) | $ - | $ - | $ 26,686 |

(1) *For those investment assets and investment liabilities held at the end of the year, the total gains were $258 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 $324 million are netted in Purchases and Issues and mortgage debt repayments of $382 million are netted in Sales and Settlements.*

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

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

| | | 2020 | | 2019 | |
|---|---|---|---|---|---|
| ($ millions) | **Significant Inputs** | **Change in Significant Inputs** | **Increase (Decrease) to Fair Value** | **Change in Significant Inputs** | **Increase (Decrease) to Fair Value** |
| Private equity | **EBITDA multiple** | **+/- 10%** | **$ 164 / (164)** | +/- 10% | $ 171 / (171) |
| Private debt | **Discount rate** | **+/- 1%** | **(12) / 13** | +/- 1% | (13) / 13 |
| Real estate | **Capitalization rate** | **+/- 0.25%** | **(481) / 533** | +/- 0.25% | (484) / 538 |

The above sensitivity analysis excludes investments where cost is used as an approximation for fair value (e.g., newly acquired real estate properties and private equity investments). In addition, it excludes investments where fair values are based on information provided by the general partners or the external fund administrators as the Plan does not have access to the assumptions and methodologies used to determine the fair value of the underlying investments. For other investments included in Level 3, management's judgment is that changing one or more of the inputs to a reasonable alternative assumption would not change the fair value of the Plan significantly.

## e. Offsetting financial assets and financial liabilities

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

| | 2020 | | | | | |
|---|---|---|---|---|---|---|
| ($ millions) | **Gross Amounts of Recognized Financial Instruments** | **Amounts Set Off in the Statements of Financial Position** | **Net Amounts of Financial Instruments Presented (note 2a)** | **Amounts Subject to Enforceable Master Netting Arrangements or Similar Agreements[(1)]** | **Cash and Securities Collateral Pledged (Received)[(2)]** | **Net Amount** |
| **Financial assets** | | | | | | |
| Securities purchased under resell agreements | $ 10,602 | $ (1,138) | $ 9,464 | $ (8,787) | $ (677) | $ - |
| Securities on loan[(3)] | 20,722 | - | 20,722 | - | (20,690) | 32 |
| Derivative instruments[(4)] | 3,151 | - | 3,151 | (2,381) | (588) | 182 |
| **Total financial assets** | **34,475** | **(1,138)** | **33,337** | **(11,168)** | **(21,955)** | **214** |
| **Financial liabilities** | | | | | | |
| Securities sold under repurchase agreements | (30,995) | 1,138 | (29,857) | 8,787 | 21,042 | (28) |
| Derivative instruments[(4)] | (4,226) | - | (4,226) | 2,381 | 1,782 | (63) |
| **Total financial liabilities** | **$ (35,221)** | **$ 1,138** | **$ (34,083)** | **$ 11,168** | **$ 22,824** | **$ (91)** |

*(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) Included within fixed income and public equity investment assets in note 2a.*
*(4) Includes pending trade receivables and payables of $314 million and $187 million, respectively.*

| ($ millions) | Gross Amounts of Recognized Financial Instruments | Amounts Set Off in the Statements of Financial Position | Net Amounts of Financial Instruments Presented (note 2a) | Amounts Subject to Enforceable Master Netting Arrangements or Similar Agreements[1] | Cash and Securities Collateral Pledged (Received)[2] | Net Amount |
|---|---|---|---|---|---|---|
| | | | 2019 | | | |
| **Financial assets** | | | | | | |
| Securities purchased under resell agreements[3] | $ 2,979 | $ (469) | $ 2,510 | $ (2,508) | $ (2) | $ - |
| Securities on loan[4] | 29,270 | - | 29,270 | - | (29,248) | 22 |
| Derivative instruments[5] | 9,884 | - | 9,884 | (7,201) | (2,625) | 58 |
| **Total financial assets** | 42,133 | (469) | 41,664 | (9,709) | (31,875) | 80 |
| **Financial liabilities** | | | | | | |
| Securities sold under repurchase agreements[3] | (18,576) | 469 | (18,107) | 2,508 | 15,499 | (100) |
| Derivative instruments[5] | (22,572) | - | (22,572) | 7,201 | 15,322 | (49) |
| **Total financial liabilities** | $ (41,148) | $ 469 | $ (40,679) | $ 9,709 | $ 30,821 | $ (149) |

(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) *Includes pending trade receivables and payables of $331 million and $89 million, respectively.*
(4) *Included within fixed income and public equity investment assets in note 2a.*
(5) *Includes pending trade receivables and payables of $242 million and $219 million, respectively.*

## f. 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 Plan, being approximately $920 million and $1,030 million respectively, as at December 31, 2020, are as follows:

| ($ millions) | Fair Value | Cost |
|---|---|---|
| **Fixed income** | | |
| Canadian bonds[1] | **$ 21,627** | **$ 18,979** |
| Non-Canadian bonds[2] | **1,173** | **835** |
| **Equities** | | |
| Non-Canadian public equities[3] | **15,662** | **14,360** |
| Non-Canadian private equity | **1,076** | **895** |

(1) *Includes Canadian government and real return bonds.*
(2) *Includes non-Canadian real return bonds.*
(3) *Includes shares of exchange-traded funds.*

# Note 3 – DERIVATIVE FINANCIAL INSTRUMENTS

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

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

## Foreign Exchange Forward Contracts

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

## Futures Contracts

Futures contracts are standardized agreements, which can be purchased or sold on a futures exchange market at a predetermined future date and price, in accordance with terms specified by the regulated futures exchange, and they are subject to daily cash margining. HOOPP invests in equity futures and interest rate futures. Equity futures relate to a specific equity, a basket of equities or index of equities. Interest rate futures, including bond futures, relate to interest rate-sensitive instruments. 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.

## Warrants

Warrant certificates give the holder the right, but not the obligation, to buy shares in a company at a certain price on or before a specified future date. The key difference between warrants and options is that warrants are issued by the company itself as a way to raise capital.

## a. Derivative notional and fair values

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

| | 2020 | | |
|---|---|---|---|
| | | Fair Value[2] | |
| ($ millions) | Notional value[1] | Assets | Liabilities |
| **Credit derivatives** | | | |
| Credit default swap options | $ 21,009 | $ 14 | $ (15) |
| Credit default swaps[3] | 12,118 | 79 | (136) |
| **Currency derivatives** | | | |
| Forwards | 21,770 | 209 | (129) |
| Options | 1,222 | 26 | (14) |
| Swaps | 1,275 | 5 | (231) |
| **Equity derivatives** | | | |
| Futures contracts | 9,863 | - | (32) |
| Options | 19,132 | 1,140 | (918) |
| Swaps | 97,110 | 850 | (1,581) |
| Warrants | 394 | 69 | - |
| **Interest rate derivatives** | | | |
| Futures contracts | 1,979 | - | (1) |
| Options | 5,692 | 16 | - |
| Swaps | 18,897 | 311 | (953) |
| Swaptions | 3,898 | 118 | (29) |
| **Total** | **$ 214,359** | **$ 2,837** | **$ (4,039)** |

*[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 $8,279 million and $44 million, respectively. These contracts mature between 2021 and 2025.*

| ($ millions) | 2019 | | |
|---|---|---|---|
| | | Fair Value[(2)] | |
| | Notional value[(1)] | Assets | Liabilities |
| **Credit derivatives** | | | |
| Credit default swap options | $ 19,388 | $ 4 | $ (4) |
| Credit default swaps[(3)] | 11,642 | 75 | (234) |
| **Currency derivatives** | | | |
| Forwards | 11,410 | 36 | (104) |
| Options | 834 | 32 | (7) |
| Swaps | 5,656 | 51 | (611) |
| **Equity derivatives** | | | |
| Futures contracts | 9,385 | 5 | (20) |
| Options | 67,300 | 8,332 | (19,726) |
| Swaps | 87,752 | 617 | (647) |
| Warrants | 330 | 42 | - |
| **Interest rate derivatives** | | | |
| Futures contracts | 20,364 | 1 | - |
| Options | 7,226 | 8 | - |
| Swaps | 23,445 | 346 | (970) |
| Swaptions | 4,066 | 93 | (30) |
| **Total** | $ 268,798 | $ 9,642 | $ (22,353) |

*[(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 $6,704 million and $40 million, respectively. These contracts mature between 2020 and 2025.*

## 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.

| | 2020 | | | |
|---|---|---|---|---|
| ($ millions) | Within 1 Year | 1 to 5 Years | Over 5 Years | Total |
| **Credit derivatives** | | | | |
| Credit default swap options | $ 21,009 | $ - | $ - | $ 21,009 |
| Credit default swaps | 555 | 11,563 | - | 12,118 |
| **Currency derivatives** | | | | |
| Forwards | 21,770 | - | - | 21,770 |
| Options | 522 | 191 | 509 | 1,222 |
| Swaps | 586 | 689 | - | 1,275 |
| **Equity derivatives** | | | | |
| Futures contracts | 9,863 | - | - | 9,863 |
| Options | 5,934 | 4,916 | 8,282 | 19,132 |
| Swaps | 81,319 | 15,791 | - | 97,110 |
| Warrants | - | 269 | 125 | 394 |
| **Interest rate derivatives** | | | | |
| Futures contracts | 971 | 1,008 | - | 1,979 |
| Options | 1,272 | 4,420 | - | 5,692 |
| Swaps | 8,471 | 8,997 | 1,429 | 18,897 |
| Swaptions | 500 | 1,218 | 2,180 | 3,898 |
| **Total** | **$ 152,772** | **$ 49,062** | **$ 12,525** | **$ 214,359** |

| | 2019 | | | |
|---|---|---|---|---|
| ($ millions) | Within 1 Year | 1 to 5 Years | Over 5 Years | Total |
| **Credit derivatives** | | | | |
| Credit default swap options | $ 19,388 | $ - | $ - | $ 19,388 |
| Credit default swaps | 1,099 | 10,367 | 176 | 11,642 |
| **Currency derivatives** | | | | |
| Forwards | 11,410 | - | - | 11,410 |
| Options | 315 | - | 519 | 834 |
| Swaps | 4,773 | 883 | - | 5,656 |
| **Equity derivatives** | | | | |
| Futures contracts | 9,385 | - | - | 9,385 |
| Options | 55,692 | 3,837 | 7,771 | 67,300 |
| Swaps | 78,743 | 9,009 | - | 87,752 |
| Warrants | - | 225 | 105 | 330 |
| **Interest rate derivatives** | | | | |
| Futures contracts | 20,364 | - | - | 20,364 |
| Options | 1,732 | 5,494 | - | 7,226 |
| Swaps | 7,595 | 13,658 | 2,192 | 23,445 |
| Swaptions | 729 | 1,817 | 1,520 | 4,066 |
| **Total** | $ 211,225 | $ 45,290 | $ 12,283 | $ 268,798 |

# Note 4 – NET INVESTMENT INCOME

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

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

| | 2020 | | | | | |
|---|---|---|---|---|---|---|
| ($ millions) | Net Interest and Dividend Income[1] | Net Gain (Loss) on Investments[2][3] | Investment Income[4] | Management Fees | Transaction Costs | Net Investment Income |
| **Cash and pending trades** | $ (39) | $ 674 | **$ 635** | $ - | $ - | **$ 635** |
| **Net repurchase agreements** | (104) | 218 | **114** | - | - | **114** |
| **Fixed income** | | | | | | |
| Short-term securities | 78 | (17) | **61** | - | - | **61** |
| Bonds | | | | | | |
| Canadian | 2,512 | 3,996 | **6,508** | - | - | **6,508** |
| Non-Canadian | 308 | 1,867 | **2,175** | - | - | **2,175** |
| Commercial loans | | | | | | |
| Non-Canadian | 20 | (32) | **(12)** | - | - | **(12)** |
| | 2,918 | 5,814 | **8,732** | - | - | **8,732** |
| **Equities** | | | | | | |
| Public equities | | | | | | |
| Canadian | 145 | (1) | **144** | - | (1) | **143** |
| Non-Canadian | (254) | (2,160) | **(2,414)** | - | (10) | **(2,424)** |
| Private equities and special situations | | | | | | |
| Canadian | 57 | 95 | **152** | (3) | (1) | **148** |
| Non-Canadian | 171 | 997 | **1,168** | (128) | - | **1,040** |
| | 119 | (1,069) | **(950)** | (131) | (12) | **(1,093)** |
| **Real assets** | | | | | | |
| Real estate | 397 | (248) | **149** | (17) | (3) | **129** |
| Infrastructure | 4 | 24 | **28** | (7) | (7) | **14** |
| | 401 | (224) | **177** | (24) | (10) | **143** |
| **Alternative investments** | - | 17 | **17** | (16) | - | **1** |
| **Derivative instruments** | - | 2,138 | **2,138** | - | (9) | **2,129** |
| **Total** | **$ 3,295** | **$ 7,568** | **$ 10,863** | **$ (171)** | **$ (31)** | **$ 10,661** |

*[1] Includes net operating income (loss) from investments in private equity, real estate and infrastructure.*
*[2] Includes realized losses from investments of $2,465 million and change in unrealized gains from investments of $10,033 million.*
*[3] Includes gain (loss) from foreign exchange.*
*[4] Net of performance fees.*

| ($ millions) | 2019 Net Interest and Dividend Income[1] | Net Gain (Loss) on Investments[2][3] | Investment Income[4] | Management Fees | Transaction Costs | Net Investment Income |
|---|---|---|---|---|---|---|
| **Cash and pending trades** | $ (39) | $ 376 | $ 337 | $ - | $ - | $ 337 |
| **Net repurchase agreements** | (323) | 377 | 54 | - | - | 54 |
| **Fixed income** | | | | | | |
| Short-term securities | 74 | (3) | 71 | - | - | 71 |
| Bonds | | | | | | |
| Canadian | 2,926 | 2,322 | 5,248 | - | - | 5,248 |
| Non-Canadian | 299 | 808 | 1,107 | - | - | 1,107 |
| Commercial loans | | | | | | |
| Non-Canadian | 8 | (9) | (1) | - | - | (1) |
| | 3,307 | 3,118 | 6,425 | - | - | 6,425 |
| **Equities** | | | | | | |
| Public equities | | | | | | |
| Canadian | 9 | (313) | (304) | - | (2) | (306) |
| Non-Canadian | 88 | (1,203) | (1,115) | - | (7) | (1,122) |
| Private equities and special situations | | | | | | |
| Canadian | 12 | 51 | 63 | (2) | - | 61 |
| Non-Canadian | 193 | 730 | 923 | (102) | (1) | 820 |
| | 302 | (735) | (433) | (104) | (10) | (547) |
| **Real assets** | | | | | | |
| Real estate | 546 | 426 | 972 | (18) | (1) | 953 |
| Infrastructure | (1) | - | (1) | (3) | - | (4) |
| | 545 | 426 | 971 | (21) | (1) | 949 |
| **Alternative investments** | - | (1) | (1) | (5) | - | (6) |
| **Derivative instruments** | - | 6,455 | 6,455 | - | (5) | 6,450 |
| **Total** | $ 3,792 | $ 10,016 | $ 13,808 | $ (130) | $ (16) | $ 13,662 |

[1] *Includes net operating income (loss) from investments in private equity, real estate and infrastructure.*
[2] *Includes realized gains from investments of $8,383 million and change in unrealized gains from investments of $1,633 million.*
[3] *Includes gain (loss) from foreign exchange.*
[4] *Net of performance fees.*

# 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, whereby the Plan effectively sells securities and simultaneously agrees to buy them back at a specified price at a future date. The net position represents the fair value of collateral pledged, as a result of the change in value of the securities sold under repurchase agreements.

#### *ii. Securities borrowing arrangements*

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

#### *iii. Derivatives*

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

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

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

## Financial assets received from HOOPP's counterparties

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

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

### *Securities borrowing arrangements (direct)*

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

### *Collateral received (indirect)*

#### *i. Resell agreements*

The Plan enters into resell agreements, whereby 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, 2020, the fair value of total collateral rehypothecated by the Plan is $38 million (2019: $1,078 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:

| | 2020 | | |
|---|---|---|---|
| ($ millions) | Repurchase Agreements | Securities Lending/Borrowing and Other Transfers | Derivatives |
| Fair value/carrying amount of financial assets transferred out[1] | $ - | $ 34,952 | $ - |
| Fair value/carrying amount of collateral pledged[2] | 31,303 | 45,604 | 3,072 |
| Fair value/carrying amount of financial assets received[3] | - | (25,022) | - |
| Fair value/carrying amount of collateral received[4] | (11,259) | (19,840) | (626) |
| Fair value/carrying amount of associated receivables (note 2) | 9,464 | - | 2,837 |
| Fair value/carrying amount of associated liabilities[5] | (29,857) | (33,378) | (4,039) |
| **Net position** | **$ (349)** | **$ 2,316** | **$ 1,244** |

*[1] Includes securities lent, both directly and through a third party, of $20,722 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 $14,230 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 $1,640 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 $18,910 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 $32 million of accrued investment liabilities relating to investments sold short. Amounts for repurchase agreements and derivatives are presented in note 2.*

| | 2019 | | |
|---|---|---|---|
| ($ millions) | Repurchase Agreements | Securities Lending/Borrowing and Other Transfers | Derivatives |
| Fair value/carrying amount of financial assets transferred out[1] | $ - | $ 34,347 | $ - |
| Fair value/carrying amount of collateral pledged[2] | 18,403 | 33,740 | 17,215 |
| Fair value/carrying amount of financial assets received[3] | - | (18,212) | - |
| Fair value/carrying amount of collateral received[4] | (2,608) | (20,402) | (2,866) |
| Fair value/carrying amount of associated receivables (note 2) | 2,179 | - | 9,642 |
| Fair value/carrying amount of associated liabilities[5] | (18,018) | (28,726) | (22,353) |
| **Net position** | $ (44) | $ 747 | $ 1,638 |

*[1] Includes securities lent, both directly and through a third party, of $29,270 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 $5,077 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 $156 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 $16,269 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 $39 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 the Plan's net investments, which HOOPP manages and measures in concert. The risk that the imbalance between the net investments and pension obligations becomes a deficit is referred to as funding risk.

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

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

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

Broadly, the Plan manages funding risk by:

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

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

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

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

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

The Board's Plan Committee (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 Plan Committee also monitors compliance with legislative and regulatory requirements and the Board's policies.

## Funding Risk

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

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

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

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

As at December 31, 2020, the Plan had a surplus for financial statement purposes of $24,131 million (2019: $20,555 million) based on the difference between the fair value of net assets available for benefits and the pension obligations. On a regulatory filing basis at December 31, 2020, the Plan had a regulatory filing surplus of $15,345 million, compared to $13,634 million as at December 31, 2019 (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 FSRA and is required to file a regulatory filing valuation periodically. It last filed a regulatory filing valuation for the year ended December 31, 2019. See note 12 for more information on HOOPP's regulatory filing valuation.

## Financial Risk Management

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

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

### *Market risk*

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

#### *i. Interest rate risk*

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

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

| | | | 2020 | | |
|---|---|---|---|---|---|
| ($ millions) | **Within 1 Year** | **1 to 5 Years** | **5 to 10 Years** | **Over 10 Years** | **Total** |
| Short-term securities | $ 3,245 | $ - | $ - | $ - | **$ 3,245** |
| Bonds[1][2] | 21,085 | 18,394 | 7,002 | 39,652 | **86,133** |
| Commercial loans[3] | 254 | 44 | 56 | - | **354** |
| Preferred shares[4] | - | - | - | 144 | **144** |
| Exchange-traded funds[4] | - | 603 | 1,669 | 999 | **3,271** |
| Derivative instruments | 9,133 | (9,495) | (1,878) | (1,317) | **(3,557)** |
| Net repurchase agreements | (20,393) | - | - | - | **(20,393)** |
| **Total** | **$ 13,324** | **$ 9,546** | **$ 6,849** | **$ 39,478** | **$ 69,197** |

[1] *Net of bonds sold short of $10,441 million.*
[2] *Includes accrued interest of $442 million.*
[3] *Includes accrued interest of $1 million.*
[4] *These financial instruments are interest rate sensitive and are classified as public equities in note 2.*

| | | | 2019 | | |
|---|---|---|---|---|---|
| ($ millions) | **Within 1 Year** | **1 to 5 Years** | **5 to 10 Years** | **Over 10 Years** | **Total** |
| Short-term securities | $ 5,378 | $ - | $ - | $ - | $ 5,378 |
| Bonds[1][2][5] | 21,665 | 23,387 | 9,324 | 41,812 | 96,188 |
| Commercial loans[3] | 312 | - | 78 | - | 390 |
| Preferred shares[4][5] | - | 620 | - | - | 620 |
| Exchange-traded funds[4] | - | 1,982 | 684 | 1,496 | 4,162 |
| Derivative instruments | (22,012) | (14,778) | (727) | (702) | (38,219) |
| Net repurchase agreements | (15,839) | - | - | - | (15,839) |
| **Total** | $ (10,496) | $ 11,211 | $ 9,359 | $ 42,606 | $ 52,680 |

[1] *Net of bonds sold short of $8,695 million.*
[2] *Includes accrued interest of $550 million.*
[3] *Includes accrued interest of $2 million.*
[4] *These financial instruments are interest rate sensitive and are classified as public equities in note 2.*
[5] *Amounts have been reclassified to conform to the current year's presentation.*

**Risk measurement**

The Plan's interest rate sensitive portfolio is reviewed to ensure compliance to policy. The ALM Committee receives quarterly reports, which include interest rate exposure for the interest rate sensitive portfolio. As at December 31, 2020, a 1% increase/decrease in interest rates would have decreased/increased the Plan's net assets available for benefits by $6,961 million (2019: $7,647 million). While the increase/decrease in interest rates would have decreased/increased the value of the Plan's assets, longer-term trends in increases/decreases in interest rates would have also decreased/increased the value of the Plan's pension obligations.

**Risk management**

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

### ii. Foreign currency risk

Foreign currency risk is the risk that the fair value of a financial instrument denominated in a foreign currency will fluctuate due to changes in applicable foreign exchange rates. While HOOPP pension benefits are paid in Canadian dollars, some of the Plan's financial instruments are denominated in other currencies. The Plan's significant 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.

| | 2020 | | | 2019 | | |
|---|---|---|---|---|---|---|
| ($ millions) | Local Currency | Canadian Dollar Equivalent | Impact of +/- 5% Change | Local Currency | Canadian Dollar Equivalent | Impact of +/- 5% Change |
| Euros | **32** | **$ 48** | **$ 2 / (2)** | 218 | $ 319 | $ 16 / (16) |
| United States Dollars | **738** | **939** | **47 / (47)** | 452 | 588 | 29 / (29) |
| Other[1] | | **(10)** | **- / -** | | 64 | 3 / (3) |
| **Total** | | **$ 977** | **$ 49 / (49)** | | $ 971 | $ 48 / (48) |

[1] *Comprised of insignificant exposures to other foreign currencies not separately disclosed. Comparative amounts have been included to conform to the current year's presentation.*

**Risk measurement**

The exposures to foreign currency are measured daily and reported monthly for compliance purposes. Each quarter, management provides the Board with reports and analysis, illustrating the impact on assets of foreign currency rate changes. As at December 31, 2020, a strengthening/weakening in the Canadian dollar of 1% against foreign currencies would result in a decrease/increase to the Plan's net assets available for benefits of approximately $9.8 million (2019: decrease/increase of approximately $9.7 million).

**Risk management**

While certain limited risk-taking activities are permitted, HOOPP manages its exposure to foreign currency risk by ensuring the exposures are effectively hedged in accordance with the limits stipulated in the IP&G. These limits generally require the Plan's foreign currency exposure to be hedged within a 5% tolerance of the Plan'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 foreign 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 $967 million (2019: $2,195 million) through its investments in dividend derivatives. HOOPP also invests in funds and securities linked to insurance contracts and is exposed to losses stemming from higher than expected insurance claims. The total fair value of these investments is $549 million (2019: $260 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.

| | | 2020 | | |
|---|---|---|---|---|
| ($ millions) | Effective Equity Exposure | % of Net Assets Available for Benefits | Benchmark | Impact of a 10% Increase/(Decrease) |
| **Canadian** | $ 5,096 | 4.9% | S&P/TSX 60 Total Return Index | $ 510 / (510) |
| **United States** | | | | |
| Equities | 13,129 | | S&P 500 Total Return Index | 1,319 / (1,308) |
| Long option strategy | - | | S&P 500 Futures with 10-Year Options | - / - |
| | 13,129 | 12.6% | | 1,319 / (1,308) |
| **International** | 14,668 | 14.1% | Blend of International Indices[1] | 1,487 / (1,471) |
| | **$ 32,893** | | | **$ 3,316 / (3,289)** |

[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 (HSI) and Australian Securities Exchange (ASX) 200.*

| | | 2019 | | |
|---|---|---|---|---|
| ($ millions) | Effective Equity Exposure | % of Net Assets Available for Benefits | Benchmark | Impact of a 10% Increase/(Decrease) |
| **Canadian** | $ 3,745 | 4.0% | S&P/TSX 60 Total Return Index | $ 375 / (374) |
| **United States** | | | | |
| Equities | 9,668 | | S&P 500 Total Return Index | 980 / (959) |
| Long option strategy | 124 | | S&P 500 Futures with 10-Year Options | (95) / (86) |
| | 9,792 | 10.4% | | 885 / (1,045) |
| **International** | 11,544 | 12.3% | Blend of International Indices[1] | 1,173 / (1,178) |
| | $ 25,081 | | | $ 2,433 / (2,597) |

[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 (HSI) and 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, 2020, a 1% increase/decrease in equity markets would have resulted in an increase/decrease in the Plan's net assets available for benefits of $329 million (2019: $251 million).

### *Risk management*

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

## *Credit risk*

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

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

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

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

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

| ($ millions) | 2020 Total Credit Exposure | 2020 % of Total | 2019 Total Credit Exposure | 2019 % of Total |
|---|---|---|---|---|
| **Sovereign securities AAA**[1] | **$ 15,644** | **12.0%** | $ 25,919 | 18.1% |
| **Fixed income instruments** | | | | |
| AAA | **20,238** | **15.5%** | 23,008 | 16.1% |
| AA | **40,358** | **31.0%** | 43,635 | 30.6% |
| A | **7,183** | **5.5%** | 6,855 | 4.8% |
| BBB | **3,537** | **2.7%** | 1,118 | 0.8% |
| BB or below | **2,237** | **1.7%** | 1,779 | 1.2% |
| **Credit derivatives** | **16,801** | **12.9%** | 16,500 | 11.6% |
| **Counterparty credit risk exposure** | | | | |
| Derivative instruments | **770** | **0.6%** | 2,692 | 1.9% |
| Repurchase agreements | **920** | **0.7%** | 58 | - |
| Securities lending program | **22,706** | **17.4%** | 21,274 | 14.9% |
| **Maximum credit risk exposure** | **130,394** | **100.0%** | 142,838 | 100.0% |
| Credit risk protection (credit derivatives) | **(13,801)** | | (15,284) | |
| Collateral received | **(18,325)** | | (19,955) | |
| **Total** | **$ 98,268** | | $ 107,599 | |

[1] *As at December 31, 2020, includes securities issued by the governments of Canada, Germany, Australia and the United States (2019: Canada, Germany and the United States).*

### *Risk measurement*

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

### *Risk management*

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

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

### *Liquidity risk*

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

#### *Risk measurement*

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

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

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

#### *Risk management*

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

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

| | **2020** | **2019** |
|---|---|---|
| ($ millions) | | |
| Liquid securities | **$ 90,723** | $ 99,300 |
| Less: net liquid securities transferred[1] | **(53,533)** | (62,749) |
| **Securities available for liquidity needs** | **$ 37,190** | $ 36,551 |

[1] *Includes securities purchased under resell agreements and securities sold under repurchase agreements, securities lent and borrowed, and collateral pledged and received.*

## Note 7 – OTHER ASSETS

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

| ($ millions) | 2020 | 2019 |
|---|---|---|
| Refundable withholding tax on contributions | **$ 107** | $ 144 |
| Fixed assets and intangible assets | **40** | 46 |
| Other | **6** | 2 |
| **Total** | **$ 153** | $ 192 |

## Note 8 – CONTRIBUTIONS

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

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

| ($ millions) | 2020 | 2019 |
|---|---|---|
| **Employers** | | |
| Current service contributions | **$ 1,458** | $ 1,371 |
| **Members** | | |
| Current service contributions | **1,157** | 1,088 |
| Past service contributions from members | **39** | 54 |
| Transfers from other plans [1] | **61** | 48 |
| | **1,257** | 1,190 |
| **Total** | **$ 2,715** | $ 2,561 |

[1] *Excludes transfers of assets from merged pension plans, which occurred in 2019.*

# Note 9 – BENEFITS

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

| ($ millions) | | 2020 | | 2019 |
|---|---|---|---|---|
| **Benefit payments** | | | | |
| Retirement pension and bridge benefits[1] | **$** | **2,424** | $ | 2,205 |
| Commuted value transfers and death benefits | | **565** | | 532 |
| | | **2,989** | | 2,737 |
| **Refunds and transfers** | | | | |
| Refunds | | **165** | | 162 |
| Transfers to other plans | | **38** | | 35 |
| | | **203** | | 197 |
| **Total** | **$** | **3,192** | $ | 2,934 |

(1) *Includes disability payments of $77 million (2019: $78 million).*

# Note 10 – OPERATING EXPENSES

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

| ($ millions) | | 2020 | | 2019 |
|---|---|---|---|---|
| **Investment**[1] | | | | |
| Administration | **$** | **181** | $ | 161 |
| Legal, actuarial and other professional fees[2] | | **11** | | 9 |
| Custodial | | **3** | | 2 |
| | | **195** | | 172 |
| **Plan**[1] | | | | |
| Administration | | **99** | | 88 |
| Legal, actuarial and other professional fees[2] | | **9** | | 11 |
| | | **108** | | 99 |
| **Total** | **$** | **303** | $ | 271 |

(1) *Based on an allocation of corporate expenses that includes direct and indirect expenses associated with Investment and Plan related activities. Costs are allocated using estimates of time associated with each activity.*
(2) *Includes amounts paid or payable to the auditors pertaining to statutory audit services of $1,307,000 (2019: $816,000), and non-audit services of $247,000 (2019: $163,000). Also includes amounts paid or payable to the actuary pertaining to actuarial services of $452,000 (2019: $524,000).*

# Note 11 – PENSION OBLIGATIONS

## Pension Obligations

The pension obligations are based on management's assumptions and include a provision for 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, 2020 actuarial valuation, the Board approved a decrease to the discount rate as indicated below, as well as changes to certain demographic assumptions based on recent experience. During 2020, the Board also approved a change to the inflation assumption impacting commuted values. Effective April 1, 2021, the commuted value no longer includes an assumption of future inflation protection on benefits where it is not guaranteed.

To determine the pension obligations as at December 31, 2020 and December 31, 2019, the following economic assumptions were analyzed and reviewed by management and the Plan's actuarial advisor for reasonableness and approved by the Board for financial reporting purposes:

| | **2020**[3] | **2019**[3] |
|---|---|---|
| Discount rate[1] | **4.65%** | 5.00% |
| Rate of price inflation | **2.00%** | 2.00% |
| Real discount rate | **2.65%** | 3.00% |
| Salary escalation rate[2] | **3.50%** | 3.50% |

*(1) Net of allowance for investment and plan expenses of 0.40% (2019: 0.40%).*
*(2) A two-tiered rate of 2.75% per annum for the first three years following the valuation date and 3.50% per annum thereafter is assumed (2019: A two-tiered rate of 2.75% per annum for the first three years following the valuation date and 3.50% per annum thereafter is assumed).*
*(3) Net impact from changes to the discount rate and all other assumptions resulted in an actuarial loss of $3,047 million, including a $1,315 million gain related to the inflation assumption change impacting commuted values (2019: Net impact from changes to the discount rate, salary escalation rate, expense provision and all other assumptions was an actuarial loss of $2,842 million).*

## Actuarial Methodology for Financial Reporting

For the determination of the actuarial present value of the pension obligations as at December 31, 2020, an actuarial valuation was conducted by Mercer (Canada) Limited. The valuation uses the projected accrued benefit actuarial cost method with respect to all benefits and assumes that the Plan will continue on a going concern basis. The data used in the valuation was based on members' demographic data provided by HOOPP staff as at October 1, 2020 and members' pay data provided as at December 31, 2019, all of which were projected to December 31, 2020 using management's estimates of experience for the intervening periods. The pensionable earnings estimates were determined based on 2019 experience and estimate assumptions.

Using this method and data, the pension obligations (or going concern actuarial pension obligations) as at December 31, 2020, were $79,852 million (2019: $73,547 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 2020, there was an estimated experience gain of $538 million (2019: gain of $64 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 2019, the Board confirmed 100% of the 2019 CPI increase as an ad hoc increase effective April 1, 2020. As at December 31, 2019, the additional impact to the pension obligations for this ad hoc inflation protection adjustment is $253 million. During 2020, the Board confirmed 100% of the 2020 CPI increase as an ad hoc increase effective April 1, 2021. As at December 31, 2020, the additional impact to the pension obligations for this ad hoc inflation protection adjustment is $54 million.

## Surplus

According to the Handbook, the surplus for financial statement presentation purposes is the difference between the market value of net assets available for benefits and the pension obligations. The surplus for financial statement purposes on December 31, 2020, was $24,131 million (2019: $20,555 million).

The net assets value used for regulatory filing purposes, referred to as the "smoothed" value of net assets, is determined in a manner that reflects long-term market trends consistent with assumptions underlying the actuarial present value of pension obligations. The smoothed value of net assets is determined by taking an average of the current market value of net assets and the market values for the four preceding years. The market values for the four preceding years are adjusted for contributions, benefit payments and operating expenses. They are also adjusted to include assumed investment return, which is based on long-term expected fund returns. The regulatory filing surplus on December 31, 2020, was $15,345 million (2019: $13,634 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 $8,786 million at December 31, 2020 (2019: $6,921 million).

# Note 12 – REGULATORY FILING VALUATION

In accordance with the PBA and the ITA, an actuarial valuation is required to be filed at least every three years to estimate the Plan's surplus or deficit, and to determine the Plan's minimum funding requirements. Mercer (Canada) Limited, prepared the last actuarial valuation for regulatory filing purposes, as at December 31, 2019, and a copy of that valuation was filed with FSRA and CRA. The effective date of the next required valuation is December 31, 2022.

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.

Mercer (Canada) Limited, in consultation with management, recommended the actuarial assumptions to be used for the regulatory filing valuation. The economic assumptions used for the December 31, 2019 regulatory filing valuation were as follows:

| Economic Assumptions | Rates |
|---|---|
| Discount rate[1] | **5.00%** |
| Rate of price inflation | **2.00%** |
| Real discount rate | **3.00%** |
| Salary escalation rate | **3.50%** |

[1] *Net of allowance for investment and plan expenses of 0.40%.*
[2] *A two-tiered rate of 2.75% for per annum for the first three years following the valuation date and 3.50% per annum thereafter is assumed.*

The most recent regulatory filing valuation conducted as at December 31, 2019, disclosed a smoothed value of net assets of $87,181 million with accrued going concern pension obligations of $73,547 million, resulting in a going concern regulatory filing surplus of $13,634 million. In accordance with the PBA, the solvency deficiency at December 31, 2019 was $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, 2020 was $178 million (2019: $207 million).

# Note 14 – RELATED PARTY TRANSACTIONS

As at December 31, 2020, a wholly-owned subsidiary of the Plan held a significant ownership interest in a commercial office building. The Plan is also a tenant in this office building. The term of its lease is 15 years with two renewal options, each for 5 years. The lease payments are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. The future minimum lease payments by year, and in aggregate, are as follows:

| ($ millions) | | 2020 |
|---|---|---|
| 2021 | $ | 6 |
| 2022 | | 7 |
| 2023 | | 7 |
| 2024 | | 7 |
| 2025 | | 7 |
| Thereafter | | 81 |
| **Total minimum lease payments** | **$** | **115** |

# Note 15 – COMMITMENTS

As part of normal business operations, the Plan has committed to funding real estate, private equity, infrastructure and alternative investments and to extend credit in the form of loans. For loan commitments, the maximum exposure to credit risk is the committed undrawn amount under the agreements. These commitments will be funded over the next several years in accordance with agreed-on terms and conditions. As at December 31, the Plan's commitments, excluding those commitments that are deemed insignificant to be disclosed, are as follows:

| ($ millions) | | 2020 | | 2019[(1)] |
|---|---|---|---|---|
| Funding commitments | **$** | **11,091** | $ | 9,100 |
| Loan commitments | | **93** | | 151 |
| **Total** | **$** | **11,184** | $ | 9,251 |

*[(1)] The 2019 amounts have been included and reclassified to conform to the current year's presentation.*

# Note 16 – CAPITAL

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

# Note 17 – GUARANTEES, INDEMNIFICATIONS AND CONTINGENCIES

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

## Guarantees

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

## Indemnifications

According to the Agreement and Declaration of Trust, the Plan may indemnify its trustees and employees against certain claims that may be made against them. In addition, the Plan may in certain circumstances in the course of the Plan's investment activities and its normal course of operations, agree to indemnify a contractual counterparty. Under the terms of these various arrangements, the Plan may be required to compensate counterparties for costs incurred because of various contingencies such as legal claims or changes in laws and regulations. The number of such agreements, the range of indemnifications and the contingent nature of the liabilities in such agreements, prevent HOOPP from making a reasonable estimate of the maximum amount that would be required to pay all such indemnifications. As at December 31, 2020, the amount recorded as a liability for claims under these arrangements was $nil (2019: $nil).

## Contingencies

As at December 31, 2020, the Plan was involved in defending against certain claims, such as tax claims, or asserting claims against third parties. The outcome and possible impact to the Plan of such litigation or claims is inherently difficult to predict. It is the opinion of management that any impact that may result would not have a significant adverse effect on the Plan's financial statements.

# Note 18 – SUBSEQUENT EVENT

On March 24, 2021, HOOPP's Board of Trustees approved an improvement to the Plan provisions effective April 1, 2021. The improvement is an increase to the benefit formula in respect of member's service from 2018 to 2020. The estimated impact of the improvement as of December 31, 2020 based on assumptions as of December 31, 2020 is an increase in the pension obligation of approximately $700 million.

# Ten Year Review

**(unaudited)**

For the years ended December 31

| ($ millions) | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|
| **CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS** | | | | | | | | | | |
| **Net assets available for benefits, beginning of the year** | **$ 94,102** | $ 79,019 | $ 77,755 | $ 70,359 | $ 63,924 | $ 60,848 | $ 51,626 | $ 47,414 | $ 40,321 | $ 35,717 |
| **Change in net assets available for benefits** | | | | | | | | | | |
| Net investment income | **10,661** | 13,662 | 1,666 | 7,598 | 6,579 | 3,103 | 9,105 | 4,046 | 6,857 | 4,327 |
| Contributions | | | | | | | | | | |
| Employers | **1,458** | 1,371 | 1,285 | 1,224 | 1,173 | 1,108 | 1,075 | 1,033 | 1,003 | 954 |
| Members | **1,257** | 1,190 | 1,106 | 1,112 | 1,022 | 991 | 929 | 880 | 860 | 797 |
| Transfer of assets from merged pension plans | **-** | 2,065 | - | - | - | - | - | - | - | - |
| Benefit payments, refunds and transfers | **(3,192)** | (2,934) | (2,547) | (2,314) | (2,127) | (1,925) | (1,702) | (1,587) | (1,486) | (1,335) |
| Operating expenses | **(303)** | (271) | (246) | (224) | (212) | (201) | (185) | (160) | (141) | (139) |
| Total change in net assets available for benefits | **9,881** | 15,083 | 1,264 | 7,396 | 6,435 | 3,076 | 9,222 | 4,212 | 7,093 | 4,604 |
| **Net assets available for benefits, end of the year** | **$ 103,983** | $ 94,102 | $ 79,019 | $ 77,755 | $ 70,359 | $ 63,924 | $ 60,848 | $ 51,626 | $ 47,414 | $ 40,321 |
| **NET ASSETS AVAILABLE FOR BENEFITS** | | | | | | | | | | |
| **Assets** | | | | | | | | | | |
| Investment assets | | | | | | | | | | |
| Cash | **$ 24** | $ 94 | $ 8 | $ 21 | $ 19 | $ 57 | $ 2 | $ 8 | $ (1) | $ 3 |
| Securities purchased under resell agreements | **9,464** | 2,179 | 10,871 | 7,797 | 6,283 | 2,498 | 3,286 | 3,046 | 3,117 | 3,188 |
| Fixed income | **99,808** | 110,099 | 104,345 | 103,177 | 115,472 | 115,930 | 106,200 | 86,694 | 74,669 | 71,241 |
| Public equities | **46,547** | 31,371 | 24,351 | 36,326 | 16,106 | 9,150 | 2,182 | 4,596 | 1,705 | 931 |
| Private equities and special situations | **13,018** | 10,813 | 10,126 | 7,220 | 4,969 | 4,339 | 3,275 | 2,580 | 1,999 | 1,972 |
| Real estate | **14,477** | 13,601 | 13,255 | 11,952 | 10,053 | 9,063 | 7,717 | 7,008 | 5,854 | 4,924 |
| Infrastructure | **756** | 114 | - | - | - | - | - | - | - | - |
| Alternative investments | **1,623** | 753 | - | - | - | - | - | - | - | - |
| Derivative instruments | **2,837** | 9,642 | 8,479 | 8,714 | 7,252 | 5,236 | 5,808 | 5,053 | 1,624 | 3,041 |
| Investment receivables | **2,832** | 1,772 | 1,052 | 3,103 | 3,635 | 1,063 | 934 | 1,438 | 1,276 | 1,538 |
| Contributions receivable | **229** | 196 | 173 | 173 | 171 | 156 | 156 | 150 | 150 | 142 |
| Other assets | **153** | 192 | 196 | 207 | 205 | 165 | 151 | 146 | 150 | 148 |
| **Total assets** | **191,768** | 180,826 | 172,856 | 178,690 | 164,165 | 147,657 | 129,711 | 110,719 | 90,543 | 87,128 |
| **Liabilities** | | | | | | | | | | |
| Investment liabilities | **(87,638)** | (86,581) | (93,701) | (100,803) | (93,661) | (83,616) | (68,753) | (58,999) | (43,046) | (46,722) |
| Other liabilities | **(147)** | (143) | (136) | (132) | (145) | (117) | (110) | (94) | (83) | (85) |
| **Total liabilities** | **(87,785)** | (86,724) | (93,837) | (100,935) | (93,806) | (83,733) | (68,863) | (59,093) | (43,129) | (46,807) |
| **Net assets available for benefits** | **103,983** | 94,102 | 79,019 | 77,755 | 70,359 | 63,924 | 60,848 | 51,626 | 47,414 | 40,321 |
| **Pension obligations** | **79,852** | 73,547 | 65,128 | 59,602 | 54,461 | 49,151 | 46,923 | 41,478 | 39,919 | 36,782 |
| **Surplus** | **$ 24,131** | $ 20,555 | $ 13,891 | $ 18,153 | $ 15,898 | $ 14,773 | $ 13,925 | $ 10,148 | $ 7,495 | $ 3,539 |
| **Investment Performance** | | | | | | | | | | |
| Investment rate of return-net | **11.42%** | 17.14% | 2.17% | 10.88% | 10.35% | 5.12% | 17.72% | 8.55% | 17.10% | 12.19% |
| Benchmark return | **9.80%** | 15.06% | 0.01% | 7.89% | 6.12% | 3.95% | 15.62% | 6.46% | 14.29% | 9.87% |
| **Value-Added return** | **1.62%** | 2.08% | 2.16% | 2.99% | 4.23% | 1.17% | 2.10% | 2.09% | 2.81% | 2.32% |

# Governance

In 1993, HOOPP's five Settlor organizations signed an Agreement & Declaration of Trust, creating a joint-governance structure that features equal representation from members and employers.

As a result, HOOPP is governed by an independent Board of Trustees made up of 16 voting members; eight trustees are appointed by the Ontario Hospital Association (OHA) and eight are appointed by the four unions representing the majority of Plan members:

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

In addition, there can be up to eight observers appointed to the Board. Up to four observers may be appointed by the OHA and one each may be appointed by each 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.

## Chairs

**Dan Anderson**
Board Chair

Retired Director/Chief Negotiator, ONA

**Adrian Foster**
Board Vice Chair

Chair, Governance & HR Committee

OHA-appointed Trustee

## Trustees

**Sandi Blancher**
Vice President, OPSEU Local 106

**Vacant**
OHA-appointed Trustee

**Jon Clark**
SEIU-appointed Trustee

**Anthony Dale**
President & CEO, OHA

**Laura Dumoulin**
OPSEU Local 675 Membership Secretary / Communications Chairman

**Jim Flett**
Chair, Audit & Finance Committee

Retired President & CEO, Kingston General Hospital

OHA-appointed Trustee

**Beverly Mathers**
Chief Executive Officer, ONA

**Ian Matheson**
OHA-appointed Trustee

**Cam Nelson**
SEIU-appointed Trustee

**Sharon Richer**
Secretary-Treasurer, Ontario Council of Hospital Unions (OCHU) CUPE

**Gerry Rocchi**
OHA-appointed Trustee

**Louis Rodrigues**
First Vice President, OCHU CUPE

**Barry Wainstein**
Chair, Asset-Liability Management Committee

Retired Vice-Chairman and Deputy Head, Global Capital Markets, Scotiabank

**Nick Zelenczuk**
OHA-appointed Trustee

## Observers

**Linda Clayborne**
OCHU CUPE

**Karli Farrow**
OHA

Executive Vice President, Patient Care Services & Chief Operating Officer, Trillium Health Partners, Mississauga Hospital

**Cathryn Hoy**
ONA

First Vice-President, ONA

**Karim Mamdani**
OHA

President & CEO, Ontario Shores Centre for Mental Health Services

## Executives

**Jeff Wendling**
President & Chief Executive Officer / Chief Investment Officer

**Reno Bugiardini**
Senior Vice President, Information Technology & Facilities Services

**Saskia Goedhart**
Senior Vice President & Chief Risk Officer

**Steven McCormick**
Senior Vice President, Plan Operations

**David L. Miller**
General Counsel & Senior Vice President, Governance

**Elena Palumbo-Sergnese**
Senior Vice President, Human Resources

**Tim Shortill**
Chief Operating Officer

**Barbara Thomson**
Senior Vice President, Finance & Chief Financial Officer

**Jim Walker**
Senior Vice President, Private Markets

**Michael Wissell**
Senior Vice President, Capital Markets & Total Portfolio

## Senior management

**Stephen Anderson**
Vice President, Equity Derivatives & Collateral Management

**Shrirang Apte**
Vice President, Credit

**Rachel Arbour**
Vice President, Plan & Policy Development

**Albert Dieleman**
Vice President, Investment Solutions Group

**Juan Jose Diz**
Vice President, Pension Solutions Group

**Juliana Duray Kikuchi**
Vice President, Finance Governance & Tax

**Linda Halley**
Vice President, Controller

**Janine Ho Soong**
Vice President, Internal Audit

**Paul Kirk**
Vice President, Short Term & Foreign Exchange

**Jacky Lee**
Vice President, Investment Analytics

**Adrian Mitchell**
Vice President, Public Equities

**Raif Murray**
Vice President, Corporate Solutions

**Christopher Poulo**
Vice President, Communications & Public Affairs

**Jeff Rabb**
Vice President, Investment Reporting, Valuation & Risk

**Nan Samaroo**
Vice President, Investment Operations

**Ray Tanveer**
Vice President, Interest Rates

**Silvano Trinca**
Vice President, Plan Operations

**Stephen Smith**
Managing Partner, HOOPP Infrastructure

**Ivana Zanardo**
Vice President, Plan Operations

## Board advisors

**Mercer (Canada) Limited**
Actuary

**PricewaterhouseCoopers LLP**
External Auditor

**Paul Litner, Osler, Hoskin & Harcourt LLP**
Board Legal Counsel

**Willis Towers Watson**
Board Compensation Advisor

**Bill Moriarty, Graham Pugh, Joanna Zapior**
Investment Advisors