2022 ANNUAL REPORT

HOOPP
Healthcare of Ontario Pension Plan

See your future. Now.

Table of contents

Chairs' message

Dan Anderson
Board Chair

Gerry Rocchi
Board Vice-Chair

> As your Board of Trustees, our primary focus is that HOOPP delivers on its pension promise. This feels even more important considering the vital role that our members and employers in the healthcare sector continue to play in this extremely difficult environment. Through it all, HOOPP is unwavering in its mission to provide Ontario healthcare workers with a secure monthly income that starts in retirement and is paid for life.

We are pleased that, despite rising inflation and a difficult year in the financial markets, the Plan's funded status at year end remained very strong at 117%. Funded status is one of the most important indicators of the health of the Plan and its ability to pay pensions to members today and in the future.

Over the years, one of the key contributors to HOOPP's overall Plan strength has been our Liability Driven Investing (LDI) strategy. It aligns the Plan's assets with its pension obligations so that the growth of HOOPP's investment portfolio meets or exceeds that of pensions owed to members.

With Board support, HOOPP adopted this LDI strategy in 2005. Since then, as HOOPP has gone from being an early adopter to becoming known as an LDI leader in the global pension landscape, this strategy has proven its worth. It helped limit investment losses during the 2008 financial crisis and, since 2010, has provided a strong foundation for a consistently positive funded status as well as benefit improvements. Our Board has confidence that the LDI approach serves our members well over the long term, but we also recognize that there may be instances where this strategy produces short-term negative results.

That was the case in 2022, where we saw difficult conditions and declines in both equity and fixed-income markets, in addition to soaring inflation. Consequently, HOOPP's investment return was -8.6% in 2022, with net assets declining to $103.7 billion, as at December 31.

While we never want to see negative returns, it's important to remember that HOOPP is a pension delivery organization that invests with a long-term focus, balancing risk and return in order to provide our members with a secure monthly pension for life. That's why the funded status is one of the most critical measures of success for HOOPP, and other pension delivery organizations.

Additional support for members

The Plan's strong funded status is also an avenue to providing additional support and benefits for members. In the last five years, the Plan's strength has made it possible for our Board to approve several significant benefit improvements for members. In 2018, HOOPP increased pensions for active members and improved survivor benefits. In 2021, HOOPP again improved benefits to provide active members with a larger lifetime pension. Building on these previous measures, the latest benefit improvement, which was effective January 1, 2023, provides eligible members with a larger lifetime pension for each year of service before 2023. Recognizing how challenging the last few years have been, we are pleased to be able to provide our members with these types of benefit enhancements and, with them, greater pension peace of mind.

> **"As healthcare delivery in Ontario evolves, we are committed to exploring opportunities to expand pension coverage in a way that benefits Plan members and employers."**

We were also pleased to provide retired and deferred members with a cost-of-living adjustment (COLA) of 4.8%, effective April 1, 2022. Members will receive another increase of 6.32% effective April 1, 2023, to help their HOOPP pension keep up with rising prices. Though an annual adjustment is not a guaranteed benefit, we are proud that since 2014, we have been able to approve COLA at 100% of the rate of increase in the Consumer Price Index (CPI). At the same time, our Board has been able to keep contribution rates unchanged since 2004. This stability helps keep the Plan affordable for members and employers.

A strong and growing Plan

Although the healthcare environment has become more challenging, we have been pleased to see Plan membership continue to increase; the Plan has added members through growing enrollment at our employers. In 2022, HOOPP also welcomed 28 new employers to the Plan, including many small healthcare providers. As healthcare delivery in Ontario evolves, we are committed to exploring opportunities to expand pension coverage in ways that benefit Plan members and employers.

Sustainable investing is an area of increasing focus for HOOPP, as well as a priority for our Board and executive management team. Climate change is an important part of that focus, and HOOPP has launched a formal plan that sets out interim goals to reinforce our commitment to achieve net-zero carbon emissions in its investment portfolio by 2050. More information can be found in the Climate change section on page 43 of this *Annual Report* and on **hoopp.com**.

Our Board is responsible for overseeing all aspects of the Plan and the Fund, and in the last few years we have been supportive of efforts by management to provide more information and reporting on initiatives and activities related to risk management and multi-year planning. These ongoing and continuous improvements have helped our Board keep abreast of the evolving and dynamic environment.

Supporting this work, along with our ongoing engagement with HOOPP management, we welcomed some new faces to the Board as Trustees and Observers this year. Joining us are: Andrea Kay (ONA appointee), Dave Verch (CUPE appointee) and William Moriarty (OHA appointee), as well as our new Board observers Sara Labelle (OPSEU appointee), Kristof Barocz (SEIU appointee), Treena Hollingworth (CUPE appointee) and Matthew Stout (ONA appointee).

We would like to acknowledge and thank those who left our Board in 2022 for their service and contributions: Louis Rodriguez (22 years of service), Jim Flett (10 years), Barry Wainstein (6 years), Ian Matheson (3 years), Beverly Mathers (2 years) and Cathryn Hoy (2 years).

It has been nearly 30 years since HOOPP became a jointly governed pension plan with equal representation from members and employers. Those three decades have witnessed challenging conditions, including 2022, but we are proud that HOOPP remains strong and members' pensions are secure.

We would like to thank our members for everything they do, and thank HOOPP staff and management for their hard work and continued commitment to delivering on the pension promise.

Dan Anderson

Dan Anderson
Board Chair

Gerry Rocchi

Gerry Rocchi
Board Vice-Chair

President & CEO's message

For so many of our members in the healthcare sector, 2022 continued to be another extremely challenging year. I want to thank you, on behalf of HOOPP, for everything that you continue to do for our communities. Through it all, our mission continues: to ensure that your HOOPP pension is secure so that you have peace of mind when it comes to retirement.

> **The Plan remained strong with a funded status of 117%... the Plan has $1.17 in assets for every $1 that is owed in pensions. This positive funded status is one of the most important indicators of the health of the Plan, confirming that pensions remain secure.**

In addition to the ongoing impact of the COVID-19 pandemic, many factors set the stage for 2022 to be an exceptionally turbulent year for investors, such as the economic fallout from the Russian invasion of Ukraine. There were dramatic declines in both equity and fixed-income markets, which rarely happen simultaneously. Furthermore, inflation reached a 40-year high, prompting central banks to raise interest rates sharply and raising fears of recession. These interventions, though necessary, stoked worries about a slowing global economy, which further affected financial markets.

HOOPP felt the impact of these challenges, as the Fund's net assets fell to $103.7 billion, representing a one-year investment return of -8.6%. Though much of this decline was due to our large portfolio of bonds, we also experienced decreases in our public equity portfolio as stock markets sold off throughout the year.

While economic conditions negatively impacted our investment portfolio, the Plan remained strong with a funded status of 117%, as at December 31, 2022. In other words, the Plan has $1.17 in assets for every $1 that is owed in pensions. This positive funded status is one of the most important indicators of the health of the Plan, confirming that pensions remain secure. The Plan's long track record of being fully funded, particularly over the last decade, was an important factor in the Board deciding to provide additional support to our members in 2022. As mentioned in the Chairs' message, these measures included a benefit improvement, a cost-of-living adjustment (COLA) and stable contribution rates.

In addition to its solid funded status, the Plan has maintained a healthy liquidity position that ensures we are able to meet our pension obligations and hold on to valuable investment assets through difficult markets. Liquidity is key to our investment team's ability to take advantage of buying opportunities in both new and existing positions.

We have always taken a dynamic approach to Liability Driven Investing (LDI), adapting our investment activities based on our outlook and shifting economic environment. While bonds will always play an important role in our LDI strategy, we continue adding alternative investments and diversifying our portfolio. For example, in the last few years, we've added more private market assets, such as real estate, infrastructure and private equity, which have generated strong returns. With warning signs of recession and the possibility for more turbulent markets ahead, we are continuing to carefully increase our allocation to private markets and alternative investments to help generate additional returns. In real estate, we plan to deepen our investment strategies internationally.

> **"I am proud of our organization's accomplishments during what was another challenging year globally. Our staff's hard work and commitment to delivering on the pension promise has helped keep our members' pension secure."**

I have confidence in the expertise and experience of our Investment Management team, in the long-term strength of the Plan, and in the value of the LDI strategy to ensure the security of HOOPP pensions for our members.

Strengthening our organization for the future

In 2022, we made progress in many areas to help strengthen our organization and ensure continued success. Three areas of focus that I would like to highlight here are risk management, climate change, and equity, diversity and inclusion (EDI).

Continuing with our evolution and expansion of our risk function, during 2022, we made significant progress on several important initiatives. This included the implementation of a new investment risk system, upgrading our risk appetite framework, and implementing new reporting. A robust risk management framework and risk aware culture increases the organization's resilience and helps us preserve our strong liquidity position and fully funded status.

We are committed to sustainable investing as an integral part of how the Plan invests; climate change is a key element of that. We will continue to evolve our approach in a way that delivers ongoing and long-term value to our members while managing climate-related risks and opportunities to our portfolio. HOOPP's net-zero portfolio pledge forms a key part of our broader climate change plan. We have also committed to expanding climate-related disclosures and continuing to engage and vote on climate issues in order to influence companies and express our views as a shareholder. You can read more about our approach in this report and in our climate change plan on **hoopp.com**.

To ensure that we can keep delivering on the pension promise as the Plan and our organization grow, we need to continue to foster a workplace that attracts and retains top talent. As an example, guided by our five-year EDI strategy, we strengthened our Employee Resource Groups in 2022 to help our employees learn from and support one another, and launched our EDI Council to help drive and embed organizational EDI initiatives across all divisions. We also worked to build the resilience of our workforce by providing employees with a range of internal supports, focused on mental health and wellness. In recognition of those employee-focused initiatives, HOOPP was once again named as a Top Employer in the Greater Toronto Area and achieved Mental Health at Work Gold Level accreditation from Excellence Canada.

In closing, I am proud of our organization's accomplishments during what was another challenging year globally. Our staff's hard work and commitment to delivering on the pension promise has helped keep our members' pension secure. I would also like to thank the Board of Trustees for their guidance and support and our Executive Team for its leadership. Together, our mission inspires us to stay focused on the future and keep moving forward with our members in mind.

Jeff Wendling
President & Chief Executive Officer

Management's Discussion and Analysis

(MD&A)

2022 Plan performance

as at December 31, 2022

Funded status

117%

Rate of return for 2022[1]
-8.60%

10-year annualized return
8.35%

Net assets

$ 103.7 billion

Net investment loss
$9.8 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, 646 employers participate in HOOPP and offer the Plan to their employees. HOOPP had 439,630 members, including 125,967 retired members, as at Dec. 31, 2022.

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 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 consistent with the fiduciary duties owed to all Plan beneficiaries by our Trustees and staff.

The Agreement & Declaration of Trust (ADT), made as of November 22, 1993 and most recently amended and restated effective December 1, 2021, is the trust document entered into by the OHA and Settlor Unions that, among other things, constitutes and empowers the current Board. The ADT is the foundation for the governance of the HOOPP Plan and Fund.

The Board of Trustees

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

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

Members of the Board also serve on five 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 Committee
- Human Resources & Compensation 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 service providers 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 one of the most important measures of the financial health of the Plan.

At the end of 2022, the Plan reported a surplus (i.e., more assets than liabilities) for the 13th consecutive year. Our -8.6% fund return, in addition to the benefit changes announced in 2022, drove a net decrease to the funded status on a net asset basis. Our 2022 return is clearly reflected in our funded status on a net asset (non-smoothed) basis but, thanks to strong fund performance over the past decade, we remain in a strong position at 112% funded.

For regulatory filing purposes, we report our funded status on a smoothed asset value basis. The asset smoothing approach is beneficial to the long-term nature of our pension promise because it gradually recognizes the Fund's investment returns over five years, meaning our 2022 return of -8.6% is only partially recognized, with the rest deferred to future years. This approach minimizes the impact of market volatility in any one year and helps the Plan avoid making decisions based on short-term market fluctuations.

The Plan's funded status for 2022 and 2021, both on a smoothed asset value basis and on a net asset basis, are shown below.

2022 Plan funded status

117%
Smoothed asset value to regulatory pension obligations
2021: 120%

112%
Net assets to regulatory pension obligations
2021: 133%

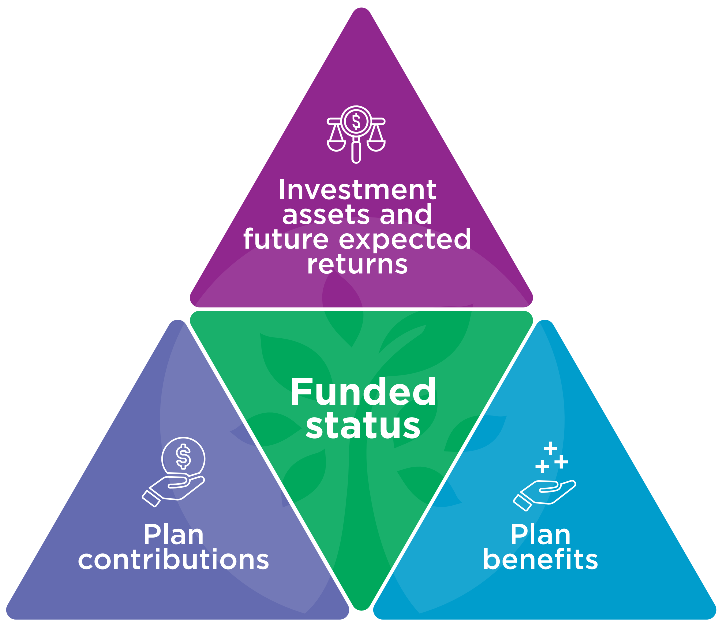
The *Investments* section of this report includes a graph on page 18 that illustrates the Plan's net and smoothed assets against its liabilities over time. More information about changes in our liabilities can be found in the *Plan Liabilities* section on page 16.

Pension plan funding management

Fluctuations in the financial market environment 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.

We balance three main components 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 objective in managing benefit levels is to provide a stable and predictable level of pension income that, together with income from other sources, contributes to a secure retirement for our members. 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 remain at the current level until at least the end of 2024.

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 are funded by investment returns to date. As such, HOOPP's approach to expected investment returns and risk is the component most actively managed by our management team with oversight by our Board.

Prudently and effectively balancing these three components is intended to ensure the long-term sustainability of our Plan.

Future funding sustainability

Funding risk, which is the risk that future investment returns (and to a lesser extent, contributions) are not able to fund Plan liabilities, is the greatest threat to our Plan's long-term sustainability. 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

Prudently managing 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 because investment returns that exceed expectations provide flexibility in managing benefit levels and contribution rates. 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 prices of many investments, as well as their expected future rates of return. If they lead to a change in the discount rate assumption, interest rate changes can also affect Plan liabilities. More information about the discount rate can be found on page 17.
- **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.
- **Equity markets:** 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. Extreme investment losses may cause substantial declines in our funded ratio.

Demographic risk

Our Plan's demographic risk is an important consideration, though its magnitude is difficult to anticipate because changes associated with demographic risk occur gradually over long periods of time.

These changes include:

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

Both the longer-term trend and year-over-year changes in demographic changes must be duly considered. Demographic trends are part of our Board's annual review of all actuarial assumptions, with the support of the Board's Plan actuary. For large pension plans like HOOPP, year-over-year changes are usually minor. An increase in members' life expectancy, for example, would increase the amount of pension benefits to be paid.

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. Plan maturity is important to monitor 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, replacing newly retired members.

Plan maturity is often measured by the ratio of active to retired members. As shown below, this ratio has declined from 2.7 in 2002 to 2.1 at the end of 2022, illustrating how our Plan is gradually maturing. It is projected to decline further to 1.9 by 2032.

Ratio of active to retired members by year

2002	2.7:1
2012	2.3:1
2022	**2.1:1**
2032	1.9:1

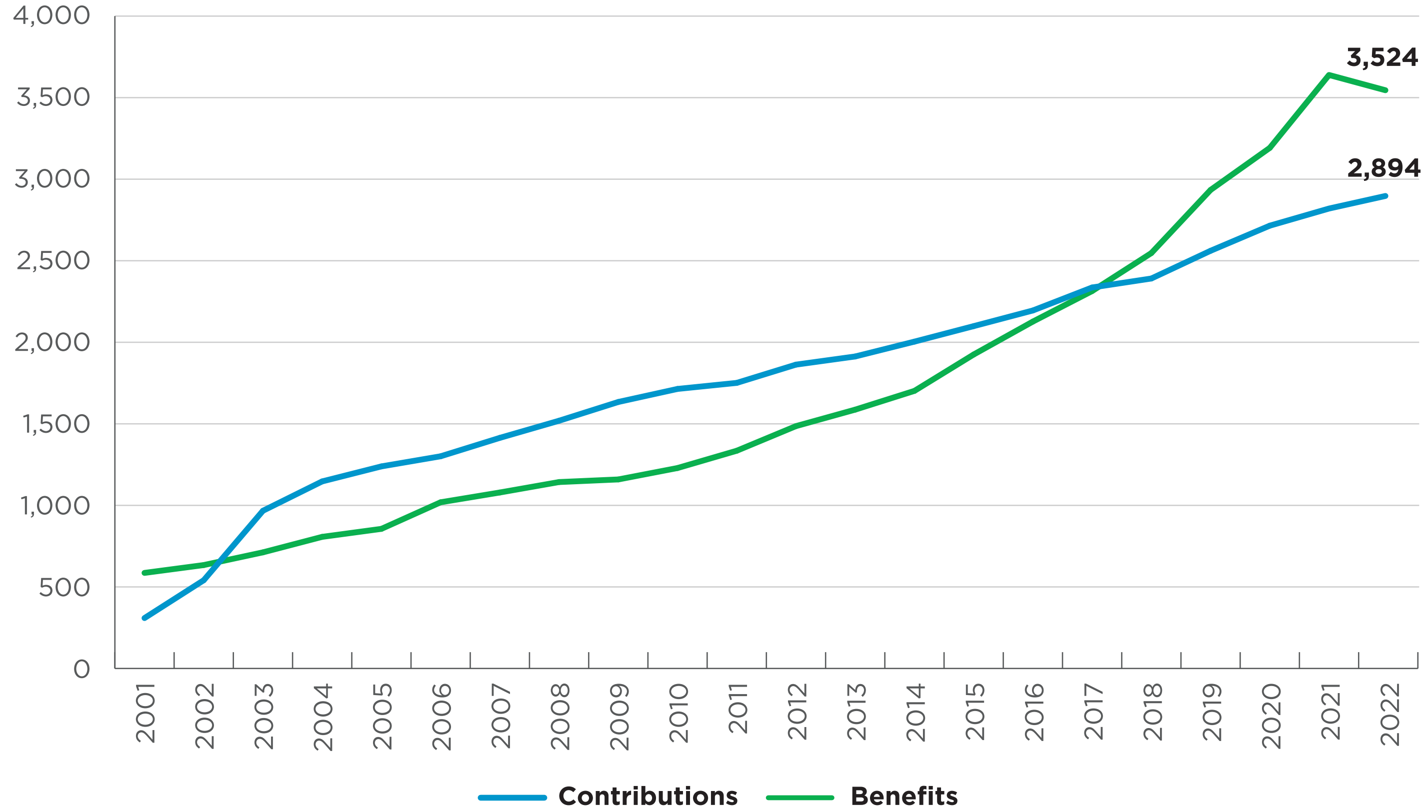
Active to retired ratio as at Dec. 31 of stated year, except 2032, which is projected.

Over longer time periods, the average age of plan participants can rise. However, with consistent membership growth, HOOPP continues to be a relatively young pension plan; the average age of HOOPP's active participants is virtually unchanged from 20 years ago.

Net cash flow, which is the difference between contributions received and pension benefits paid, is another measure of a pension plan's maturity. 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, used to recover from investment losses, is further reduced. Funding deficiencies are also more difficult to address. For example, a contribution rate increase where there is a smaller proportion of active members would have a lesser impact on addressing a deficiency, if one were to exist.

The chart on the next page reflects the ongoing maturation of the Plan: total benefits paid have exceeded total contributions since 2018, producing a negative cash flow on this basis. While this trend is likely to continue, it does not mean that HOOPP is unable to pay its promised benefits. The Plan remains fully funded, which means it is projected to have sufficient assets to pay the promised benefits. However, it is an aspect of plan maturity we must monitor and manage over time.

Contributions vs. benefits
($ millions)



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. Total benefit payments were higher in 2021 due to an increase in lump sum commuted value payments in that year. Further details of all these amounts can be found in Notes 8 and 9 of the *Financial statements*.

Plan liabilities

Our Plan's liabilities are estimated using current and future benefit payments and several economic and demographic assumptions.

Economic assumptions include:

- inflation and cost-of-living adjustment 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 our Plan will continue to operate on a long-term basis. 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.

Actual future economic and demographic outcomes will 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 12.

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

First, as our members contribute to the Plan throughout the year, they accrue or earn future benefits. In addition, the value of previously earned benefits grows at the rate of expected return of the Fund. Pension benefits paid out during the year offset this growth, reducing the Plan's total pension obligation.

Secondly, in 2022, the Board approved an increase to the Plan's benefit formula in respect of active members' service up to the end of 2022, effective January 1, 2023, increasing pension obligation by $2,346 million. Further details can be found in Note 11 of the *Financial statements*.

Thirdly, changes in economic or demographic assumptions, such as changes in the discount rate, future expected inflation rate, estimated life expectancy or retirement age, affect the calculation of our pension obligation. The Plan's pension obligation decreased by a total of $1,504 million in 2022 from changes in assumptions.

The table below shows, at a high level, what factors contributed to changes in the Plan's pension obligation in both 2022 and 2021.

Pension obligation	**2022**	**2021**
($ millions)		
Pension obligation at the start of the year	**85,902**	**79,852**
Increases in benefits due to members	5,977	5,693
Benefit improvement	2,346	704
Changes in assumptions	(1,504)	(347)
Pension obligation at year end	**92,721**	**85,902**

Key economic assumptions

The sum of the inflation rate assumption and the real discount rate assumption is the discount rate assumption, as outlined below.

Assumption	2022	2021
Inflation rate*	2.00%	2.00%
Real discount rate	3.80%	2.65%
Discount rate	5.80%	4.65%

* Rate of price inflation of 3.5% for 2023, 2.3% for 2024, 2.1% for 2025 and 2.0% per annum thereafter (2021: 2.00% per annum). Assumed inflation protection: 100% of CPI for all years of service, notwithstanding its discretionary nature (2021: contractual).

Financial results are sensitive to changes in assumptions. The discount rate is impacted by changes in interest rates and other asset class return assumptions. The table below shows how an increase or decrease of 1% in the discount rate assumption would affect pension obligations.

Change in assumption	Discount rate assumption	Pension obligations ($ millions)	Change in pension obligations (as a %)
+1.00%	6.80%	80,223	-13%
	5.80%	92,721	
-1.00%	4.80%	108,738	17%

Investments

> Funded status is one of the most important indicators of the health of the Plan and its ability to pay pensions to members today and in the future. Our primary approach to maintaining a positive funded status and managing funding risk is a Liability Driven Investing (LDI) strategy, where our Plan's liabilities are closely considered when investing Fund assets. This approach focuses on ensuring that the long-term growth of our investment portfolio meets or exceeds the growth in our pension obligation to members.

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

20-year history: assets and liabilities

($ billions)

Despite the impact of sharp declines in major bond and equity markets on our portfolio in 2022, HOOPP's funded status based on smoothed assets ended the year at 117%, down only slightly from where we finished 2021, due to the impact of the smoothing assets over a 5-year period.

2022 results

HOOPP's investment results in 2022 were:

- a net investment decline of $9.8 billion
- a reduction in net assets to $103.7 billion from $114.4 billion in 2021

The table below shows investment performance for 2022 and 2021, as well as the 10-year and 20-year performance of the Fund (registered pension plan).

	2022	2021	10-year	20-year
Total return	**-8.60%**	11.28%	8.35%	9.31%
Benchmark*	**-13.21%**	8.59%	5.74%	7.28%
Value-added return	**4.61%**	2.69%	2.61%	2.03%

* 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.

While we never want to see negative returns, our focus is always on the long term. We invest and plan in terms of decades, not single years. And, as a pension delivery organization, our focus is on funded status and our ability to pay pensions now and in the future. We remain in an excellent position on this front.

The sharp decline in both bond and equity markets is reflected in our 2022 performance, as our LDI approach requires significant bond holdings to hedge our liabilities. That said, we were responsive to market conditions, and thus able to gradually reduce bond holdings as yields declined in 2020, 2021 and early 2022. We are well positioned to take advantage of higher bond yields going forward.

Challenging market conditions, such as those seen in 2022, can also create the conditions for stronger future returns and the potential for continued value generation through active management. HOOPP's internal investment teams added significant value in 2022, and we will continue to actively look for attractively priced opportunities.

Active management and relative performance

Active management return, or value add (the performance an active manager delivers that exceeds the result of a benchmark passive index), is a consistent strength at HOOPP and our internal investment teams made a major contribution to overall returns in 2022. Investment teams exceeded respective benchmarks in each asset class, generating $5,226 million in total value added, the highest figure in HOOPP's history. The total Fund return of -8.6% exceeded the Policy portfolio (benchmark) return by 4.61%.

The sources of value-add in 2022 were broad. Our in-house Private Equity, Infrastructure and Real Estate teams continued to perform strongly, generating a collective $3,882 million in value-add (representing 3.43% at the total Fund level) in 2022, and we will continue to expand our presence and portfolio exposure in the years ahead. Our Capital Markets department contributed $1,344 million (1.18% at the total Fund level), with significant contributions coming from the Asset Allocation, Public Equity, and Absolute Return Strategies teams.

2022 investment environment

Sustained global inflation and policy responses to these rising prices defined the investment environment in 2022. Policymakers and financial market participants faced a series of challenging choices as inflation touched multi-decade highs, stimulated by a combination of emergency spending and income supports from governments and prior reductions in interest rates, supply chain disruptions and the shifting spending patterns and labour market dynamics as lockdown measures eased. The war in Ukraine compounded the inflation shock, as the conflict led to increased energy costs, feeding further into rising prices.

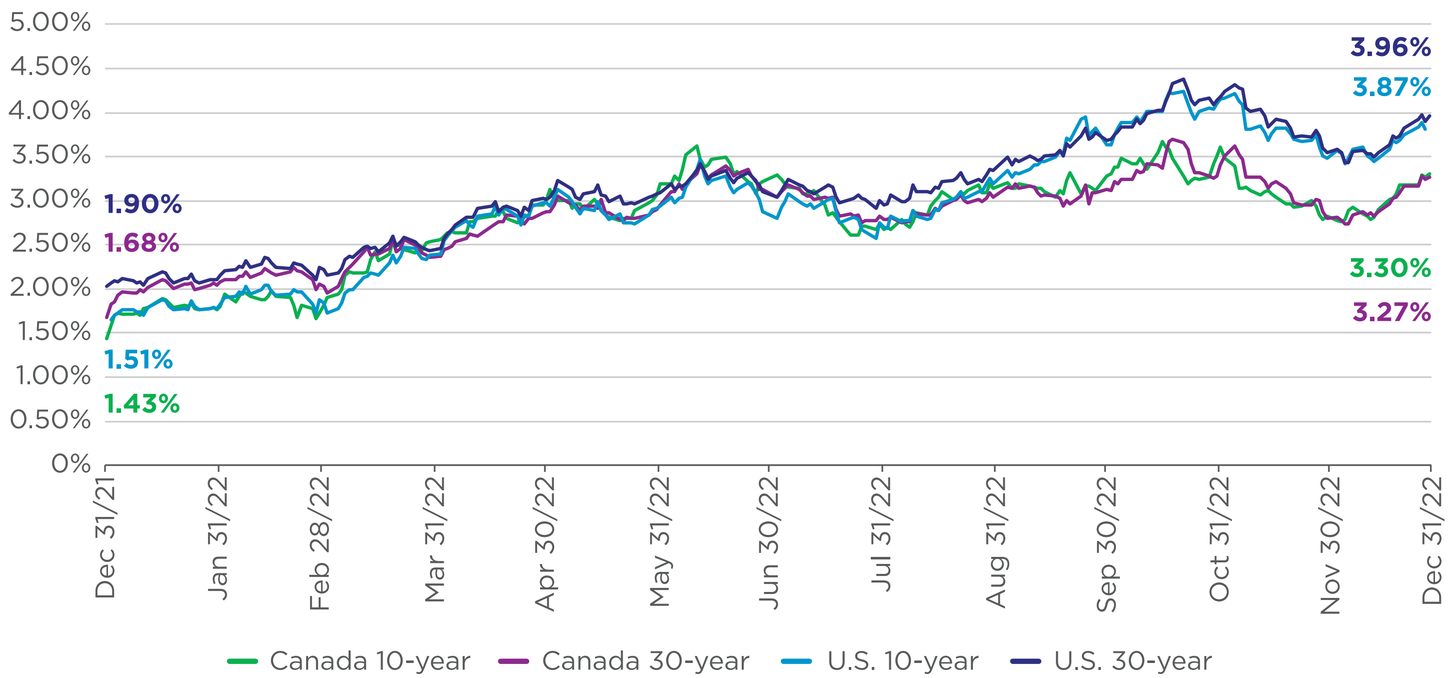
As it became clearer that higher prices were entrenched rather than transitory, global central banks significantly tightened monetary policy, reversing over 10 years of historically low interest rates. This prompted significant market declines as market participants reassessed widely held assumptions that inflation would prove temporary.

Higher interest rates, in response to persistent inflation, led to a sharply negative year for bonds. Over the past 40 years, when stocks have fallen significantly, bonds have typically provided balance by gaining value; 2022 was the first year on record when both stocks and bonds lost more than 10%.

North American government bond market returns were driven by the highest inflation rates experienced on the continent since the early 1980s. This was a result of an imbalance between surging consumer and industrial demand (fuelled by massively stimulative COVID-era monetary and fiscal policies) and constrained global supply. Headline year-over-year CPI reached over 8% in Canada and over 9% in the U.S., prompting the Bank of Canada (BOC) and the U.S. Federal Reserve (Fed) to aggressively hike their policy interest rates by 4% and 4.25% respectively, the largest and fastest increase in four decades.

The chart below illustrates how Canadian bond yields changed over the course of the year.

Changes in Canada and U.S. interest rates: one year



Public equity markets were down in 2022, with the broad MSCI ACWI total return down 18.4% (in U.S. dollars). The most significant reason for the substantial declines was the growing realization among equity market participants that central banks, especially the Fed, were going to aggressively tighten monetary policy to try to stem inflation, and that this would weigh on economic growth.

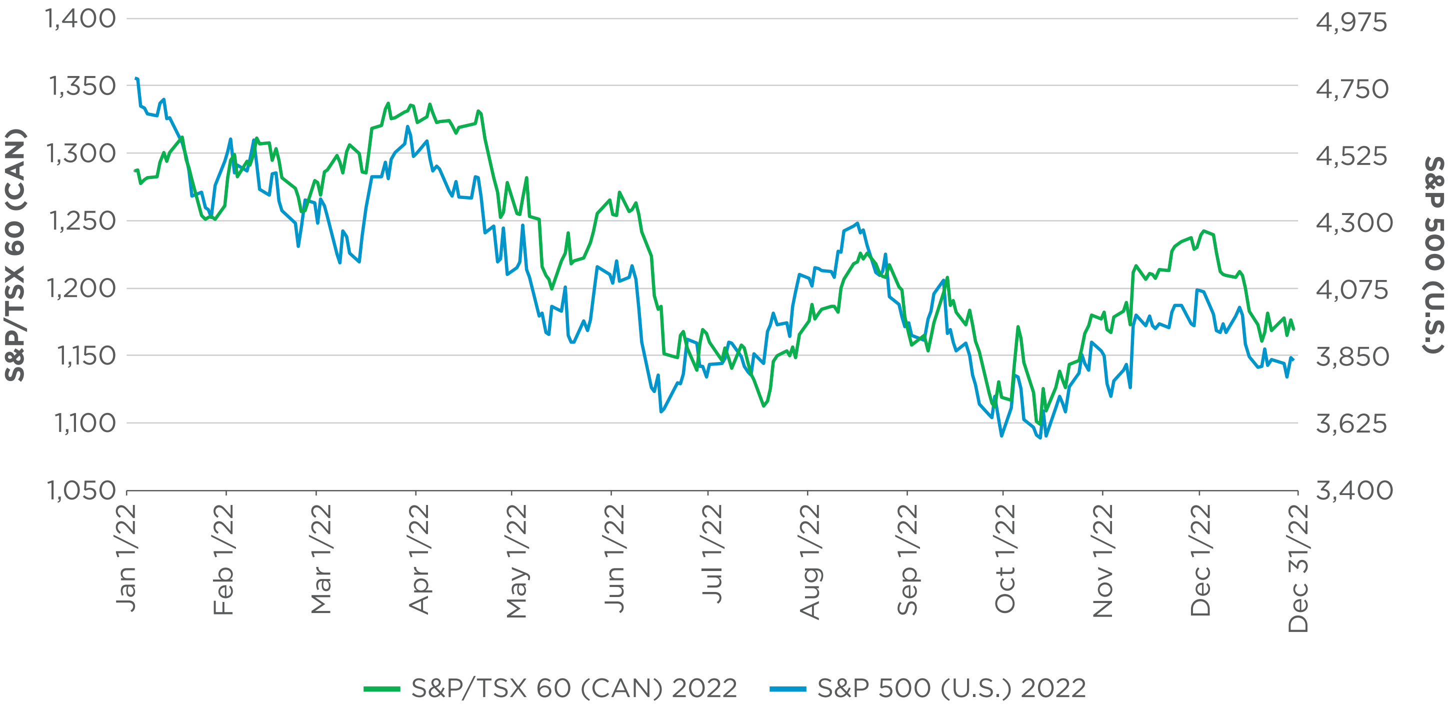
A summary of equity market total returns for various indices is provided below.

Index	Total returns (2022)	Annual total returns (2012-2021)
S&P/TSX 60	-6.2%	9.9%
U.S. S&P 500	-18.1%[2]	16.5%
MSCI ACWI[3]	-18.4%[2]	8.6%
MSCI Emerging Markets	-20.6%[2]	5.9%

[2] U.S. dollars
[3] The MSCI ACWI is an index of large and mid-cap stocks in developed and emerging market countries.

As shown in the graph below, the Canadian stock market posted modest declines relative to the S&P 500, with the S&P/TSX 60 down 6.2% in total return terms. Better relative performance was due to the high weight of Energy companies in the Canadian index coupled with a much lower weight in technology companies relative to the U.S.

S&P/TSX 60 (CAN) vs S&P 500 (U.S.): one year



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.

	2022	2021
($ millions)		
Net investment income	**(9,758)**	11,595
Changes due to operations		
Contributions	**2,894**	2,820
Benefit payments	**(3,524)**	(3,639)
Operating expenses	**(352)**	(345)
Total changes due to operations	**(982)**	(1,164)
Total change in net assets available for benefits	**(10,740)**	10,431
Change in pension obligation[1]	**(6,819)**	(6,050)
Net change in surplus on a net assets basis	**(17,559)**	4,381
Funded ratio on a net assets basis	**112%**	133%
Change in smoothing adjustment[2]	**16,121**	(2,159)
Regulatory funded ratio	**117%**	120%

[1] Information related to the change in pension obligation is provided on page 16.

[2] 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 and benefit payments.

As seen in the table above, a net investment loss of $9.8 billion is the largest driver in the $10.7 billion reduction in net assets in 2022. This investment return was, in turn, the largest driver of the reduction in the funded ratio based on a net asset basis from 133% at the end of 2021 to 112% at the end of 2022. Asset values are smoothed for regulatory filing purposes, where both investment gains and losses are recognized over a five-year period, leading to less volatility in the regulatory funded ratio, which changed from 120% at the end of 2021 to 117% at the end of 2022.

Details of the performance of individual strategies within the Private Markets and Capital Markets portfolios follow in subsequent sections. The table below shows how much each investment strategy contributed to net investment income in 2022 and 2021.

($ millions)	Net interest and dividend income	Net gain (loss)*	2022 net investment income	2021 net investment income
Capital markets				
Fixed income – short-term	1,661	(1,454)	**207**	86
Fixed income – bonds	402	(10,071)	**(9,669)**	(810)
Public equities	373	(4,511)	**(4,138)**	6,110
Credit	(370)	412	**42**	650
Other capital markets	608	675	**1,283**	1,089
Total capital markets	2,674	(14,949)	**(12,275)**	7,125
Private markets				
Real estate	403	120	**523**	1,652
Private equity	186	1,452	**1,638**	2,635
Infrastructure	45	311	**356**	183
Total return seeking portfolio	634	1,883	**2,517**	4,470
Total	**3,309**	**(13,067)**	**(9,758)**	11,595

* Net of management fees and transaction costs.

The net investment income generated by the above-mentioned strategies is presented in the financial statements in accordance with the requirements of accounting standards. More detail on the performance of these portfolios is found in the section below.

Capital markets portfolio

Fixed income

The fixed-income portfolio consists of a bond portfolio holding fixed-rate and inflation-indexed bonds, and a short-term and cash portfolio. The bond portfolio is the backbone of HOOPP's LDI strategy and helps offset the sensitivity of the Plan's liabilities to changes in interest rates and inflation. The bonds in this portfolio provide government-guaranteed rates of return, serve as high quality liquid collateral to support other investment activity, and are a diversifying asset for the Fund.

Overall, the bond portfolio, comprised of universe and long universe government bonds, U.S. Treasuries and real return bonds was down by $9.8 billion in 2022. HOOPP entered the year having sold a material percentage of its bond portfolio at very favourable prices in 2020 and 2021 and further reduced the bond portfolio in early 2022. These actions helped mitigate losses when interest rates rose (and bond prices fell) aggressively, thus helping the Plan to remain well-funded. Once bonds reached more attractive levels in late 2022, we began to increase the size of our bond portfolio and locked-in important government-backed returns that bode well for maintaining our strong funded status over the long term. Of note, we added $3.8 billion in market value of real bonds to the portfolio in 2022, representing a significant component of our bond portfolio.

Looking ahead, the Plan's fixed-income portfolios are expected to provide strong diversification and an effective liability hedge in 2023. The liability hedging bond portfolios entered 2023 holding government guaranteed securities yielding roughly 4.00% nominal rates, materially higher than the start of 2022. The portfolio's efficacy as a diversifying and liability hedge asset is, however, to an important degree, predicated upon the BOC and the Fed succeeding in returning inflation towards its 2% CPI target rates. The risk to the outlook is a stubbornly high CPI, forcing the BOC and Fed to hike policy rates more than what is currently expected.

Public equities

Public equities provide HOOPP with long-term growth to generate investment returns. Our strategy is to build a balanced, research-based portfolio with broad market exposure to generate returns over time. HOOPP invests in public equities in Canada, the U.S. and internationally, diversifying the Fund and providing return opportunities. Over time, HOOPP benefits from volatility in public equity markets by adding exposure when valuations are cheap and prices are low. We balance this by reducing equity exposure when valuations are high.

Public equity markets were down in 2022, with the broad MSCI ACWI total return down 18.4% (in U.S. dollars). Despite the decline, we made relatively modest changes to the fund's equity positioning. Even at the market lows in the summer and again in October, we did not feel that market valuations were favourable enough to meaningfully increase our equity exposure given the uncertain outlook for inflation.

Canadian equities

HOOPP's Canadian equity portfolio was down 0.52% in 2022, after gains of 30.0% in 2021.

The Canadian stock market posted modest declines, with the Energy sector significantly outperforming the broader Canadian stock market. In Financials, the largest sector in the Canadian market, Canadian banks fell about 9%, while Canadian insurance companies collectively posted gains of about 3% in 2022.

U.S. equities

Following strong returns of 29.6% in 2021, the fund's U.S. equity portfolios was down 19.4% in 2022.

The largest sector in the U.S. stock market is Information Technology (IT), a sector which had posted extraordinarily good performance over the past decade. IT fell 28% in 2022, which was the first year with negative returns for the sector since 2008. Traditionally defensive sectors, such as Utilities, Consumer Staples and Health Care, were all relatively flat in 2022. Consumer Discretionary and Communications Services, sectors with high economic sensitivity and many high growth companies, fell 37% to 40%.

International equities

The fund's international equity portfolio was down 5.9% in 2022, following a return of 11.1% in 2021.

Declines in public equities were also experienced in non-North American markets. The MSCI World index, excluding the U.S., which is a proxy for non-U.S. developed markets, posted a total return of -13.8% (in U.S. dollars) while the total return for Emerging Markets was -20%. The very strong U.S. dollar reduced returns for U.S. holders of international assets. Within Emerging markets, the MSCI China index posted a total return loss of 21.8%, the second consecutive year of losses for the Chinese market.

Looking ahead, if inflation rates continue to fall towards historical levels and developed economies continue to grow in 2023, then equities represent attractive value, and we would expect decent returns in the year ahead. On the other hand, either persistent inflation or much weaker economic activity would decrease the probability of gains after the losses of 2022.

Credit

Credit markets (also known as bond markets or debt markets) are where companies can raise funds by issuing debt, and where investors can trade that debt. The credit team is responsible for investing and trading in these markets to provide returns for the Fund. The corporate credit group employs a relative value approach to investing, which compares the value of assets across all the different investable assets in credit universe against similar or comparable assets.

We increase or decrease capital allocation depending on expected risk-adjusted returns and relative value. HOOPP gains exposure to credit through a combination of corporate bonds, structured products and derivatives.

HOOPP's Synthetic Credit benchmark saw a decline of $39 million for the year. Active strategies in the asset class delivered strong results for 2022. Overall, the credit portfolio generated a 1% return, representing a gain of $142 million for 2022, versus a 4.7% return for $650 million for 2021.

This is a strong aggregate return for HOOPP when compared to the broad negative returns in Credit last year.

The returns were generated by having appropriate hedges for a broad market sell-off, opportunistic allocation to Collateralized Loan Obligations, and outperformance from trading Macro Credit products.

Other capital market strategies

Other capital market strategies at HOOPP are deployed to manage the risk and enhance the return of the Fund. These strategies benefit the Fund by generating positive returns that have low correlation to traditional asset classes such as stocks and bonds. Along with various internal and externally managed strategies, this includes the strategic reweighting of equities, fixed income, and corporate credit. Other capital market strategies gained $1,283 million in 2022, compared to a gain of $1,089 million in 2021.

Private markets

Private equity

HOOPP Capital Partners' (HCP) mandate is to continue building a global portfolio that provides diversified exposure to private capital securities with attractive risk-adjusted returns. This is achieved by selectively investing globally in:

- privately held businesses that offer the potential for attractive equity returns
- limited partner interests in private equity and private debt funds
- other private capital solutions, including structured equity and private debt across the risk/return spectrum

HOOPP's private equity platform is positioned to provide long-term, patient capital to companies seeking funding to grow and transform their business. HCP partners with founders, management teams and like-minded institutional investment partners to invest in private companies that need funding for activities such as: i) ownership transition and succession; ii) expansion and strategic growth initiatives; and iii) strategic acquisitions.

In 2022, HCP outperformed its public equity benchmark by $3.5 billion and continued to position itself as a preferred partner in the industry. At the end of 2022, HCP had $17.7 billion invested, with a further $9.7 billion of unfunded commitments in private investments. During a challenging year, the portfolio generated a currency-hedged return of 11.04% compared to 23.7% in 2021 (the return on an unhedged basis was 15.7% in 2022 compared to 21.1% in 2021). Primary drivers of this positive return in 2022 included tactical dispositions of successful investments and industry concentration in areas less exposed to the slowing economy.

In recent years, there has been an influx of capital seeking investment within the private equity market, resulting in large capital pools seeking to invest in a limited universe of opportunities. Notwithstanding the potential risks associated with increased demand for private investment opportunities, we believe the private capital markets will continue to deliver attractive returns and offer diversification benefits to HOOPP's investment portfolio over the long term.

Infrastructure

Infrastructure investing encompasses the facilities, services, and installations considered essential to the functioning and economic productivity of a society. HOOPP Infrastructure (HI) aims to deliver attractive, sustainable returns through high-value and long-duration investments in sectors such as communications and data, power generation and transmission, energy, transportation, and utilities. HI is executing on this mandate through a combination of direct deals, a small number of private infrastructure funds and related co-investments.

HI delivered a very strong 9.4% return in 2022, exceeding the benchmark by 3.6%. The HI portfolio grew to $4.7 billion, as at December 31, 2022, compared with $2.7 billion a year ago, and is expected to continue to grow both in absolute terms and as a percentage of the HOOPP Fund, with HI executing on its mandate to invest in high quality infrastructure assets at favourable risk-adjusted returns. As at December 31, 2022, HI held $3.6 billion of direct and co-investments in asset that included:

- several fibre optic and communication tower businesses in Europe and the U.S.
- U.S. renewable power generation assets
- a container terminals company with operations in several ports in North, Central and South America

A further $1.1 billion of assets were held through private infrastructure funds, representing positions in a wide variety of infrastructure sectors and geographies, with very little exposure in non-OECD countries.

Looking ahead, a higher long-term interest rate environment would be expected to yield somewhat lower entry prices for lower risk, lower returning (often referred to as "core") infrastructure assets. Additionally, HI will continue pursuing investment opportunities related to the ongoing energy transition globally that have the potential to produce strong risk-adjusted returns and are aligned with HOOPP's commitment to achieving net-zero carbon emissions in our investment portfolio by 2050.

Real estate

The real estate mandate is to invest in commercial (industrial, office and retail), residential and certain "alternative" (life science, cold storage, student housing) real estate to produce steady cashflow with capital appreciation. These income streams have a high degree of reliability and, in times of inflation, can act as a good hedge as rental values increase and fluctuate, making real estate a good match for managing long-term pension liabilities.

In 2022, the portfolio produced a net return of 4.0% on a currency-hedged basis, and $262 million in value added. At year-end, real estate's portfolio had a gross market value of $21.0 billion versus $20.1 billion at the end of 2021.

After recovering in 2021 and early 2022, real estate markets met significant challenges from rapidly increasing interest rates, geopolitical tensions, high inflation and volatile capital markets. Given these factors and our focus on the completion of dispositions initiated in late 2021, new investment activity was limited to $617 million while dispositions totaled approximately $950 million in 2022.

The key factors impacting returns included:

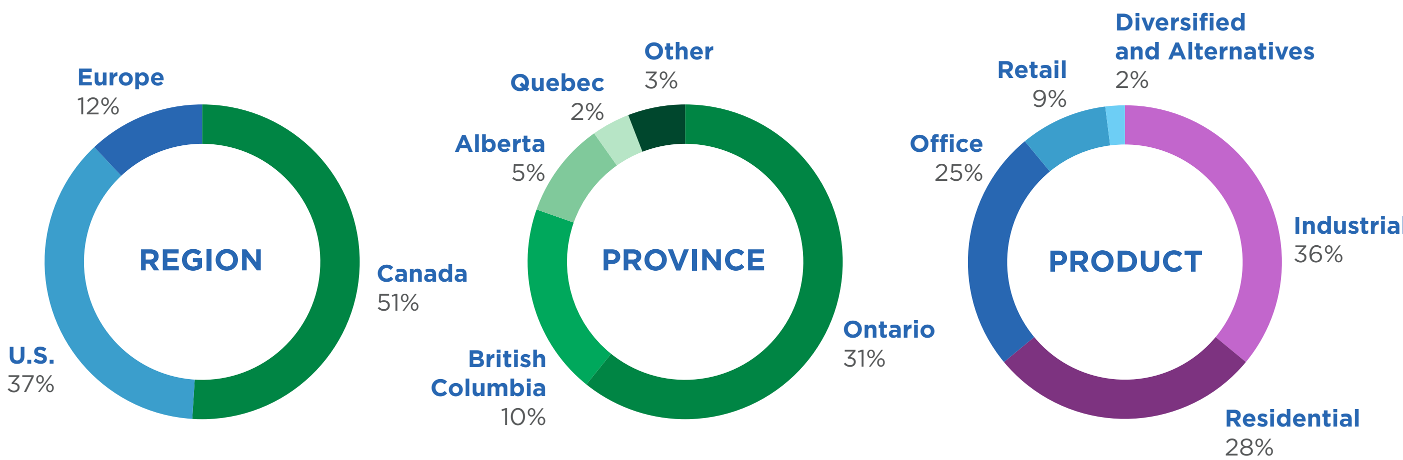
- **Continued relative strength in our North American Industrial and Residential portfolios:** Fundamentals remain strong in this segment, with key markets remaining at tight vacancy levels with continued strong rental rate growth, contributing to strong cash flow growth.
- **Negative valuation impact on European Industrial:** Although almost fully leased, our European Industrial portfolio faced significant valuation decreases given the impact of higher interest rates on long lease duration assets and lower relative rental growth backdrop.
- **Significant pressure on our Canadian Office and Retail holdings:** The inconsistent adoption and design of hybrid work, softening office markets and the reduced availability of financing negatively impacted the valuations in our Office portfolio. While retail has largely recovered from the depths of the pandemic, our enclosed mall portfolio remains under pressure from the impact of ecommerce and cool investor appetite.
- **Positive debt mark-to-market returns:** Given the rapid rise in interest rates and low in-place cost of debt financing, we recorded a positive debt mark-to-market return. This has historically been a headwind to our returns and will gradually unwind as we approach the debt maturity dates.
- **Gains from non-core real estate dispositions:** HOOPP achieved an average 7% gain on asset sales in 2022, with dispositions of these majority-owned and controlled assets coming largely from our non-core office, industrial and residential assets.

Given the strategic dispositions, development progress in our core markets and key strategic activities, we have continued to move towards our long-term capital allocation objectives, which include:

- increasing our portfolio positioning to Industrial and Residential
- growing our U.S. portfolio allocation
- establishing a North American real estate private debt program
- expanding our investment program in student residential and alternative asset classes

The following charts illustrate the global diversification and property type mix of HOOPP's real estate portfolio.

Real estate asset mix by region and product



2023 Investment outlook

Anticipating financial market and economic movements is always challenging, but it is especially difficult when well-established patterns change. In the decade leading up to 2020, inflation was low and stable, economic growth was also relatively stable and interest rates gradually fell. Post-pandemic, inflationary pressures forced global monetary policymakers to aggressively tighten financial conditions. The path of global inflation will play a significant role in determining market and economic outcomes in the year ahead.

Our investment teams remain focused on building resilient portfolios that minimize risks to the Plan's funded status and generate consistent value-add within a shifting environment. We will also continue to grow our exposure to private market asset class and increase our geographic diversification and presence and take the next steps on our journey toward a net-zero portfolio by 2050.

Sustainable investing

HOOPP's sustainable investing approach is core to our investment strategy. Sustainable investing applies an environmental, social and governance (ESG) lens to the investment process and is premised on the belief that ESG factors can be financially material. The incorporation of material ESG factors across the investment life cycle contributes to the prudent management of the Fund's investment assets.

Our three-pillar framework illustrates how sustainable investing is put into practice. Assessment of ESG factors that may affect the risk-return profile of an investment is part of the comprehensive analysis, due diligence and portfolio management activities. Sustained access to investment opportunities is required to generate the long-term returns needed to deliver on the pension promise. The sustainability of the communities, ecosystems and capital markets we invest in is connected to HOOPP's access to future investment opportunities.

Highlights from our sustainable investing program in 2022 include:

- mapping our pathway to a net-zero portfolio
- driving value through stewardship
- promoting sustainable markets

Our pathway to a net-zero portfolio

Climate change continues to be a key focus, both from a risk management and investment strategy perspective. Building on our ongoing climate work, HOOPP announced a commitment to achieve a net zero portfolio by 2050. Through 2022, we built a bottom-up plan to deliver on this goal. Our plan includes actions and interim targets that map our pathway to a net-zero portfolio by 2050.

Over the same period, we have made progress on our climate goals. In 2022, we made strides towards our goal of a 50% reduction in absolute greenhouse gas emissions by 2030 versus a 2019 baseline for our real estate properties under operational control. We met with our management partners to discuss the development of fully costed, property-level decarbonization plans. These plans outline how the emissions reductions will be achieved, moving us towards our 2030 goal and contributing to real world climate benefits.

Our net-zero portfolio plan, including interim targets and actions, as well as more information on our ongoing work on managing climate risk and investing in climate opportunities can be found in our climate change plan available on **hoopp.com/climatechange**.

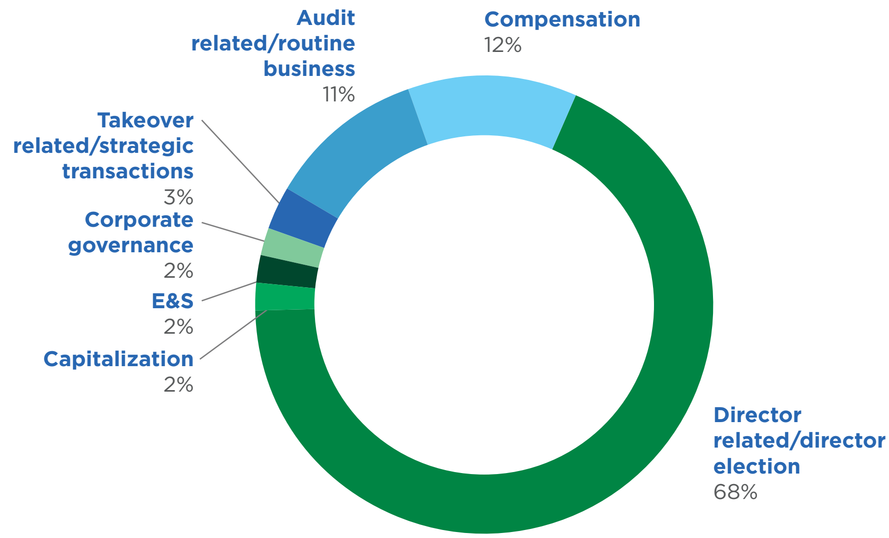
Driving value through stewardship

Responsible stewardship, a key pillar of our sustainable investing approach, helps protect and enhance the value of our investment portfolio. Through our proxy voting and engagement activities, we promote corporate behaviour that is aligned with sustainable value. We use our influence as an investor to support good governance practices and disclosure of decision-useful sustainability information.

In 2022, we implemented two key proxy voting changes. First, we increased our board gender diversity requirement, withholding support for the chair of a company's nominating committee if less than 30% of the board was made up of female directors. This threshold is part of a multi-year strategy to raise the bar on board diversity.

Second, we withdrew support for the chair of the relevant committee if a company did not disclose its governance of climate change risks and opportunities in line with the Taskforce on Climate-related Financial Disclosures (TCFD) framework. For more information on the TCFD, as well as HOOPP's own TCFD-aligned disclosures, please visit **hoopp.com/climatechange**.

2022 breakdown of proposal types



As a shareholder, we vote on a variety of proposals. The graphic above shows the breakdown of proposal types voted in 2022. Additional highlights from the 2022 proxy voting season include:

- We voted against management on 18% of proposals, asserting our view based on HOOPP's long-term interest.
- We voted against 13% of executive compensation proposals, where pay was not aligned with performance.
- We supported 48% of environmental and social-themed shareholder proposals and 51% of climate-related shareholder proposals, such as those that would improve disclosure of pertinent sustainability information to shareholders.

Over the past few years, we have increasingly reinforced our voting actions through engagement to bolster our influence as an investor. For example, we followed-up with the companies where we withheld support for a director due to a lack of climate governance disclosures. Focusing on high-emitting sectors, we reached out to over 50 companies to communicate our climate change expectations for public companies.

We also engaged over 65 companies and issuers on other relevant ESG topics, such as board structure and EDI. In 2022, we continued our involvement in collaborative engagement initiatives, including Climate Engagement Canada (CEC) and the 30% Club Canada Investor Group.

Promoting sustainable markets

As a long-term investor, HOOPP supports efforts that promote the sustainability of the capital markets we participate in. One of the ways we do this is by collaborating with like-minded peers to improve corporate disclosure of standardized, sector specific ESG data and information. In 2022, we worked with Canadian peers to support mandatory climate disclosures in Canada and the U.S., and international sustainability reporting standards.

Member and employer services

We thank our members and employers for their continuing dedication and commitment to our communities amid the ongoing challenges in the healthcare sector. In 2022, we continued to deliver on the pension promise and were able to enhance the benefits and services we provide members through the HOOPP pension.

Ongoing strength of the Plan

The Plan's strong funded status, once again, enabled our Board to approve a benefit improvement, providing eligible members with a larger lifetime pension for each year of service before 2023. The improvement builds on similar ones announced in 2017 and 2021. Each was done prudently to ensure the improvements were meaningful to members while also being financially responsible for the Plan.

The ongoing strength of the Plan has also been a critical factor in two other important decisions by our Board. In support of our members, our Board decided to keep member and employer contribution rates unchanged until at least the end of 2024 and to provide retired and deferred members with a 4.8% cost-of-living adjustment to their pension, effective April 1, 2022. These measures help keep the Plan affordable and increase monthly benefits to help our members' pension keep up with the rising cost of living, respectively. We are pleased to be able to approve both in these times of historically high inflation.

Our commitment to serving our members

We want members to see us as trusted partners who can offer guidance and context that will allow them to make informed retirement planning decisions. In 2022, we continued to enhance the pension education and support that we provide by leveraging our existing communication and digital channels. This work included:

- **re-designed annual statements for active and deferred members,** helping members better understand their pension by highlighting the most important information in a modern and easy-to-read design
- **updated *Planning for retirement* and *Leaving your HOOPP employer* sections on hoopp.com** to ensure that the information is simpler and more intuitive
- **launch of the *Expert Corner* on hoopp.com** to provide members with financial and retirement planning insights from industry experts

Alongside enhanced member information and online resources, we continue to broaden training for our Member Services staff. This will help members feel even more confident that they are being supported by professionals who understand the retirement landscape and can educate and guide them in making decisions about their HOOPP pension.

As our member education evolves, so does the online service we provide. For example, eligible members can now securely submit their retirement elections without the exchange of paper forms, while having access to a dedicated pension specialist and online guidance resources. Eligible members have responded enthusiastically to this new feature, which has seen an adoption rates of more than 95%. As a result, we are already seeing quicker turnaround times for members, resulting from reduced processing times.

Aligned with these changes, we have shifted to primarily paperless member communications. The vast majority of our active and deferred segments, a population of more than 300,000 members, are now receiving digital communications related to Plan changes, benefit option forms and newsletters.

As we evolve our digital capabilities to support our members, we are moving to new technology platforms that will offer enhanced functionality and more service offerings for members. We will also introduce multi-factor authentication to our employer portal to help reduce the likelihood of unauthorized access to member information.

Growing Plan membership

In 2022, we welcomed 28 new employers to the Plan, including many small healthcare providers. As healthcare delivery in Ontario evolves, we're continuing to explore opportunities to expand pension coverage into new areas of the healthcare sector in a way that benefits Plan members and employers. For example, in 2021, we completed an agreement to merge the pension plan of Carefor Health & Community Services into HOOPP. Carefor is Eastern Ontario's largest and oldest home healthcare and community support charity; its services include home care, retirement living, and assisted living. As part of this transaction, which has received Carefor member and regulatory approval, Carefor became a new HOOPP employer effective Jan. 1, 2023.

Overall Plan membership surpassed 435,000 by the end of 2022, with consistent increases in each of our active, retired and deferred segments. It is worth noting that our Plan data for each segment is general in nature and does not reflect unique changes in job title, role or profession levels.

Plan & member snapshot

as at December 31, 2022

439,630 Total members

267,610
Active members

67%
of active members work full-time

125,967
Retired members

33%
of active members work part-time

46,053
Deferred members

$30,700
Average annual pension for newly retired members

4.8%
Cost-of-living adjustment (COLA) for retired and deferred members
(effective April 1, 2022)

Employer breakdown

as at December 31, 2022

646 Total employers

183 Small healthcare organizations

141 Hospitals

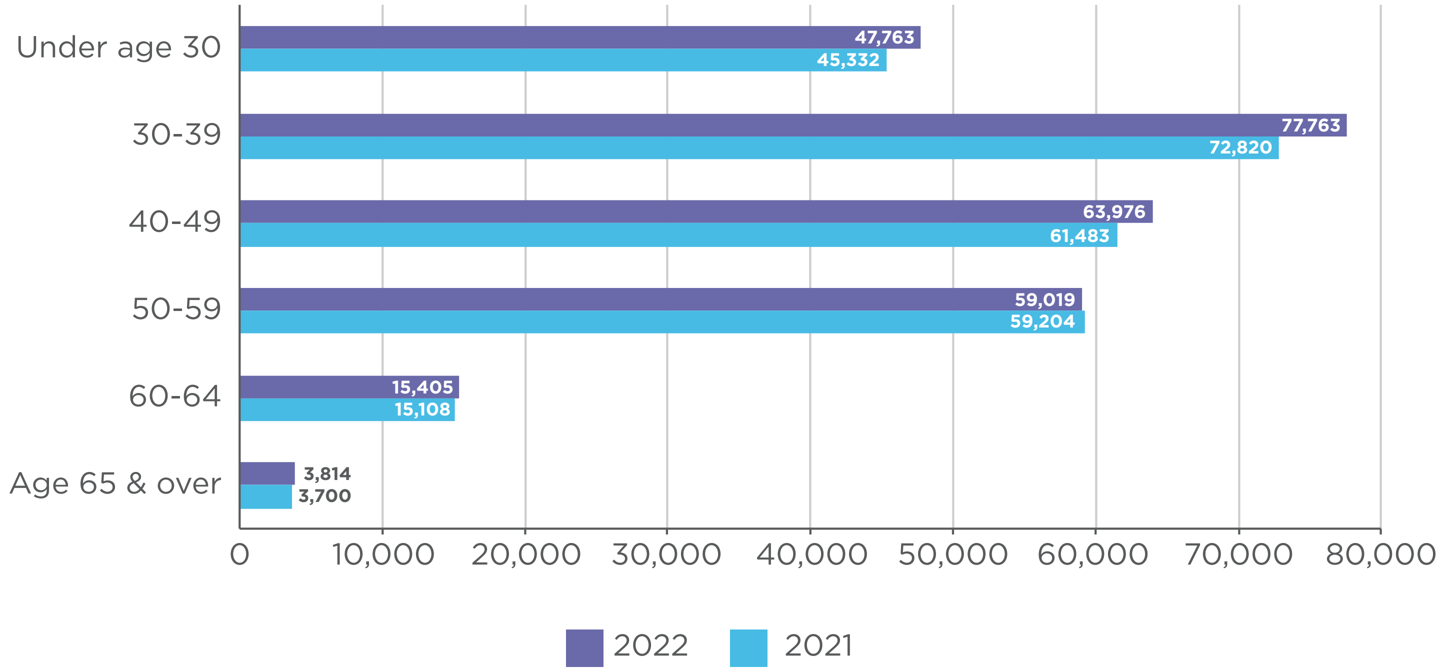
89 Family health teams

90 Service providers

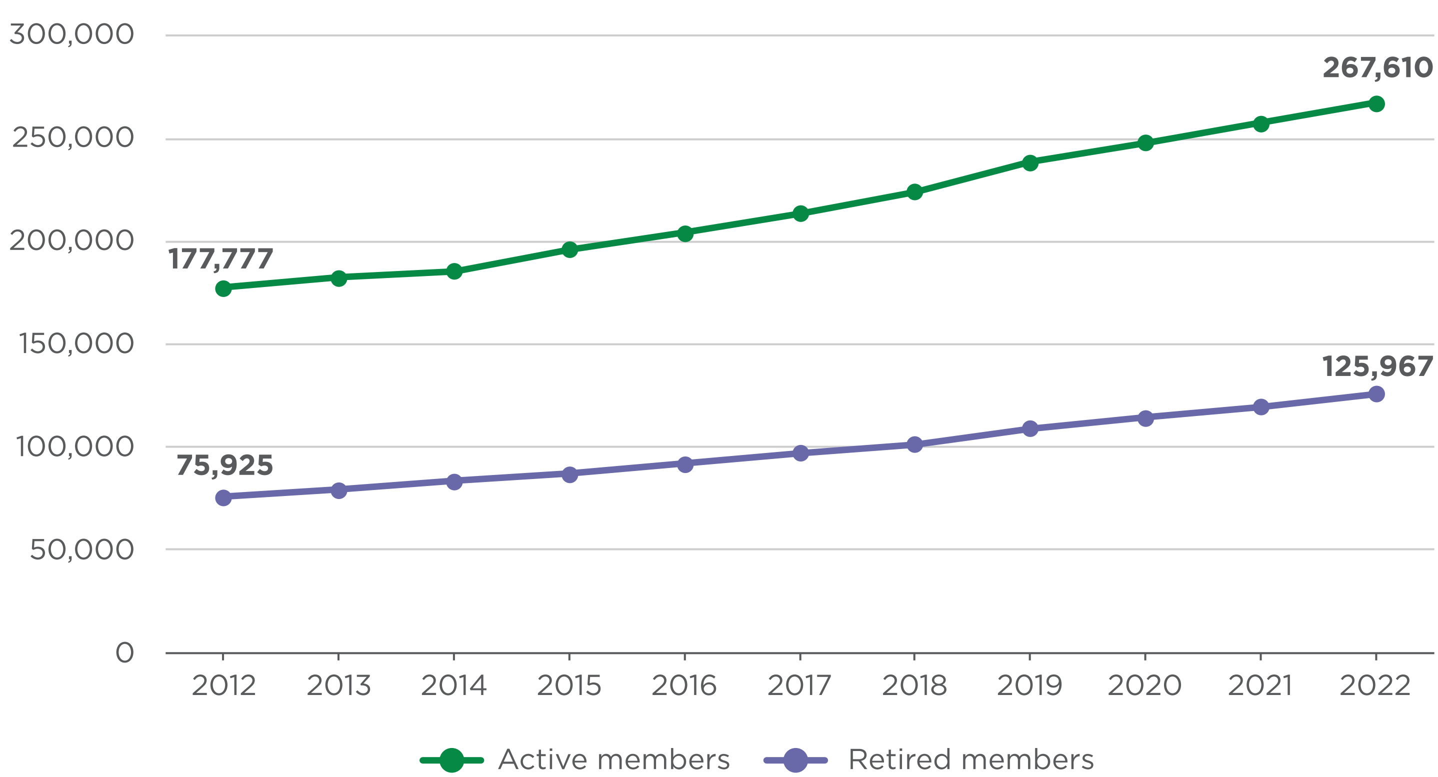
76 Foundations

67 Community health centres

Active members by age group



Active and retired member growth



Our people

As we continue to grow the Plan's membership and employer base, we recognize that our people are fundamental to our pension promise and to our success. To allow our employees to do their best work and help us attract and develop the best talent, we strive to foster a high-performing and resilient culture through an engaging work environment. Our areas of strategic focus include: advancing our equity, diversity, and inclusion (EDI) strategy; adapting to the future of work; and talent development.

Investing in our staff

The evidence is clear: diverse and inclusive teams that create belonging are more innovative and make better decisions. To continue strengthening our organization, last year we made important progress on our five-year EDI strategy launched in 2021. This included introducing our new EDI Council to help champion and ingrain our strategy, and the strengthening of our employee resource groups (ERGs). By encouraging inclusivity, ERGs help staff learn from and support one another, promote allyship and positive change at the employee level, thereby helping to create a positive work environment for everyone.

As the needs of our workforce evolve, understanding and adapting to these needs is key to attracting, retaining, and engaging top talent. In recognition of the ongoing challenges and concerns related to COVID-19, we launched our hybrid workplace model early in the year, with a flexible mix of in-office and remote work for employees. We are paying particular attention to ensuring that this hybrid way of working is engaging, inclusive, and effective, by providing the right programs and policies to support our people through this change.

We did this by continuing to invest in our staff during this transition, supporting their physical and mental wellness through a variety of resources and programs. As recognition of the overall quality of our employee programs, HOOPP was selected as one of Greater Toronto's Top Employers for the third year in a row.

GREATER TORONTO'S TOP 2023 EMPLOYERS

This prestigious award has become the benchmark for workplace best practices and innovative programs. Similarly, HOOPP was named one of four finalists in the Health/Wellness Program through the Workplace Benefits Awards, and received the Mental Health at Work Gold Level accreditation with Excellence Canada. These awards highlight how much we value and invest in our employees, as they help us to effectively serve members.

Investing in an effective total rewards program – including compensation, benefits, and wellness – is a crucial aspect of human capital management. Our total rewards program is designed to attract, motivate, and retain talent, and to be competitive relative to the pension and financial industries. Regular benchmarking is conducted against our industry and peer group, supported by external consultants as needed. We also engage an external advisor, Willis Towers Watson, to assist the Board in reviewing compensation recommendations, including rewards philosophy, incentive plan design, and executive compensation.

In addition to these initiatives, we continued to foster a learning culture where employees at all levels have a range of valuable training and development options available to them. This encourages innovation, ensures skills are up to date and growing and helps create the next generation of leaders; all of which help create a resilient organization.

We remain confident that these strategies and initiatives will help us continue to keep our staff engaged, productive and committed to our efforts to deliver on the pension promise.

Risk management and internal controls

Risk management is a critical element in HOOPP's ability to provide members with a secure retirement pension for life. Managing risks appropriately ensures that future returns and asset growth will be sufficient to fund Plan liabilities.

Our Risk division covers all relevant risk categories, such as investment and liquidity risk, enterprise and operational risk, and risk related to compliance mandates.

HOOPP first established an independent Risk division in 2020. Reporting to the CEO, the CRO is responsible for further development and execution of risk management activities at HOOPP, in support of the delivery of HOOPP's strategic imperatives and pension promise. Risk management activities have historically been conducted in various units across the organization. These activities within the business units remain in place and will evolve as the Risk division's programs continue to be enhanced and consistently implemented across HOOPP.

In 2022 the Risk division delivered and implemented a variety of new and/or updated risk management and compliance capabilities. This included:

- enhancing frameworks or policies covering enterprise risk management, pension plan funding risk, counterparty credit risk, and compliance management
- a full review of investment portfolio guidelines
- new analytical tools and methodologies for use in managing investment risks
- several compliance management system modules as well as an operational risk event reporting process and system
- various new quarterly and annual management-level and Board-level risk-based reports

The Risk division will ensure our risk management and compliance programs continue to evolve to meet our future needs, while providing expertise and comprehensive risk reporting to the Board.

At the HOOPP management committee level, our Operations Committee provides management oversight for operational and compliance risks, and our Investment Risk Committee provides management oversight over all matters pertinent to investment and financial risks.

As part of its oversight role, our Board is responsible for ensuring that an effective risk management program is in place. The accountability for enterprise risk management (ERM) and compliance is delegated to the Audit & Finance Committee, while the Asset Liability Management Committee provides oversight on investment and liquidity risk. All Board committees have oversight of risks related to their respective mandates. The Board and its Committees can and have appointed professional advisors for their expert advice and assistance in support of their mandates, including in relation to the fulfillment of their responsibilities for oversight of risk management.

HOOPP's Board-approved Risk Appetite Framework (RAF) is reviewed annually and articulates the maximum risk that HOOPP is willing to take in pursuit of its strategic objectives. The RAF includes risk appetite statements, metrics, and limits as well as reporting requirements relative to major risk categories covering financial, operational, compliance, and reputational risks.

Risk, responsibilities, programs and processes

To achieve our objectives, we must effectively manage several risks:

- **Funding risk** that HOOPP cannot generate sufficient return on investment to meet the pension promise.
- **Liquidity risk** that could result in HOOPP not meeting its short-term debt obligations or not being able to access markets when needed to sell or buy assets.
- **Operational risk** including the potential disruption or loss resulting from people, processes, systems, or external events.
- **Compliance risk** caused by the failure to abide by laws, rules, regulations, and internal governance processes and policies.
- **Reputational risk** that results from negative changes in perceptions of stakeholders (including members, employers, employees, market counterparties, regulators and government bodies, media, peers, and third-party vendors/suppliers), and/or ineffectively managed financial, operational, and compliance risks.

All these risks are identified and managed within our firm-wide ERM capabilities. ERM is the establishment of common risk management practices and tools applicable to all risk categories enterprise-wide. It is intended to increase positive outcomes and reduce negative surprises. Practices and tools are designed to facilitate the consistent and systematic identification, assessment, monitoring and reporting of key risks in a timely and complete manner. Such practices include the use of robust stress testing tools designed to measure the impact of potential future economic scenarios on both Fund assets and Plan liabilities and also to 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.

Other important governance and risk management programs and processes include:

- **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
    - the responsibilities and core values expected of our staff in the workplace
- **Efficient and effective Board and Committee reporting and decision-making process.**
- **Programs and processes** for managing the recruitment, retention, performance and development of HOOPP staff, our most critical resource.
- **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
- **Separate risk and governance functions** in the Finance, Plan Operations, and IT and Facilities Services divisions that bolster our internal capabilities as we continue to navigate an increasingly complex regulatory and investment environment.
- **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.
- **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 2022, 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, 2022.

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

HOOPP incurs operating costs for staff compensation, technology, facilities, and other items to support the administration of the Plan and the investment of Fund assets. Together, these make up HOOPP's total operating costs.

Plan administration costs

HOOPP incurred $114 million or $292 per member to administer the Plan in 2022, a decrease from $118 million or $311 per member in the previous year. HOOPP remains focused on spending prudently to deliver the pension promise in a cost-effective way.

Investment operating costs

In 2022, HOOPP incurred $238 million in investment operating costs, compared to $227 million in 2021.

The increase was a result of strategic investments in staffing and technology to support new income-generating opportunities and to manage risk.

Total Operating costs

In 2022, our total operating costs were $352 million or 32 basis points of our average net assets available for benefits, which was similar to 2021. Based on publicly available information, HOOPP's operating costs compare favourably to similar Canadian pension plans.

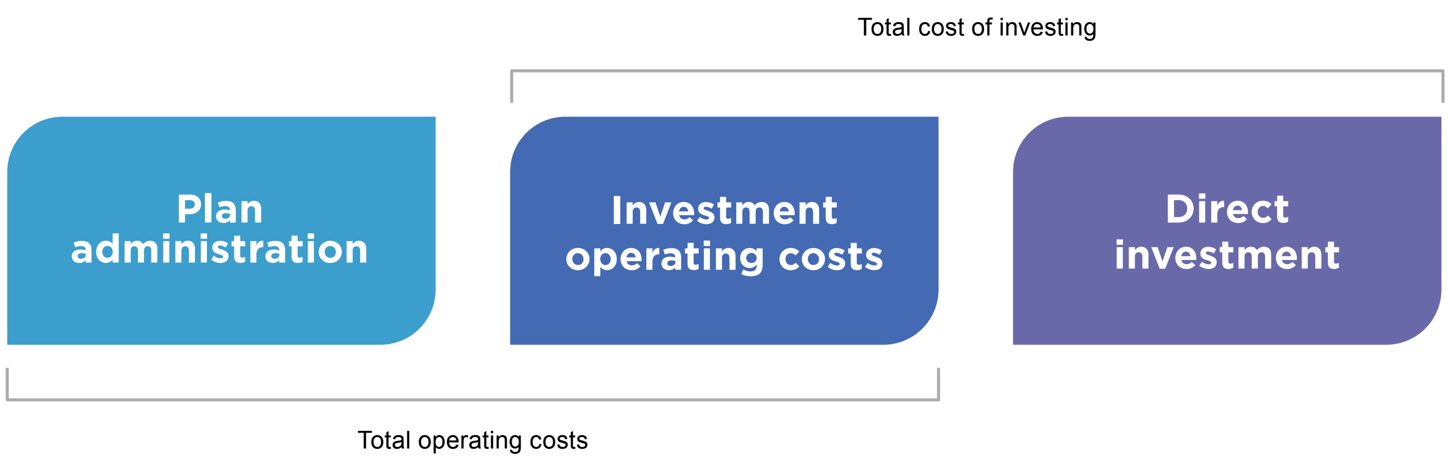
Direct investment costs

Costs related directly to investing include management fees for 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 2022, HOOPP incurred $242 million in direct investment costs, compared to $217 million in 2021.

Total cost of investing

Our total cost of investing is made up of our investment operating costs and direct investment costs.

HOOPP's total cost of investing represented 44 basis points of our average net assets available for benefits in 2022, compared to 41 basis points in 2021. Controlled investment cost growth is expected to continue over the coming years as we seek new opportunities for fund returns and mature as an organization.



Ten-year review

Ten Year Review

(unaudited)

For the years ended December 31

($ millions)	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS										
Net assets available for benefits, beginning of the year	**$114,414**	$103,983	$ 94,102	$ 79,019	$ 77,755	$ 70,359	$ 63,924	$ 60,848	$ 51,626	$ 47,414
Change in net assets available for benefits										
Net investment income	**(9,758)**	11,595	10,661	13,662	1,666	7,598	6,579	3,103	9,105	4,046
Contributions										
Employers	**1,553**	1,502	1,458	1,371	1,285	1,224	1,173	1,108	1,075	1,033
Members	**1,341**	1,318	1,257	1,190	1,106	1,112	1,022	991	929	880
Transfer of assets from merged pension plans	**—**	—	—	2,065	—	—	—	—	—	—
Benefits paid	**(3,524)**	(3,639)	(3,192)	(2,934)	(2,547)	(2,314)	(2,127)	(1,925)	(1,702)	(1,587)
Operating expenses	**(354)**	(345)	(303)	(271)	(246)	(224)	(212)	(201)	(185)	(160)
Total change in net assets available for benefits	**(10,742)**	10,431	9,881	15,083	1,264	7,396	6,435	3,076	9,222	4,212
Net assets available for benefits, end of the year	**$103,672**	$114,414	$103,983	$ 94,102	$ 79,019	$ 77,755	$ 70,359	$ 63,924	$ 60,848	$ 51,626
NET ASSETS AVAILABLE FOR BENEFITS										
Assets										
Investment assets										
Cash	**$ 57**	$ 92	$ 24	$ 94	$ 8	$ 21	$ 19	$ 57	$ 2	$ 8
Securities purchased under resell agreements	**7,476**	11,714	9,464	2,179	10,871	7,797	6,283	2,498	3,286	3,046
Fixed income	**99,988**	100,294	99,808	110,099	104,345	103,177	115,472	115,930	106,200	86,694
Public equities	**23,703**	57,342	46,547	31,371	24,351	36,326	16,106	9,150	2,182	4,596
Private equities and special situations	**19,999**	15,363	13,018	10,813	10,126	7,220	4,969	4,339	3,275	2,580
Real estate	**18,155**	17,916	14,477	13,601	13,255	11,952	10,053	9,063	7,717	7,008
Infrastructure	**4,661**	2,662	756	114	—	—	—	—	—	—
Alternative investments	**4,849**	2,886	1,623	753	—	—	—	—	—	—
Derivative instruments	**2,769**	4,077	2,837	9,642	8,479	8,714	7,252	5,236	5,808	5,053
Investment receivables	**2,966**	4,384	2,832	1,772	1,052	3,103	3,635	1,063	934	1,438
Contributions receivable	**212**	210	229	196	173	173	171	156	156	150
Other assets	**262**	213	153	192	196	207	205	165	151	146
Total assets	**185,097**	217,153	191,768	180,826	172,856	178,690	164,165	147,657	129,711	110,719
Liabilities										
Investment liabilities	**(81,248)**	(102,551)	(87,638)	(86,581)	(93,701)	(100,803)	(93,661)	(83,616)	(68,753)	(58,999)
Other liabilities	**(177)**	(188)	(147)	(143)	(136)	(132)	(145)	(117)	(110)	(94)
Total liabilities	**(81,425)**	(102,739)	(87,785)	(86,724)	(93,837)	(100,935)	(93,806)	(83,733)	(68,863)	(59,093)
Net assets available for benefits	**103,672**	114,414	103,983	94,102	79,019	77,755	70,359	63,924	60,848	51,626
Pension obligations	**92,721**	85,902	79,852	73,547	65,128	59,602	54,461	49,151	46,923	41,478
Surplus	**$ 10,951**	$ 28,512	$ 24,131	$ 20,555	$ 13,891	$ 18,153	$ 15,898	$ 14,773	$ 13,925	$ 10,148
Investment Performance										
Investment rate of return-net	**(8.60)%**	11.28 %	11.42 %	17.14 %	2.17 %	10.88 %	10.35 %	5.12 %	17.72 %	8.55 %
Benchmark return	**(13.21)%**	8.59 %	9.80 %	15.06 %	0.01 %	7.89 %	6.12 %	3.95 %	15.62 %	6.46 %
Value-Added return	**4.61 %**	2.69 %	1.62 %	2.08 %	2.16 %	2.99 %	4.23 %	1.17 %	2.10 %	2.09 %

Advocacy and Climate change

Advocacy

Advocating on behalf of HOOPP and our members

Our pension advocacy program helps support HOOPP's mission to deliver on the pension promise by promoting the value of Canada-model pension plans and demonstrating their value and efficiency in saving for retirement.

Our ongoing research, which illustrates how individuals, employers, and governments can all take reasonable steps to improve the efficiency of retirement savings, is a foundational element of this program. In addition, we monitor the public policy environment, build relationships with key government officials and work with aligned stakeholder organizations to protect the interests of Plan members across a host of public policy and regulatory issues. HOOPP has historically enjoyed a positive relationship with government stakeholders by taking a cooperative and policy-based approach in supporting the retirement security for all.

2022 Highlights

Research

The fourth annual installment of our *Canadian Retirement Survey*, conducted with Abacus, found that economic factors such as rising inflation and interest rates are threatening Canadians' retirement security. The outlook is particularly troubling for those under age 35, whose barriers to home ownership and savings capacity – both of which have a strong impact on retirement security – are increasingly challenged by current economic conditions. With reduced access to some of the retirement savings vehicles that were available to previous generations, such as home ownership, those under 35 see the value in having access to better workplace pension plans. To learn more about the findings, go to **hoopp.com**

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.

Our Canadian Employer Pension research, conducted with Angus Reid Group, explored how Canadian employers perceive the current economic climate's impact on business, the state of retirement security in Canada and the business value of offering retirement benefits to employees. Results show that while Canadian businesses are most worried about staff retention and well-being the solutions vary amid economic uncertainty. Research shows that good workplace retirement plans create value for employers, including a range of benefits that strengthen an employer's bottom line. To learn more about the findings, go to **hoopp.com**.

The Pension Collective

To reflect the changing healthcare environment and retirement landscape, HOOPP's grassroots education program, previously known as the HOOPP Ambassador Program, was relaunched in late 2021 as The Pension Collective. It is a HOOPP-led community of individuals who want to learn more about retirement saving, planning and security. The goal of the program is to educate members, as well as non-members, on the value of Canada-model pension plans, like HOOPP, while expanding the conversation around the importance of retirement security for all Canadians. The program has well over 11,000 members, and provides them with a variety of in-person and virtual education sessions.

2023 Key initiatives

Building on the success of 2022, we will continue to conduct the annual tracking *Canadian Retirement Survey* and *Canadian Employer Pension Survey*. We are also planning to develop an insightful white paper that closely examines the health impacts of retirement income security.

All of this will help expand the conversation around retirement security and the value of strong pension programs to members, employers and society in general. It will also help build HOOPP's brand and reputation as a retirement security thought leader.

Climate change

Our plan to achieve a net-zero portfolio

Climate change is a serious global risk that impacts all aspects of human life and activity, including the economy, without any regard for borders or geography. Collective action is urgently required, and HOOPP has an important role to play. As a pension delivery organization, we have a fiduciary responsibility to deliver on our pension promise to Ontario healthcare workers and we consider climate risk as part of our management of the Fund. While climate change poses financial risks to the Fund, it can also present economic opportunities and potentially enhanced financial returns.

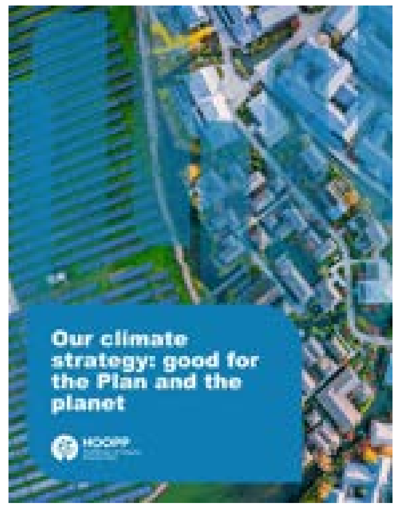
We have committed to achieving net-zero emissions in our portfolio by 2050. Our net-zero portfolio plan seeks to lower our carbon footprint through real-world emissions reductions.

Setting targets that support our goal

Our commitment and plan to achieve net zero by 2050 is a multi-decade goal. To achieve that long-term goal, we have thoughtfully designed interim targets that work in tandem, with each reinforcing the other. Our plan's interim targets are:

- encouraging companies to adopt credible, science-based transition plans that can directly reduce the greenhouse gases that enter the atmosphere
- increasing the capital made available for green investments that support our net-zero commitment and help us deliver on the pension promise
- focusing on emissions reductions. We prioritize real-world emissions reductions over selling assets that may reduce our carbon footprint but not the world's footprint

These targets provide us with a pathway to continue delivering on our pension promise while achieving our commitment of a net-zero portfolio by 2050. In combination, the three goals should deliver results that can be good for our Plan and our planet.



HOOPP is well positioned to participate and contribute now and in the coming decades by investing in companies and technologies that will reduce emissions in the real world. We are investing in solutions that are both in our members' best financial interests and have a real impact on emissions reductions.

Learn more about our plan on **hoopp.com/climatechange**.

Financial statements

as at Dec. 31, 2022

Management's Responsibility for Financial Reporting

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

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

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

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

March 9, 2023

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, 2022. The purpose of this valuation is to determine pension obligations of the Plan as at December 31, 2022, 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 $92,721 million in respect of service accrued to December 31, 2022 and a smoothed value of net assets of $108,850 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, 2022 and members’ pay data provided as at December 31, 2021, all of which was projected to December 31, 2022, using management’s estimates of experience for the intervening periods;
- the benefits specified by the terms of the Plan including the 2022 CPI adjustment which will become effective April 1, 2023 in respect of all pensioners’ and deferred vested members’ benefits;
- subsequent events, if any, that were known by February 13, 2023, 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, 2022, 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

Luc Girard	Joseph Fung
Fellow, Canadian Institute of Actuaries	Fellow, Canadian Institute of Actuaries

March 9, 2023

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, 2022 and 2021 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, 2022 and 2021;
- 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, included in the annual report.

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

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

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

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

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

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

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

Auditor's responsibilities for the audit of the financial statements

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

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

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

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

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

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

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

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

PricewaterhouseCoopers LLP

Chartered Professional Accountants, Licensed Public Accountants

Toronto, Ontario

March 9, 2023

Statements of Financial Position

As at December 31		2022		2021
($ millions)				
Assets				
Investment assets (note 2)	**$**	**184,623**	$	216,730
Contributions receivable				
Employers		**119**		118
Members		**93**		92
Other assets (note 7)		**262**		213
		185,097		217,153
Liabilities				
Investment liabilities (note 2)		**81,248**		102,551
Other liabilities		**175**		188
		81,423		102,739
Net assets available for benefits		**103,674**		114,414
Pension obligations (note 11)		**92,721**		85,902
Surplus (note 11)	**$**	**10,953**	$	28,512

See accompanying Notes to the Financial Statements.

ON BEHALF OF THE BOARD OF TRUSTEES

Dan Anderson	Gerry Rocchi	Nick Zelenczuk
Chair, Board of Trustees	Vice Chair, Board of Trustees	Chair, Audit & Finance Committee

March 9, 2023

Statements of Changes in Net Assets Available for Benefits

For the years ended December 31		2022		2021
($ millions)				
Net assets available for benefits, beginning of year	**$**	**114,414**	$	103,983
Investment operations				
Net investment income (note 4)		**(9,758)**		11,595
Investment operating expenses (note 10)		**(238)**		(227)
		(9,996)		11,368
Plan operations				
Contributions (note 8)				
Employers		**1,553**		1,502
Members		**1,341**		1,318
Benefits paid (note 9)		**(3,524)**		(3,639)
Plan operating expenses (note 10)		**(114)**		(118)
		(744)		(937)
Change in net assets available for benefits		**(10,740)**		10,431
Net assets available for benefits, end of year	**$**	**103,674**	$	114,414

See accompanying Notes to the Financial Statements.

Statements of Changes in Pension Obligations

For the years ended December 31		2022		2021
($ millions)				
Pension obligations, beginning of year	**$**	**85,902**	$	79,852
Changes in pension obligations				
Interest accrued on benefits		**4,116**		3,742
Benefits accrued		**4,058**		3,463
Amendments to the plan (note 11)		**3,623**		1,529
Changes in actuarial assumptions (note 11)		**(1,504)**		(347)
Experience losses/(gains) (note 11)		**50**		1,302
Benefits paid (note 9)		**(3,524)**		(3,639)
		6,819		6,050
Pension obligations, end of year	**$**	**92,721**	$	85,902

See accompanying Notes to the Financial Statements.

Notes to the Financial Statements

For the years ended December 31, 2022 and 2021

Description of the Plan

The following description of the Healthcare of Ontario Pension Plan (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 of Trustees (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. The Board may approve an annual increase above the guaranteed level up to 100% of the increase in the previous year's CPI, to an annual maximum of 10%.

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 provides supplementary pension benefits to members whose earnings result in a pension that exceeds the maximum pension permitted under the ITA for RPPs. The RCA is funded by member and employer contributions, as well as investment earnings, and is administered as part of the overall Plan; however, its assets are held in a segregated account. 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 come due. 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 Chartered Professional Accountants of Canada (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, volatilities and others. 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. Other factors, including liquidity and redemption restrictions or lock up periods, may also be taken into consideration in the determination of fair value for both quoted and unquoted investments where applicable.

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 recorded at cost, which together with accrued interest approximates fair value due to their short-term nature.

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

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.

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 at quoted market prices if they exist. Where quoted prices are not available, fair values are calculated using discounted cash flows based on current market yields on comparable securities or prices provided by independent third parties. In some instances, certain loans may be valued at cost plus accrued interest, which approximate fair value, where appropriate.

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, through ownership in limited partnership funds and co-investments with limited partnership funds. Directly held private equity investments are valued at estimated fair value using appropriate valuation techniques such as capitalized earnings or discounted cash flow methodologies. 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 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). 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 as 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 include investments held directly, through ownership in limited partnership funds and co-investments with limited partnership funds. Directly held infrastructure investments are valued at estimated fair value using appropriate valuation techniques such as discounted cash flow methodology where future cash flows generated by the investments are discounted using a risk-adjusted discount rate. 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 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 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 receivables and investment payables 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.

Investment Income

Investment income consists of net interest income, recognized on an accrual basis, net dividend income, recognized on the ex-dividend date, and net operating income from investments in private equity and special situations, real estate, infrastructure and alternative investments, recognized on an accrual basis. Investment income also includes realized and unrealized gains (losses).

Management Fees and Performance Fees

Management fees and performance fees related to investments in real estate, private equity and special situations, 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 and unrealized gains and losses arising from these foreign currency translations are included in net realized and unrealized gains (losses).

Pension Obligations

Pension obligations are determined based on an actuarial valuation prepared by an independent actuarial 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, 2022. 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, 2022 regulatory filing valuation if one were to be completed.

Contributions

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

Benefits Paid

Benefits paid consist of retirement pensions, bridge benefits, commuted value transfers, disability benefits, death benefits as well as transfers to other plans and refunds. These 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.

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).

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.

Future Accounting Standards

Amendments to Section 4600, *Pension Plans* were issued in December 2022 and will be effective for fiscal years beginning on or after January 1, 2024. The amendments will not have a significant impact on HOOPP.

Note 2 – INVESTMENTS

a. Investment fair value and cost

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

	2022		2021	
($ millions)	Fair Value	Cost	Fair Value	Cost
INVESTMENT ASSETS				
Cash	**$ 57**	**$ 57**	$ 92	$ 92
Securities purchased under resell agreements (note 5)	**7,476**	**7,487**	11,714	11,684
Fixed income				
Short-term securities	**3,260**	**3,260**	2,106	2,121
Bonds				
Canadian	**74,089**	**79,720**	87,801	83,646
Non-Canadian	**22,052**	**22,606**	9,922	9,646
Commercial loans				
Non-Canadian	**587**	**593**	465	494
	99,988	**106,179**	100,294	95,907
Equities				
Public equities				
Canadian	**2,563**	**2,129**	2,327	2,102
Non-Canadian	**21,140**	**21,561**	55,015	50,437
Private equities and special situations				
Canadian	**3,033**	**659**	1,892	652
Non-Canadian	**16,966**	**13,503**	13,471	10,293
	43,702	**37,852**	72,705	63,484
Real assets				
Real estate	**18,155**	**13,974**	17,916	13,432
Infrastructure	**4,661**	**4,008**	2,662	2,465
	22,816	**17,982**	20,578	15,897
Alternative investments	**4,849**	**4,544**	2,886	2,880
Derivative instruments (notes 3 & 5)	**2,769**	**1,266**	4,077	1,438
Investment receivables				
Cash collateral pledged (note 5)	**1,730**	**1,730**	2,244	2,244
Pending trades	**662**	**663**	1,591	1,597
Accrued investment income	**574**	**574**	549	549
	2,966	**2,967**	4,384	4,390
Total investment assets	**184,623**	**178,334**	216,730	195,772
INVESTMENT LIABILITIES				
Securities sold under repurchase agreements (note 5)	**(29,643)**	**(29,712)**	(29,292)	(29,235)
Bonds sold short (note 5)	**(11,339)**	**(12,593)**	(19,814)	(19,795)
Equities sold short (note 5)	**(23,325)**	**(24,161)**	(24,151)	(26,966)
Derivative instruments (notes 3 & 5)	**(2,728)**	**(1,273)**	(3,745)	(2,127)
Investment payables				
Cash collateral received (note 5)	**(12,252)**	**(12,252)**	(24,052)	(24,052)
Pending trades	**(1,499)**	**(1,498)**	(1,114)	(1,118)
Accrued investment liabilities	**(462)**	**(482)**	(383)	(405)
	(14,213)	**(14,232)**	(25,549)	(25,575)
Total investment liabilities	**(81,248)**	**(81,971)**	(102,551)	(103,698)
NET INVESTMENTS	**$ 103,375**	**$ 96,363**	$ 114,179	$ 92,074

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.

For the year ended December 31, 2022, transfers from Level 2 to Level 1 included $887 million of investments (year ended on December 31, 2021: $nil). Transfers between Level 2 and Level 1 occur when unadjusted quoted market prices are used for valuing an investment asset or investment liability that was previously valued using valuation techniques with significant observable inputs.

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 from Level 1 to Level 3 occur when an investment asset's or investment liability's fair value, which was determined previously through unadjusted quoted prices in active markets is now determined using a valuation technique with significant unobservable inputs. Transfers from Level 3 to Level 1 occur when unadjusted quoted market prices are used for valuing an investment asset or investment liability that was previously valued using a valuation technique with significant unobservable inputs.

Transfers between Level 2 and Level 3, and/or between Level 1 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:

	2022			
($ millions)	Level 1	Level 2	Level 3	Total
Investment assets				
Cash	$ 57	$ —	$ —	**$ 57**
Securities purchased under resell agreements	—	7,476	—	**7,476**
Short-term securities	—	3,260	—	**3,260**
Bonds	—	95,275	866	**96,141**
Commercial loans	—	—	587	**587**
Public equities	23,555	148	—	**23,703**
Private equities and special situations	—	—	19,999	**19,999**
Real estate	—	—	18,155	**18,155**
Infrastructure	—	—	4,661	**4,661**
Alternative investments	—	—	4,849	**4,849**
Derivative instruments	49	2,567	153	**2,769**
Investment receivables	1,730	1,236	—	**2,966**
	25,391	109,962	49,270	**184,623**
Investment liabilities				
Securities sold under repurchase agreements	—	(29,643)	—	**(29,643)**
Bonds sold short	—	(11,339)	—	**(11,339)**
Equities sold short	(23,325)	—	—	**(23,325)**
Derivative instruments	(128)	(2,398)	(202)	**(2,728)**
Investment payables	(12,252)	(1,961)	—	**(14,213)**
	(35,705)	(45,341)	(202)	**(81,248)**
Net Investments	**$ (10,314)**	**$ 64,621**	**$ 49,068**	**$ 103,375**

	2021			
($ millions)	Level 1	Level 2	Level 3	Total
Investment assets				
Cash	$ 92	$ —	$ —	$ 92
Securities purchased under resell agreements	—	11,714	—	11,714
Short-term securities	—	2,106	—	2,106
Bonds	—	97,675	48	97,723
Commercial loans	—	—	465	465
Public equities	56,329	1,013	—	57,342
Private equities and special situations	—	—	15,363	15,363
Real estate	—	—	17,916	17,916
Infrastructure	—	—	2,662	2,662
Alternative investments	—	—	2,886	2,886
Derivative instruments	61	3,916	100	4,077
Investment receivables	2,244	2,140	—	4,384
	58,726	118,564	39,440	216,730
Investment liabilities				
Securities sold under repurchase agreements	—	(29,292)	—	(29,292)
Bonds sold short	—	(19,814)	—	(19,814)
Equities sold short	(24,151)	—	—	(24,151)
Derivative instruments	(42)	(3,602)	(101)	(3,745)
Investment payables	(24,052)	(1,497)	—	(25,549)
	(48,245)	(54,205)	(101)	(102,551)
Net Investments	$ 10,481	$ 64,359	$ 39,339	$ 114,179

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.

	2022						
($ millions)	Fair Value Dec 31, 2021	Total Gains (Losses) Included in Net Income (1)	Purchases and Issues	Sales and Settlements	Transfers In(2)	Transfers Out(2)	Fair Value Dec 31, 2022
Bonds	$ 48	$ 4	$ 814	$ —	$ —	$ —	**$ 866**
Commercial loans	465	24	251	(153)	—	—	**587**
Private equities and special situations	15,363	2,181	5,020	(2,527)	—	(38)	**19,999**
Real estate(3)	17,916	79	1,143	(638)	—	(345)	**18,155**
Infrastructure	2,662	481	1,630	(112)	—	—	**4,661**
Alternative investments	2,886	324	2,541	(902)	—	—	**4,849**
Derivative instruments – assets	100	43	17	(7)	—	—	**153**
Derivative instruments – liabilities	(101)	21	(132)	10	—	—	**(202)**
Total	**$ 39,339**	**$ 3,157**	**$ 11,284**	**$ (4,329)**	**$ —**	**$ (383)**	**$ 49,068**

(1) For those investment assets and investment liabilities held at the end of the year, the total gains were $2,183 million.
(2) Transfers into and transfers out of Level 3 are assumed to occur at the end of the year.
(3) For real estate, mortgage debt borrowings of $187 million are netted in Purchases and Issues and mortgage debt repayments of $151 million are netted in Sales and Settlements.

	2021						
($ millions)	Fair Value Dec 31, 2020	Total Gains (Losses) Included in Net Income (1)	Purchases and Issues	Sales and Settlements	Transfers In(2)	Transfers Out(2)	Fair Value Dec 31, 2021
Bonds	$ —	$ (1)	$ 27	$ —	$ 22	$ —	$ 48
Commercial loans	353	1	364	(253)	—	—	465
Private equities and special situations	13,018	2,696	3,450	(3,436)	—	(365)	15,363
Real estate(3)	14,477	1,066	2,700	(327)	—	—	17,916
Infrastructure	756	176	1,794	(64)	—	—	2,662
Alternative investments	1,623	44	2,279	(1,060)	—	—	2,886
Derivative instruments – assets	83	18	56	(57)	—	—	100
Derivative instruments – liabilities	(56)	(7)	(59)	21	—	—	(101)
Total	$ 30,254	$ 3,993	$ 10,611	$ (5,176)	$ 22	$ (365)	$ 39,339

(1) For those investment assets and investment liabilities held at the end of the year, the total gains were $2,847 million.
(2) Transfers into and transfers out of Level 3 are assumed to occur at the end of the year.
(3) For real estate, mortgage debt borrowings of $489 million are netted in Purchases and Issues and mortgage debt repayments of $201 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.

			2022		2021	
($ millions)	**Significant Inputs**	**Change in Significant Inputs**	**Fair Value**	**Increase (Decrease) to Fair Value**	**Fair Value**	**Increase (Decrease) to Fair Value**
Private equity	**EBITDA multiple**	**+/- 10%**	**$ 763**	**$ 113 / (113)**	$ 2,097	$ 204 / (204)
	Discount rate	**+/- 1%**	**806**	**(51) / 55**	n/a	n/a
Private debt(1)	**Discount rate**	**+/- 1%**	**714**	**(41) / 44**	524	(19) / 20
Infrastructure	**Discount rate**	**+/- 0.25%**	**1,295**	**(56) / 60**	556	(29) / 32
Real estate	**Capitalization rate**	**+/- 0.25%**	**11,482**	**(603) / 730**	10,905	(619) / 709

(1) Included within private equities and special situations in note 2a.

The above sensitivity analysis excludes investments where cost is used as an approximation for fair value (e.g., newly acquired real estate properties, private equity and infrastructure 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:

	2022					
($ 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	$ 8,334	$ (858)	$ 7,476	$ (7,312)	$ (163)	$ 1
Securities on loan(4)	19,365	—	19,365	—	(19,321)	44
Derivative instruments(5)	2,877	—	2,877	(1,937)	(826)	114
Total financial assets	**30,576**	**(858)**	**29,718**	**(9,249)**	**(20,310)**	**159**
Financial liabilities						
Securities sold under repurchase agreements(3)	(30,507)	858	(29,649)	7,312	22,294	(43)
Derivative instruments(5)	(3,107)	—	(3,107)	1,937	1,076	(94)
Total financial liabilities	**$ (33,614)**	**$ 858**	**$ (32,756)**	**$ 9,249**	**$ 23,370**	**$ (137)**

(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 payables of $6 million.
(4) Included within fixed income and public equity investment assets in note 2a.
(5) Includes pending trade receivables and payables of $108 million and $379 million, respectively.

	2021					
($ 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[3]	$ 12,460	$ (713)	$ 11,747	$ (11,184)	$ (562)	$ 1
Securities on loan[4]	34,494	—	34,494	—	(34,138)	356
Derivative instruments[5]	4,753	—	4,753	(3,052)	(1,308)	393
Total financial assets	51,707	(713)	50,994	(14,236)	(36,008)	750
Financial liabilities						
Securities sold under repurchase agreements	(30,005)	713	(29,292)	11,184	18,106	(2)
Derivative instruments[5]	(4,119)	—	(4,119)	3,052	1,046	(21)
Total financial liabilities	$ (34,124)	$ 713	$ (33,411)	$ 14,236	$ 19,152	$ (23)

(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 of $33 million.
(4) Included within fixed income and public equity investment assets in note 2a.
(5) Includes pending trade receivables and payables of $676 million and $374 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 $960 million and $1,030 million respectively, as at December 31, 2022 (2021: $920 million and $1,140 million respectively), are as follows:

	2022	
($ millions)	Fair Value	Cost
Fixed income		
Canadian bonds[1]	**$ 14,550**	**$ 14,785**
Non-Canadian bonds[2]	**10,014**	**10,302**
Equities		
Non-Canadian public equities[3]	**2,655**	**2,907**
Canadian private equities	**2,490**	**7**

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

	2021	
($ millions)	Fair Value	Cost
Fixed income		
Canadian bonds[1]	$ 19,703	$ 17,416
Equities		
Non-Canadian public equities[2]	20,093	16,927
Canadian private equities	1,309	7

(1) Includes Canadian government and real return bonds.
(2) 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:

Forwards

Forwards are contractual agreements between two parties to either buy or sell an asset at a predetermined price on a specified future date. HOOPP invests in currency forwards and bond forwards. Currency forwards are used to modify the Plan's exposure to currency risk. Bond forwards are used to manage the Plan's exposure to market risk and to enhance returns.

Futures

Futures are standardized agreements, which can be purchased or sold on a regulated futures exchange. HOOPP invests in commodity, equity, and interest rate futures. Equity and commodity futures are agreements to either buy or sell at a predetermined date and price, a single equity or commodity, an equity or commodity index, or a basket of equities. Interest rate futures are agreements to either buy or sell an interest rate-sensitive instrument, such as bonds, on a predetermined future date at a specified price. 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, options on futures 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.

- Commodity swaps are agreements between two parties to exchange a series of cash flows based on the return of a commodity index. One party typically agrees to pay a fixed or floating interest rate in return for receiving the commodity return. These commodity-based swaps are used for yield enhancement purposes 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.

	2022		
		Fair Value(2)	
($ millions)	Notional value(1)	Assets	Liabilities
Commodity derivatives			
Futures	$ 112	$ 1	$ (1)
Swaps	339	—	—
Credit derivatives			
Credit default swap options	46,287	31	(28)
Credit default swaps(3)	13,841	165	(253)
Currency derivatives			
Forwards	35,112	111	(550)
Options	2,324	38	(7)
Swaps	5,490	222	(116)
Equity derivatives			
Futures	13,454	19	(109)
Options	20,282	1,110	(636)
Swaps	69,170	488	(826)
Warrants	397	19	—
Interest rate derivatives			
Forwards	241	1	—
Futures	5,331	1	—
Options	26,160	7	(4)
Swaps	28,565	448	(187)
Swaptions	7,235	108	(11)
Total	**$ 274,340**	**$ 2,769**	**$ (2,728)**

(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) Includes the sale of credit protection, which HOOPP indirectly guarantees the underlying reference obligations. The notional amount of the credit protection sold is $8,999 million and the fair values of related assets and liabilities are $53 million and $187 million respectively. All of these contracts mature within 5 years.

	2021		
		Fair Value[2]	
($ millions)	Notional value[1]	Assets	Liabilities
Credit derivatives			
Credit default swap options	$ 23,378	$ 7	$ (22)
Credit default swaps[3]	13,906	116	(141)
Currency derivatives			
Forwards	28,877	120	(224)
Options	995	31	(17)
Swaps	1,656	23	(94)
Equity derivatives			
Futures	7,963	5	(33)
Options	32,291	2,027	(1,489)
Swaps	116,453	1,295	(1,261)
Warrants	462	58	—
Interest rate derivatives			
Forwards	1,042	36	—
Futures	6,843	—	(1)
Options	7,039	1	—
Swaps	16,158	214	(434)
Swaptions	7,707	144	(29)
Total	$ 264,770	$ 4,077	$ (3,745)

(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) Includes the sale of credit protection, which HOOPP indirectly guarantees the underlying reference obligations. The notional amount of the credit protection sold is $10,003 million and the fair values of related assets and liabilities are $64 million and $57 million respectively. The majority of these contracts mature within 5 years.

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.

	2022			
($ millions)	Within 1 Year	1 to 5 Years	Over 5 Years	Total
Commodity derivatives				
Futures	$ 112	$ —	$ —	$ 112
Swaps	339	—	—	$ 339
Credit derivatives				
Credit default swap options	46,287	—	—	46,287
Credit default swaps	374	13,128	339	13,841
Currency derivatives				
Forwards	35,111	1	—	35,112
Options	598	1,659	67	2,324
Swaps	254	3,997	1,239	5,490
Equity derivatives				
Futures	13,454	—	—	13,454
Options	10,017	6,591	3,674	20,282
Swaps	49,538	17,276	2,356	69,170
Warrants	32	314	51	397
Interest rate derivatives				
Forwards	241	—	—	241
Futures	4,440	891	—	5,331
Options	24,805	1,355	—	26,160
Swaps	13,747	13,103	1,715	28,565
Swaptions	4,117	2,122	996	7,235
Total	**$ 203,466**	**$ 60,437**	**$ 10,437**	**$ 274,340**

	2021			
($ millions)	Within 1 Year	1 to 5 Years	Over 5 Years	Total
Credit derivatives				
Credit default swap options	$ 23,378	$ —	$ —	$ 23,378
Credit default swaps	330	13,450	126	13,906
Currency derivatives				
Forwards	28,876	1	—	28,877
Options	284	648	63	995
Swaps	168	879	609	1,656
Equity derivatives				
Futures	7,963	—	—	7,963
Options	20,996	5,587	5,708	32,291
Swaps	64,764	45,632	6,057	116,453
Warrants	1	230	231	462
Interest rate derivatives				
Forwards	1,042	—	—	1,042
Futures	6,274	569	—	6,843
Options	4,138	2,901	—	7,039
Swaps	6,591	7,908	1,659	16,158
Swaptions	3,397	2,361	1,949	7,707
Total	$ 168,202	$ 80,166	$ 16,402	$ 264,770

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:

	2022					
($ 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	$ (228)	$ (1,178)	**$ (1,406)**	$ —	$ —	**$ (1,406)**
Net repurchase agreements	(339)	(775)	**(1,114)**	—	—	**(1,114)**
Fixed income						
Short-term securities	106	(112)	**(6)**	—	—	**(6)**
Bonds						
Canadian	2,124	(10,563)	**(8,439)**	—	—	**(8,439)**
Non-Canadian	301	(171)	**130**	—	—	**130**
Commercial loans						
Non-Canadian	39	24	**63**	—	—	**63**
	2,570	(10,822)	**(8,252)**	—	—	**(8,252)**
Equities						
Public equities						
Canadian	86	555	**641**	—	(3)	**638**
Non-Canadian	255	(3,055)	**(2,800)**	—	(13)	**(2,813)**
Private equities and special situations						
Canadian	63	1,151	**1,214**	(2)	(1)	**1,211**
Non-Canadian	358	1,035	**1,393**	(133)	(1)	**1,259**
	762	(314)	**448**	(135)	(18)	**295**
Real assets						
Real estate	482	79	**561**	(18)	(7)	**536**
Infrastructure	62	481	**543**	(9)	(5)	**529**
	544	560	**1,104**	(27)	(12)	**1,065**
Alternative investments	—	361	**361**	(37)	—	**324**
Derivative instruments	—	(657)	**(657)**	—	(13)	**(670)**
Total	**$ 3,309**	**$ (12,825)**	**$ (9,516)**	**$ (199)**	**$ (43)**	**$ (9,758)**

(1) Includes net operating income (loss) from investments in private equity, real estate and infrastructure.
(2) Includes net realized gains from investments of $2,226 million and change in unrealized losses from investments of $15,051 million.
(3) Includes gain (loss) from foreign exchange.
(4) Net of performance fees.

($ millions)	2021 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	$ (33)	$ (31)	$ (64)	$ —	$ —	$ (64)
Net repurchase agreements	(34)	(13)	(47)	—	—	(47)
Fixed income						
Short-term securities	8	(15)	(7)	—	—	(7)
Bonds						
Canadian	2,163	(2,949)	(786)	—	—	(786)
Non-Canadian	180	55	235	—	—	235
Commercial loans						
Non-Canadian	27	1	28	—	(1)	27
	2,378	(2,908)	(530)	—	(1)	(531)
Equities						
Public equities						
Canadian	147	(85)	62	—	(12)	50
Non-Canadian	468	7,291	7,759	—	(11)	7,748
Private equities and special situations						
Canadian	87	424	511	(1)	—	510
Non-Canadian	71	2,272	2,343	(107)	—	2,236
	773	9,902	10,675	(108)	(23)	10,544
Real assets						
Real estate	463	1,066	1,529	(18)	(23)	1,488
Infrastructure	22	176	198	(8)	(6)	184
	485	1,242	1,727	(26)	(29)	1,672
Alternative investments	—	66	66	(22)	—	44
Derivative instruments	—	(15)	(15)	—	(8)	(23)
Total	$ 3,569	$ 8,243	$ 11,812	$ (156)	$ (61)	$ 11,595

(1) Includes net operating income (loss) from investments in private equity, real estate and infrastructure.
(2) Includes net realized losses from investments of $3,127 million and change in unrealized gains from investments of $11,370 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.

In most cases, when collateral is 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.

In most cases, when collateral is 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, 2022, the fair value of total collateral rehypothecated by the Plan is $4,107 million (2021: $314 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:

2022			
($ millions)	Repurchase Agreements	Securities Lending/Borrowing and Other Transfers	Derivatives
Fair value/carrying amount of financial assets transferred out(1)	$ —	$ 28,430	$ —
Fair value/carrying amount of collateral pledged(2)	30,487	46,613	4,362
Fair value/carrying amount of financial assets received(3)	—	(20,780)	—
Fair value/carrying amount of collateral received(4)	(8,208)	(17,656)	(2,112)
Fair value/carrying amount of associated receivables (note 2)	7,476	—	2,769
Fair value/carrying amount of associated liabilities(5)	(29,643)	(34,738)	(2,728)
Net position	**$ 112**	**$ 1,869**	**$ 2,291**

(1) Includes securities lent, both directly and through a third party, of $19,365 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 $9,065 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 $1,730 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 $12,252 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 $74 million of accrued investment liabilities relating to investments sold short. Amounts for repurchase agreements and derivatives are presented in note 2.

2021			
($ millions)	Repurchase Agreements	Securities Lending/Borrowing and Other Transfers(6)	Derivatives
Fair value/carrying amount of financial assets transferred out(1)	$ —	$ 49,198	$ —
Fair value/carrying amount of collateral pledged(2)	30,566	49,492	4,578
Fair value/carrying amount of financial assets received(3)	—	(25,226)	—
Fair value/carrying amount of collateral received(4)	(12,757)	(26,844)	(3,524)
Fair value/carrying amount of associated receivables (note 2)	11,714	—	4,077
Fair value/carrying amount of associated liabilities(5)	(29,292)	(44,039)	(3,745)
Net position	$ 231	$ 2,581	$ 1,386

(1) Includes securities lent, both directly and through a third party, of $34,494 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 $14,704 million represents other transfers of financial assets received from various transactions, which have not been recognized on HOOPP's statements of financial position as the risks and rewards remain with the counterparty.

(2) Includes cash collateral pledged of $2,244 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 $24,052 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 $74 million of accrued investment liabilities relating to investments sold short. Amounts for repurchase agreements and derivatives are presented in note 2.

(6) The comparative amounts have been restated to eliminate financial assets that have been transferred within HOOPP.

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 management, 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 Risk 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, 2022, the Plan had a surplus for financial statement purposes of $10,953 million (2021: $28,512 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, 2022, the Plan had a regulatory filing surplus of $16,129 million, compared to $17,567 million as at December 31, 2021 (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, 2021. 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.

			2022		
($ millions)	Within 1 Year[5][6]	1 to 5 Years	5 to 10 Years	Over 10 Years	Total
Short-term securities	$ 3,260	$ —	$ —	$ —	**$ 3,260**
Bonds[1][2]	12,572	22,599	11,997	37,783	**84,951**
Commercial loans[3]	110	166	288	27	**591**
Preferred shares[4]	—	—	—	4	**4**
Exchange-traded funds[4]	12	—	269	111	**392**
Derivative instruments	6,682	(14,610)	(1,470)	11	**(9,387)**
Net repurchase agreements	(22,167)	—	—	—	**(22,167)**
Total	**$ 469**	**$ 8,155**	**$ 11,084**	**$ 37,936**	**$ 57,644**

(1) Net of bonds sold short of $11,339 million.
(2) Includes accrued interest of $428 million.
(3) Includes accrued interest of $4 million.
(4) These financial instruments are interest rate sensitive and are classified as public equities in note 2.
(5) Excludes cash of $39 million.
(6) Excludes net cash collateral liabilities of $10,522 million.

			2021		
($ millions)	Within 1 Year[5][6]	1 to 5 Years	5 to 10 Years	Over 10 Years	Total
Short-term securities	$ 2,106	$ —	$ —	$ —	$ 2,106
Bonds[1][2]	19,841	16,491	(227)	42,068	78,173
Commercial loans[3]	192	121	154	—	467
Preferred shares[4]	—	—	—	355	355
Exchange-traded funds[4]	—	734	471	298	1,503
Derivative instruments	9,637	(6,893)	(706)	34	2,072
Net repurchase agreements	(17,578)	—	—	—	(17,578)
Total	$ 14,198	$ 10,453	$ (308)	$ 42,755	$ 67,098

(1) Net of bonds sold short of $19,814 million.
(2) Includes accrued interest of $391 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) Excludes cash of $73 million.
(6) Excludes net cash collateral liabilities of $21,808 million.

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, 2022, a 1% increase in interest rates would have decreased the Plan's net assets available for benefits by $6,334 million (2021: $7,316 million); a 1% decrease in interest rates would have increased the Plan's net assets available for benefits by $7,787 million (2021: $7,316 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.

	2022			2021		
($ millions)	Local Currency	Canadian Dollar Equivalent	Impact of +/- 5% Change	Local Currency	Canadian Dollar Equivalent	Impact of +/- 5% Change
Euros	**(42)**	**$ (60)**	**$ (3) / 3**	172	$ 248	$ 12 / (12)
British Pounds	**(137)**	**(224)**	**(11) / 11**	32	55	3 / (3)
United States Dollars	**(397)**	**(538)**	**(27) / 27**	747	944	47 / (47)
Other[(1)]		**(69)**	**(3) / 3**		(28)	(1) / 1
Total		**$ (891)**	**$ (44) / 44**		$ 1,219	$ 61 / (61)

(1) Comprised of insignificant exposures to other foreign currencies not separately disclosed.

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.

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 10% 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 $99 million (2021: $622 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 $973 million (2021: $721 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.

		2022		
($ millions)	**Effective Equity Exposure**	**% of Net Assets Available for Benefits**	**Benchmark**	**Impact of a 10% Increase/ (Decrease)**
Canadian	$ 5,220	5.0 %	S&P/TSX 60 Total Return Index	$ 523 / (522)
United States	8,545	8.2 %	S&P 500 Total Return Index	860 / (853)
International	14,481	14.0 %	Blend of International Indices(1)	1,450 / (1,433)
	$ 28,246			**$2,833 / (2,808)**

(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), SPI 200 Index, MSCI EM Index, MSCI World Climate Paris Aligned, S&P Global Clean Energy Custom Index, Nasdaq Clean Edge Green Energy Custom Index.

		2021		
($ millions)	**Effective Equity Exposure**	**% of Net Assets Available for Benefits**	**Benchmark**	**Impact of a 10% Increase/ (Decrease)**
Canadian	$ 5,788	5.1 %	S&P/TSX 60 Total Return Index	$ 582 / (578)
United States	13,013	11.4 %	S&P 500 Total Return Index	1,388 / (1,296)
International	18,696	16.3 %	Blend of International Indices(1)	1,889 / (1,870)
	$ 37,497			$3,859 / (3,744)

(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), Deutscher Aktien Index (DAX), Cotation Assistee en Continu (CAC) 40 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.

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:

	2022		2021	
($ millions)	Total Credit Exposure	% of Total	Total Credit Exposure	% of Total
Sovereign securities AAA[1]	**$ 26,046**	**21.1 %**	$ 8,303	6.3 %
Fixed income instruments				
AAA	**17,366**	**14.1 %**	16,768	12.6 %
AA	**29,621**	**23.9 %**	35,640	26.9 %
A	**11,303**	**9.2 %**	14,749	11.1 %
BBB	**2,204**	**1.8 %**	2,973	2.2 %
BB or below	**2,059**	**1.7 %**	3,025	2.3 %
Credit derivatives	**20,549**	**16.7 %**	22,662	17.1 %
Counterparty credit risk exposure				
Derivative instruments	**940**	**0.8 %**	1,700	1.3 %
Repurchase agreements	**318**	**0.3 %**	796	0.6 %
Securities lending program	**12,820**	**10.4 %**	26,055	19.6 %
Maximum credit risk exposure	**123,226**	**100.0 %**	132,671	100.0 %
Credit risk protection (credit derivatives)	**(16,793)**		(14,226)	
Collateral received	**(10,849)**		(23,674)	
Total	**$ 95,584**		$ 94,771	

(1) As at December 31, 2022, includes bonds issued or guaranteed by the governments of Canada, Germany, Australia and the United States (2021: Canada, Germany, Australia 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:

		2022		2021
($ millions)				
Liquid securities	$	**77,608**	$	83,564
Less: net liquid securities transferred[1]		**(50,177)**		(50,582)
Securities available for liquidity needs	**$**	**27,431**	$	32,982

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

Interest Rate Benchmark Reform

Global regulators have prioritized the reform and replacement of benchmark interest rates such as USD LIBOR, GBP LIBOR, and other interbank offered rates (IBORs). As a result, public authorities and other market participants are selecting new benchmark interest rates in key currencies with the objective that these rates will be based on liquid underlying market transactions. The publication of LIBOR settings for all Euro LIBOR, all Swiss franc LIBOR, the spot next, 1-week, 2-month and 12-month Japanese yen LIBOR, the overnight, 1-week, 2-month and 12- month sterling LIBOR, and the 1-week and 2-month US dollar LIBOR ceased immediately after December 31, 2021. However, the United Kingdom's Financial Conduct Authority (FCA) required the continued publication of 1-month, 3-month and 6-month sterling and yen LIBOR settings until the end of 2022 on a non-representative "synthetic" basis. Additionally, the publication for the overnight and 12-month US dollar LIBOR settings will cease immediately after June 30, 2023. The FCA will continue to consider whether to also require the continued publication on a synthetic basis of the 1-month, 3-month and 6-month US dollar LIBOR settings for a further period after June 30, 2023. On May 16, 2022, the administrator of the Canadian Dollar Offered Rate (CDOR), announced that it will cease the calculation and publication of all tenors of CDOR after June 28, 2024.

Risk measurement

HOOPP established an enterprise-wide transition program to assess the impact of interest rate benchmark reform on its investment portfolio, operational processes, and internal controls, and to execute the transition to alternate reference rates. As at December 31, 2022, HOOPP was evaluating the investment contracts that reference an IBOR tenor and mature after the expected cessation of that IBOR. As a result, HOOPP continues to be exposed to interest rate risk, albeit the investment contracts will be indexed to different reference rates. Refer to the section above for a discussion on interest rate risk.

Risk management

As at December 31, 2022, the Plan held non-derivative financial assets and liabilities with a fair value of $670 million and $72 million (2021: $362 million and $466 million) respectively, and derivatives with a total notional value of $11,034 million (2021: $14,166 million) referencing LIBOR tenors that will cease after June 30, 2023 (2021: LIBOR tenors that ceased after December 31, 2021 or will cease after June 30, 2023). In addition, as at December 31, 2022, the Plan held non-derivative financial assets and liabilities with a fair value of $2,603 million and $nil (2021: $4,352 million and $nil) respectively, and derivatives with a total notional value of $10,998 million (2021: $7,661 million) referencing CDOR that will cease after June 28, 2024. Management's assessment is that the impact of these transitions on the Plan's investments will not be significant. Management will continue to monitor benchmark rates in other jurisdictions as they evaluate benchmark reforms.

Note 7 – OTHER ASSETS

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

($ millions)	2022	2021
Refundable withholding tax on contributions	**$ 217**	$ 164
Fixed assets and intangible assets	**38**	40
Other	**7**	9
Total	**$ 262**	$ 213

Note 8 – CONTRIBUTIONS

Contributions received are reconciled annually, within one 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)	2022	2021
Employers		
Current service contributions	**$ 1,553**	$ 1,502
Members		
Current service contributions	**1,232**	1,192
Past service contributions from members	**32**	40
Transfers from other plans	**77**	86
	1,341	1,318
Total	**$ 2,894**	$ 2,820

Note 9 – BENEFITS PAID

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

($ millions)	2022	2021
Retirement pension and bridge benefits	**$ 2,724**	$ 2,442
Death benefits	**199**	210
Disability benefits	**75**	75
Commuted value transfers	**475**	879
Transfers to other plans(1)	**51**	33
Total	**$ 3,524**	$ 3,639

(1) Includes refunds of $14 million (2021: $2 million)

Note 10 – OPERATING EXPENSES

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

($ millions)	2022	2021
Investment[1]		
Administration	**$ 224**	$ 212
Legal, actuarial and other professional fees[2]	**10**	11
Custodial	**4**	4
	238	227
Plan[1]		
Administration	**109**	108
Legal, actuarial and other professional fees[2]	**5**	10
	114	118
Total	**$ 352**	$ 345

(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 $1,190,000 (2021: $1,208,000), audit-related services of $773,000 (2021: $401,000) and non-audit services of $135,000 (2021: $137,000). Also includes amounts paid or payable to the actuary pertaining to actuarial services of $444,000 (2021: $443,000).

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. 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.

The Board approved changes to certain assumptions at each reporting date as set out in the table below.

To determine the pension obligations as at December 31, 2022 and December 31, 2021, 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:

	2022[4]	2021[4]
Discount rate[1]	**5.80 %**	4.65 %
Rate of price inflation[2]	**2.00 %**	2.00 %
Real discount rate	**3.80 %**	2.65 %
Salary escalation rate[3]	**3.50 %**	3.50 %

(1) Net of allowance for investment and plan expenses of 0.40% (2021: 0.40%).
(2) Rate of price inflation of 3.5% for 2023, 2.3% for 2024, 2.1% for 2025 and 2.0% per annum thereafter is assumed (2021: 2:00% per annum is assumed). Assumed inflation protection: 100% of CPI for all years of service, notwithstanding its discretionary nature (2021: contractual, as detailed under 'Inflation Protection' in the Description of the Plan).
(3) For both 2022 and 2021, 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.
(4) Net impact from changes to assumptions resulted in an actuarial gain of $1,504 million (2021: actuarial gain of $347 million).

Actuarial Methodology for Financial Reporting

For the determination of the actuarial present value of the pension obligations as at December 31, 2022, 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 management as at October 1, 2022 and members' pay data provided as at December 31, 2021, all of which were projected to December 31, 2022 using management's estimates of experience for the intervening periods. The pensionable earnings estimates were determined based on 2021 experience and estimate assumptions.

Using this method and data, the pension obligations (or going concern actuarial pension obligations) as at December 31, 2022, were $92,721 million (2021: $85,902 million).

Experience Gains and Losses

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 2022, there was an experience loss of $50 million (2021: loss of $1,302 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 2022, the Board confirmed 100% of the 2022 CPI increase as an ad hoc increase effective April 1, 2023. As at December 31, 2022, the additional impact to the pension obligations for this ad hoc inflation protection adjustment, in excess of the inflation protection assumed at the prior year-end, is $1,277 million. During 2021, the Board confirmed 100% of the 2021 CPI increase as an ad hoc increase effective April 1, 2022. As at December 31, 2021, the additional impact to the pension obligations for this ad hoc inflation protection adjustment, in excess of the inflation protection assumed at the prior year-end, is $825 million.

During 2022, the Board also approved an amendment to the Plan provisions for eligible members active in the Plan on or after January 1, 2023, which increased the benefit formula accrual rate in respect of years up to the end of 2022. The additional impact for this improvement was an increase to the pension obligations of $2,346 million as of January 1, 2022. During 2021, the Board approved an amendment to the Plan provisions effective April 1, 2021 which increased the benefit formula accrual rate in respect of the years 2018, 2019 and 2020. The impact of this improvement was an increase to the pension obligations of $704 million as of January 1, 2021.

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, 2022, was $10,953 million (2021: $28,512 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 (for periods prior to 2020). 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, 2022, was $16,129 million (2021: $17,567 million).

The market value of net assets available for benefits is less than the smoothed value of net assets, resulting in a difference between the surplus for financial statement purposes and that for regulatory filing purposes of $5,176 million at December 31, 2022 (2021: the market value of net assets available for benefits exceeded the smoothed value of net assets by $10,945 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, 2021, and a copy of that valuation was filed with FSRA and CRA. The effective date of the next required valuation is December 31, 2024.

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, 2021 regulatory filing valuation were as follows:

Economic Assumptions	Rates
Discount rate(1)	**4.65 %**
Rate of price inflation(2)	**2.00 %**
Real discount rate	**2.65 %**
Salary escalation rate(3)	**3.50 %**

(1) Net of allowance for investment and plan expenses of 0.40%.
(2) Contractual inflation protection assumed.
(3) 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, 2021, disclosed a smoothed value of net assets of $103,469 million with accrued going concern pension obligations of $88,248 million, resulting in a going concern regulatory filing surplus of $15,221 million. The obligations reflect the benefit improvement approved by the Board in 2022 in respect of years up to the end of 2021 disclosed under Plan Provisions in note 11. In accordance with the PBA, the solvency deficiency at December 31, 2021 was $nil.

Note 13 – RETIREMENT COMPENSATION ARRANGEMENT

Under the RCA, 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, 2022 was $362 million (2021: $276 million).

Note 14 – RELATED PARTY TRANSACTIONS

As at December 31, 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 the 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:

		2022
($ millions)		
2023	$	7
2024		7
2025		7
2026		7
2027		7
Thereafter		67
Total minimum lease payments	**$**	**102**

Note 15 – COMMITMENTS

As part of normal business operations, the Plan has committed to enter into investment and other transactions including funding of real estate, private equity, infrastructure and alternative investments and extending 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:

		2022		2021
($ millions)				
Funding commitments	**$**	**18,655**	$	10,955
Loan commitments		**116**		85
Total	**$**	**18,771**	$	11,040

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, 2022, the amount recorded as a liability for claims under these arrangements was $nil (2021: $nil).

Contingencies

As at December 31, 2022, 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.

Governance

Governance

Below you will find a list of HOOPP's Chairs, Board Trustees, Observers, Executives, Senior management and Board advisors, as at December 31, 2022.

Chairs

Dan Anderson
Board Chair

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

Gerry Rocchi
Board Vice-Chair

Chair, Governance Committee and Chair, HR & Compensation Committee

OHA-appointed Trustee

Trustees

Sandi Blancher
Vice Chair

OPSEU Hospital Professionals Division

Giselle Branget
OHA-appointed Trustee

Jon Clark
SEIU Healthcare

Anthony Dale
President & CEO, Ontario Hospital Association

Laura Dumoulin
OPSEU Local 675 Membership Secretary / Communications Chairman

Jim Flett
OHA-appointed Trustee

Andrea Kay
Chief Executive Officer, Ontario Nurses' Association

Ian Matheson
OHA-appointed Trustee

William Moriarty
OHA-appointed Trustee

Cam Nelson
SEIU-appointed Trustee

Sharon Richer
Chair, Plan Committee

Secretary-Treasurer, Ontario Council of Hospital Unions (OCHU)

Dave Verch
Vice President OCHU-CUPE

Barry Wainstein
Chair, Asset-Liability Management Committee

OHA-appointed Trustee

Nick Zelenczuk
Chair, Audit & Finance Committee

OHA-appointed Trustee

Observers

Kristof Barocz
Observer SEIU

Deputy Chief of Staff and Interim Director of Hospitals at SEIU Healthcare SEIU Local 1

Karli Farrow
Observer OHA

President & CEO, Trillium Health Partners

Treena Hollingworth
Observer CUPE

Vice President, OCHU-CUPE

Sara Labelle
Observer, OPSEU

OPSEU Regional Vice-President

Karim Mamdani
Observer OHA

President & CEO, Ontario Shores Centre for Mental Health Services

Matthew Stout
Observer ONA

Advisor to the CEO Executive Lead Labour Relations, ONA

Executives

Jeff Wendling
President & Chief Executive Officer

Mary Abbott
Senior Vice President & General Counsel

Reno Bugiardini
Senior Vice President, Information Technology & Facilities Services

Saskia Goedhart
Senior Vice President & Chief Risk Officer

Steven McCormick
Senior Vice President, Plan Operations

Elena Palumbo-Sergnese
Senior Vice President, Human Resources

Tim Shortill
Chief Operating Officer

Barbara Thomson
Senior Vice President, Finance & Chief Financial Officer

Michael Wissell
Chief Investment Officer

Senior Management

Communications & Public Affairs

Christopher Poulo
Vice President, Communications & Public Affairs

Finance

Nancy Borges
Vice President, Investment Reporting, Data Governance & Valuation

Juliana Duray Kikuchi
Vice President, Finance Governance & Tax

Linda Halley
Vice President, Controller

Jeff Rabb
Vice President, Office of the CFO

Nan Samaroo
Vice President, Investment Operations

Human Resources

Nick D'Souza
Vice President, Total Rewards

Alicia Yetman
Vice President, Human Resources

Information Technology & Facilities Services

Juan Jose Diz
Vice President, Pension Solutions Group

Lorena Gepraegs
Vice President, IT Security, Risk and Governance

Raif Murray
Vice President, Investment Solutions Group

Ryan Van Luttikhuisen
Vice President, Corporate Solutions Group

Investment Management

Stephen Anderson
Senior Managing Director, Equity Derivatives & Collateral Management

Shrirang Apte
Senior Managing Director, Credit

Scott Clausen
Vice President, Actuarial Services

Lori Hall-Kimm
Senior Managing Director & Head of Global Private Equity

Jacky Lee
Senior Managing Director, Total Portfolio

Drew McFadzean
Vice President, Office of the Chief Investment Officer

Adrian Mitchell
Senior Managing Director, Public Equities

Eric Plesman
Senior Managing Director & Head of Global Real Estate

Stephen Smith
Senior Managing Director & Head of Global Infrastructure

Ray Tanveer
Senior Managing Director, Interest Rates

Legal Services & Governance

Debbie Caruso
Associate General Counsel, Investments

Angela Waite
Associate General Counsel, Corporate & Privacy

Plan Operations

Rachel Arbour
Vice President, Plan & Policy Development

Tabitha Chinniah
Vice President, Product & Service Experience

Victoria Sampson
Vice President, Member Services

Silvano Trinca
Vice President, Plan Operations

Diana Wintermans
Vice President, Plan Operations, Actuarial Services

Ivana Zanardo
Vice President, Client Services

Risk & Internal Audit

Stephane Arvanitis
Vice President, Total Fund & Investment Risk

Stephen Choi
Vice President, Investment Risk Public, Capital & Private Markets

Abas Kanu
Vice President, HOOPP Compliance Officer

Helena Przybycien
Vice President, Enterprise & Operational Risk

Janine Ho Soong
Vice President, Internal Audit

Board advisors

Mercer (Canada) Limited
Actuary

Pricewaterhouse Coopers LLP
External Auditor

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

Willis Towers Watson
Board Compensation Advisor

Gordon Gibbons
Investment Advisor