MOVING FORWARD

2021 FUNDED STATUS REPORT

OPTrust

"We are navigating our way through the pandemic and moving forward. Our role as a pension plan is to look beyond the short term and instead, decades into the future to pay pensions for generations of Ontarians.'

Peter Lindley
President and Chief
Executive Officer

With net assets of over $25 billion, OPTrust invests and manages one of Canada's largest pension funds and administers the OPSEU Pension Plan (including OPTrust Select), a defined benefit plan with over 100,000 members.

RACHEL ASSEFI

Senior Pension Consultant,
Member Experience, Toronto

OPTrust

Rachel Assefi is a Senior Pension Consultant at OPTrust. She provides members with important pension education and guidance, working collaboratively across several lines of business, to deliver a high-quality member experience. During her nearly five years with OPTrust, Rachel has held progressively senior roles giving her the knowledge and experience to best serve members and their unique needs, such as buying back pension service, changes to marital status and planning for retirement, to name a few. Rachel enjoys translating complicated pension information in a way that is easy to understand. **"It's a great feeling when a member can change the way they look at information, understand their pension options and know what to do next,"** she said. While Rachel is several years away from retiring, she believes strongly in the value of her pension and looks at it a little like a warm retirement security blanket.

STEVEN WICKENS

Youth Support Worker,
Central Toronto Youth Services

OPTrust Select Member

Steven Wickens is a Youth Support Worker at Central Toronto Youth Services (CTYS) and works primarily in a bail support program helping youth move forward and not reoffend. In particular, he supports youth that would not otherwise qualify for bail to find employment, find places to do community service hours, get back into school and sometimes even find somewhere to live. He also provides individual counselling. **"I really enjoy developing relationships with these kids,"** Steve says, adding he enjoys helping the youth achieve their required goals. Currently age 57, Steve says as time goes by, his pension is becoming increasingly important and at this stage in his life, he is interested in long-term security. He highlighted that before joining CTYS, he spent over 10 years working for the Ontario Public Service and deferred the pension he was entitled to there. He has been at CTYS since 2001, and now that the organization joined OPTrust Select, he is taking advantage of the option to buy back service. When thinking about his eventual retirement, he doesn't have solid plans yet but would like to travel or pursue hobbies he has put off during his working years.

2021 HIGHLIGHTS

OPTrust remains **fully funded** for the 13th consecutive year

4.85% nominal discount rate

15.3% one-year net investment return

Over **$25 billion** in net assets

8.9% 10-year average net investment return (2012-2021)

Funding Highlights[1]

At December 31 ($ millions)

	2021 VALUATION	2020 VALUATION
Net assets available for benefits	$ 25,913	$ 23,046
Actuarial smoothing adjustment	(2,461)	(980)
ACTUARIAL VALUE OF ASSETS	23,452	22,066
LIABILITIES	(23,288)	(21,910)
SURPLUS	$ 164	$ 156

1 The differences between funding and financial statement valuations are described on page 15.

8.8/10 average member satisfaction

Rolled out a comprehensive multi-year inclusion, diversity and equity roadmap

Welcomed our 50th new employer to OPTrust Select, growing membership to over **1,700**

Surpassed **100,000** member milestone

MESSAGE FROM THE
CHAIR & VICE-CHAIR

The challenges of the pandemic continued to have an impact throughout 2021. Yet OPTrust delivered on its mission of paying pensions today, preserving pensions for tomorrow. Most importantly for our members, we remain fully funded, allowing us to keep contribution rates and benefits stable.

PLAN SUSTAINABILITY

Throughout the year, the Board of Trustees focused on keeping the Plan sustainable for the long term. While OPTrust welcomed its 100,000th plan member and 50th employer to OPTrust Select, we recognize challenges to sustainability persist. We continued to track both short- and long-term risks and challenges facing the Plan, such as market volatility, low interest rates, plan maturation and the immediate effects of the ongoing global public health crisis.

GOVERNANCE AND STRATEGY

Strategic leadership, prudent oversight and joint governance are the foundations upon which the Board's work rests. The Board works with the Plan's management on an ongoing basis to ensure effective operations while also considering long-term priorities that will achieve our mission and vision.

Oversight of strategy is one of the Board's most critical responsibilities. OPTrust's current strategy will conclude at the end of 2022 so we initiated discussions on the development of a new, five-year strategic plan. Through robust conversations with the management team, we formed the foundation for renewing our strategy. When completed later in 2022, the refreshed strategy will guide our efforts to secure the health and longevity of the Plan and help the organization continue to move forward.

DELIVERING ON OUR MISSION

For OPTrust, 2021 was the year of focusing on the essentials of being a well-run pension plan: long-term sustainability, providing an excellent member experience, efficiently run operations and appropriate tools to let people do their best work. Also in 2021, OPTrust refreshed its vision and established a new set of core values to guide the team as it delivers its mission to members.

The team continued to perform efficiently and effectively while working remotely. Members received high standards of service as the Member Experience team addressed members' needs by leveraging digital technology to collaborate in innovative and creative ways. The investment team delivered exceptional results while investing in a risk-efficient manner.

The Board works with the Plan's management on an ongoing basis to ensure effective operations while also considering long-term priorities that will achieve our mission and vision.

As team members gradually return to a shared workspace, lessons learned from the previous two years of remote work will be leveraged in support of an engaging and fulfilling work experience reflective of OPTrust's culture and values.

While the working environment may continue to change in the near future, the commitment of the OPTrust team has remained constant. Our sincere thanks to every member of the team for their dedication and hard work on behalf of our members during yet another challenging year.

Sharon Pel
Chair

Lindsey Burzese
Vice-Chair

MESSAGE FROM THE PRESIDENT & CEO

As I write this message, I cannot help but reflect on the two years since the coronavirus pandemic changed the world and how far we collectively have come since then. There is no question the impact of the pandemic and the immeasurable loss of lives and livelihoods will be felt for years.

We are navigating our way through the pandemic and moving forward. Our role as a pension plan is to look beyond the short term and instead, decades into the future to pay pensions for generations of Ontarians.

In many respects there was much to be optimistic about during 2021 and we are focused on navigating our way through the pandemic and moving forward.

BUILDING ON STRENGTHS

Together through our efforts, we maintained our fully funded status for the 13th consecutive year and continued to meet members' expectations with an average 8.8 out of 10 in satisfaction. During the year, we strengthened actuarial assumptions to enhance the long-term health of the Plan by lowering the discount rate to 2.85 per cent, net of inflation, from 3.0 per cent in 2021. The Plan's funding position is not something we take for granted as it relates directly to pension security for our members in retirement.

GROWTH AND SUSTAINABILITY

We continued to focus on Plan sustainability. In 2021, we recognized two significant milestones in the growth of OPTrust — surpassing 100,000 members and welcoming our 50th new employer to OPTrust Select. With this pension offering, employers are making a difference to the disparity in retirement income in communities across Ontario for these members and their families.

INVESTMENT PERFORMANCE

OPTrust's investment strategy was designed to weather market volatility by treating risk as a resource that needs to be carefully managed and that strategy again performed well in 2021. We invest locally and globally and ended the year with a net investment return of 15.3 per cent. As long-term investors, we focus on a longer horizon and OPTrust's 10-year return is now 8.9 per cent. More than 70 per cent of the Plan's pension benefits are funded by returns.

While the pandemic has presented numerous challenges, many opportunities have also arisen. We invested in innovative companies and real estate assets positioned for a post-pandemic world such as our investment in Portland Commons. This project presented a rare opportunity to develop one of the first post-COVID-19 office buildings in the heart of downtown Toronto, reflecting our long-term approach to property development in an environmentally sustainable manner, as we move forward.

RENEWED URGENCY

The United Nations Intergovernmental Panel on Climate Change report and its 26th Climate Change Conference (COP26) in 2021 both made clear the intensifying impact of climate change, which will impact the economy, financial markets and the communities in which we invest.

This urgency underscores our commitment to continually improve how we integrate environmental, social and governance (ESG) factors into our investment decision making and asset stewardship. This year, OPTrust took important steps to better assess and monitor responsible investing integration in our externally managed investments and to lay the foundation for the renewal of our climate change strategy.

WORKING WITH PURPOSE

Our vision is to deliver peace of mind in retirement for our members, to invest sustainably for the long-term health of the Plan and to create an inclusive and fulfilling work experience for our people. We have a core set of values that are important building blocks to our culture and serving our members and every day the team works with purpose to reflect these values.

Building on our commitment to accelerate meaningful progress towards a more inclusive workforce, OPTrust appointed its first Inclusion, Diversity and Equity leader to develop a robust three-year strategy that will ultimately move our organization forward. Working with purpose also means readying our organization to thrive as we move forward, reimagining what work at OPTrust can look like in the coming years.

IN APPRECIATION

I continue to be inspired by the resiliency and strength of our team and their exceptional efforts. They truly went above and beyond in always putting members first every day. I am also appreciative of the Executive Team, the Board of Trustees and the Plan Sponsors for their leadership, confidence and support over the past year.

Together, we have continued to move forward by doing what we do best: focusing on our members so they can have peace of mind knowing their pension is secure today and in the future.

Peter Lindley
President and Chief Executive Officer

CULTURE AND VALUES

Our values help us focus on delivering service to members and our mission — paying pensions today, preserving pensions for tomorrow.

> **Collaboration and Teamwork**
> **Integrity**
> **Respect**
> **Flexibility**
> **Excellence and Continuous Improvement**

PENSION **FUNDING**

SUSTAINABILITY

The Plan is sustainable if it continues to deliver an appropriate and competitive benefit within an acceptable cost range in the short, medium and long terms. That means members' contribution levels will remain relatively steady through the years they are making those contributions to the Plan and they will be paid their pensions when they retire. As of December 31, 2021, the the Plan has been fully funded for 13 consecutive years, yet ongoing challenges remain, including: the investment environment, plan maturity, longevity risk and low interest rates that affect the funding valuation.

Interest rates (yields) have been at their lowest levels in over 200 years. Given the low yields, investors need to increase investment risk to generate the returns they need. This makes it challenging to keep the Plan fully funded into the future. The climate change crisis adds more uncertainty to the markets.

In addition to market conditions, the demographics of our Plan are challenging because of the proportion of inactive relative to active contributing members. The continuing growth in the proportion of retirees means funding risk is borne by a smaller group of contributing members, which constrains the amount of risk the Plan can take on.

There are several methods to help maintain the funded status: our Member-Driven Investing (MDI) strategy, the risk tolerance specified in our Risk Appetite Statement and our funding tools. As challenges continue for longer periods of time, the tools at our disposal are applied differently. This includes the way we use risk within the MDI strategy. Plan sustainability is directly influenced by how we manage challenges and the amount of risk we are willing to assume.

We are always looking into the future so we can attempt to foresee any upcoming challenges that could potentially affect our sustainability. In 2021, we extended the scope of the sustainability study we started in 2020. The study helped us understand the impact and likelihood of negative outcomes and how they can be alleviated through changes to investments, contributions and/or future benefits. In 2021, we also conducted a comprehensive study that considers climate change impacts on our assets and liabilities. This study looked at economic and demographic future outcomes under various scenarios.

FUNDING PENSIONS

The pension commitment spans many decades. In keeping with that long-term time horizon, short-term market events, whether positive or negative, should not lead to contribution and/or benefit changes. Contributions and/or benefits should only be changed when economic conditions or member demographics and/or behaviours change the long-term expected cost of the benefit. In setting the funding policy, we seek to maintain a balance between four different goals: benefit security, contribution rate stability, fairness between the two schedules of benefits and intergenerational equity. Intergenerational equity means that every generation of members will pay a fair amount for the benefits they receive — not that every generation should pay the same contributions for the same benefit. Of all these goals, the security of accrued benefits is the most important. It is essential we keep our commitment to members that they will receive their accrued benefits.

Funding Valuations and Financial Statements Valuations

The financial position of the Plan is presented using two different methods: funding valuations and financial statements valuations.

The funding valuation is used to determine the adequacy of the contribution rate and the funded position of the Plan and is filed with regulators at least once every three years, as per the regulatory requirements. The financial statements valuation is used for disclosure for the purpose of this report. Both actuarial valuations require many different assumptions about future economic conditions and events. "Best estimate" assumptions are unbiased and are based on Plan experience and the consideration of potential future outcomes.

> We are always looking into the future so we can attempt to foresee any upcoming challenges that could potentially affect our sustainability.

FUNDING VALUATIONS

A funding valuation presents the Plan's financial information in a manner approved by OPTrust's Board of Trustees and in accordance with standards and regulations. It determines whether the Plan's assets, together with expected investment income and projected future contributions in respect of current members, are sufficient to fund members' expected benefits. This valuation approach is known as the modified aggregate method. It identifies any gains and losses that have occurred since the last funding valuation and confirms the overall contribution requirements until the next valuation. The funding valuation uses best estimate assumptions with the exception of the discount rate, which includes a margin of conservatism, which helps the Plan meet its funding goals. Please see Note 5 to the financial statements on page 63 for further discussion.

FINANCIAL STATEMENTS VALUATIONS

OPTrust's financial statements rely on an actuarial valuation prepared in accordance with Canadian accounting standards for pension plans. The financial statements valuation is prepared using our best estimate assumptions. The valuation recognizes the increase in value of future obligations over time, and pension-related receipts and disbursements. Experience gains or losses (i.e., when actual experience differs from what we assumed) are recognized in the year incurred.

2021 FUNDING VALUATION

OPTrust engages independent actuaries to perform regular valuations of the Plan to ensure there are enough assets to meet the projected cost of members' lifetime pensions. OPTrust's 2021 valuation shows the Plan remained fully funded as of December 31, 2021. The funding valuation also showed deferred (or smoothed) investment gains of $2,461 million, which will be recognized over the next four years, further supporting the Plan's funded status in the years to come. The Plan's real discount rate for the 2021 funding valuation was reduced to 2.85 per cent, net of inflation, down from 3.00 per cent in 2020. The effect of this change increased the total fund liabilities by $668 million. Changes in the Plan's actuarial assumptions can have a major impact on the projected cost of members' pensions and the Plan's funded status. The table shows the impact of a 0.5 per cent change in certain key assumptions on the Plan's funded status.

FUNDING VALUATION ASSUMPTIONS

	2021 VALUATION	2020 VALUATION
Inflation rate	2.00%	2.00%
Discount rate (real)	2.85%	3.00%
Discount rate (nominal)	4.85%	5.00%
Salary increases (nominal)[1]	2.75%	2.75%

1 Plus an allowance for promotion, based on long-term scale.

SENSITIVITY TO ACTUARIAL ASSUMPTION CHANGES

($ millions)

	+0.5%	−0.5%
Impact of change in inflation linked assumptions[1]	192	(197)
Impact of change in funding discount rate assumption[2]	2,113	(2,465)
Impact of change in assumed increase in salaries	(718)	628

1 Assumes equivalent change in economic assumptions that are dependent on inflation.

2 Assumes all other assumptions remain unchanged.

SERVING OUR **MEMBERS**

Our members continue to be well served and supported during the pandemic.

FOCUSED ON SERVING OUR MEMBERS

How our members feel about the services we provide is important. In 2021, our members and retirees gave us high marks, rating their satisfaction an average 8.8 out of 10. We were rated among the top 10 globally and top two among our Canadian peer group for the services we provide in a global benchmarking study conducted by CEM Benchmarking Inc.

Participation in a pension plan is an important part of a member's financial well-being. With that in mind, a new educational video *What's Important — Safeguard your retirement: Get the facts before you act* was released in November, which is Financial Literacy month in Canada. This video, developed in partnership with some of our Canadian pension peers, not only serves to educate our plan members, but others who participate in defined benefit pension plans in the broader public sector in Canada. Other significant accomplishments in 2021 include becoming more efficient in ways that improved response times to members.

MOVING FORWARD

Our members continue to be well served and supported during the pandemic. Members are showing more and more interest in attending webinars to learn about their pensions as they prepare for retirement. *Ready, Set, Retire!* and *Health Coverage in Retirement* are two new webinars members can attend live or view a recording afterwards, at their convenience. Retirement is a major transition and although exciting, can be a time of apprehension. *Ready, Set, Retire!* gives an overview of the pension benefit, so members know what to expect and can plan ahead.

Some of our members are also eligible for insured benefits coverage in retirement (provided by the Government of Ontario). Our *Health Coverage in Retirement* webinar explains the different coverage options and member eligibility. These sessions are a great way for members to learn more about the options available to them. Members can expect more offerings as we continue to grow our webinar library.

Our members are also receiving faster service from us as we have made improvements to our processes. We have automated and prioritized our leave-of-absence process to get cost quotes in our members' hands sooner. Expanding our Electronic Funds Transfer deposits allows terminated members to receive lump sum payments quicker and more safely than waiting for the mail. We have also introduced electronic forms so employers can send member information to us efficiently and in turn we can provide benefit options to members without delay.

OPTRUST SELECT

OPTrust Select membership continues to grow with approximately 1,700 members in the Plan from over 50 employers from the nonprofit and charitable sectors. Retiree information and educational resources have been expanded with a new OPTrust Select Retirees Booklet now available on our new Retiree section on **optrustselect.com.**

As interest from employers joining the Plan continues to grow, we enhanced our onboarding processes to ensure new employers get the support they need. For many of these employers, providing a pension benefit for their employees is new and our goal is to ensure this important membership journey is smooth and well supported.

HIGHLIGHTS FOR THE YEAR

Top 10 CEM global ranking for service and top two among Canadian peer group

Over **1,000** members attended online pension information sessions

8.8/10 average member satisfaction

Supported members through approximately **44,000** life events

Surpassed **100,000** member milestone

Supported members through over **41,000** telephone counselling sessions

Welcomed our **50th** new employer to OPTrust Select, growing membership to over 1,700

Over **90,500** online transactions and electronic communications

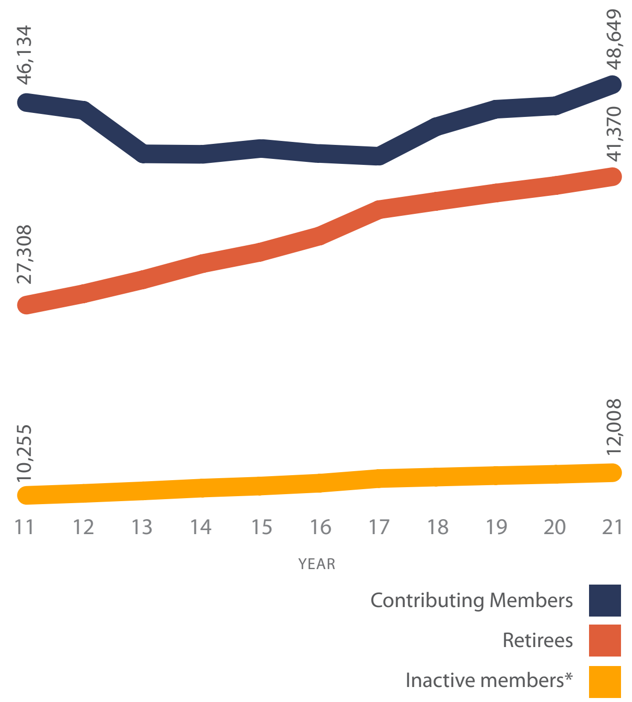
Over **$1 billion** total entitlements paid

Over **347,000** visits to our website

OPTrust remains **fully funded** for the **13th** consecutive year

OPTRUST MEMBERSHIP

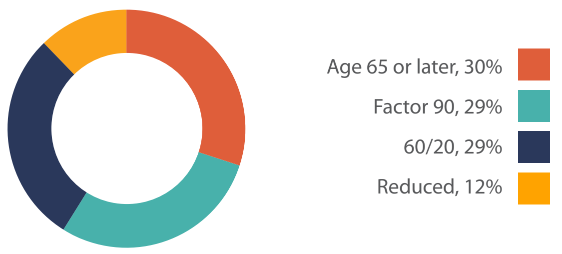
At December 31



In 2021, OPTrust's contributing membership was 48,649 at year-end, while the number of retirees was 41,370 at year-end.

* *Comprised of* ***deferred pensioners*** *and* ***former members with entitlements in the Plan*** *(see Membership Statistics chart on following page).*

2021 RETIREMENT SNAPSHOT



In 2021, OPTrust members retired under one of the following options:

Age 65 or later: The normal retirement age under the Plan is age 65; members can postpone retirement as late as age 71

Factor 90: Age plus years of pension service total at least 90

60/20: Age 60 or older plus at least 20 years of pension service

Reduced: Available starting at age 55 to members who do not qualify for an unreduced pension

Note: Chart does not include deferred, disability or survivor pensions.

MEMBERSHIP STATISTICS

At December 31	2021	2020	2019	2018	2017	2016
Active members	**48,649**	47,249	46,330	46,354	45,259	43,575
Average age	44.3	44.8	44.8	44.7	44.9	45.1
Average salary	$ 69,388	$ 67,623	$ 65,605	$ 63,195	$ 63,887	$ 62,121
Number of new members enrolled	6,146	4,523	3,799	5,218	5,210	4,567
Number of members terminated or retiring	4,746	3,604	3,823	4,123	3,526	4,827
Former members with entitlements in the Plan	**1,603**	1,401	1,629	1,411	1,399	1,500
Deferred pensioners	**10,405**	9,635	9,508	8,943	8,386	8,058
Current pensioners	**41,370**	40,198	39,008	38,221	37,355	36,409
Average age	72.8	72.4	72.0	71.4	70.9	70.3
Average annual pension	$ 22,504	22,321	$ 21,930	$ 21,613	$ 21,426	$ 21,321
Total members and pensioners	**102,027**	98,483	96,475	94,929	92,399	89,542

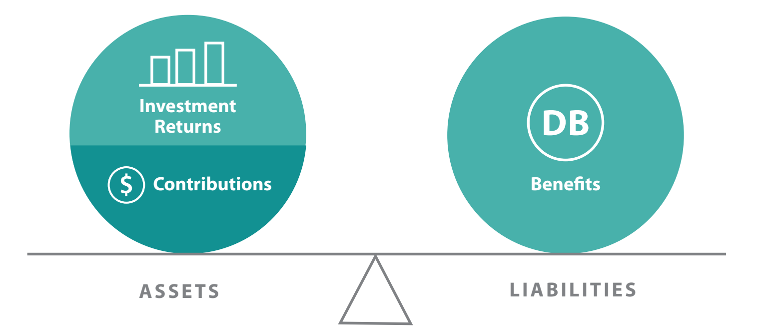
INVESTMENT STRATEGY & PERFORMANCE

TOTAL PORTFOLIO APPROACH

- We adopt a Total Portfolio Approach (TPA), which emphasizes an integrated approach to investing in which management and the Board work toward shared stakeholder objectives, namely preserving the fully funded status of the Plan over the long term.
- Our portfolios are designed and sized with the desired return, risk and liability-hedging characteristics of the total fund in mind.

MDI STRATEGY

- Our Member-Driven Investing (MDI) strategy is our application of a TPA, which aims to earn the returns to keep our Plan fully funded at the lowest risk possible. This is aligned with our members' interest — to improve pension certainty.
- Our total portfolio approach emphasizes hedging our liabilities to the extent possible, harvesting a diversified set of risk premia and adding value in asset classes where we have a competitive advantage.
- We construct our portfolio to be resilient to different economic and market environments. This helps our Plan weather market volatility while also delivering attractive returns in good times. We strive to implement cost-effective risk mitigation strategies to reduce drawdowns without being a drag on long-term returns.



KEY ACCOMPLISHMENTS

- Retained our fully funded status and generated attractive returns despite a low-yield environment.
- Strong value creation in our private markets portfolios.
- Implemented systematic investment strategies that will help to mitigate risk in adverse market environments.
- Initiated small-sized investment in digital assets and will continue to explore this space.
- Developed measures to better assess the quality of decision making at various levels of our portfolio hierarchy.
- Completed a top-down assessment of the impact of climate change on our Plan sustainability.

Investment Environment

The investment environment in 2021 was characterized by a further pickup in economic activity following the COVID-19 shock, rising interest rates and inflation, against a backdrop of aggressive monetary and fiscal stimulus. An easing of lockdowns amid major progress on COVID-19 vaccinations has supported a return to a more stable growth path. However, healthy demand growth against continued supply bottlenecks has caused inflation pressure to increase, with interest rates and monetary policy expectations repricing to tighter settings toward the end of 2021.

Supply-demand imbalances, which were particularly acute in commodity markets, contributed to inflation pressures. Commodity prices rose significantly this year, with oil prices registering a 55 per cent rally — the largest since the Global Financial Crisis. Higher commodity prices helped support the Canadian dollar, which appreciated modestly against most major currencies. Alternative asset classes such as infrastructure and real estate have also performed well. Non-traditional assets, including digital assets, continued to see rapid growth and increased participation from institutional investors in 2021.

Despite potential interest rate and inflation risks, 2021 proved generally favourable for investment risk taking. Equities in developed markets did exceptionally well, while emerging markets were flat. Bond values declined drastically as yields jumped as much as 80 basis points for Canadian long-term bonds. This again highlighted the benefit of a diversified portfolio, through which we actively participated in the growth recovery while managing downside risk.

Total Fund Performance

Our total fund portfolio delivered a net return of 15.3 per cent in 2021. Return-seeking assets were the largest positive contributor, while liability-hedging and risk-mitigating assets did not perform as well.

ASSET CLASS OVERVIEW

In alignment with our total portfolio approach, we divide our total fund assets into four sub-portfolios, each with a specific purpose, to help us achieve our MDI objectives: Liability Hedging Portfolio (LHP), Return Seeking Portfolio (RSP), Risk Mitigation Portfolio (RMP) and Funding Portfolio (FP).

Liability Hedging Portfolio: The objective of the LHP is to help mitigate risks to the Plan's funded status caused by changes in the liability discount rate. To do so, we hedge a portion of the Plan's interest rate sensitivity by holding Canadian government bonds. These bond holdings also serve as the main source of funding liquidity for the Plan. We significantly reduced our allocation to bonds in 2020 as yields reached historical lows, while maintaining ample liquidity in the Plan.

Our LHP helped keep our funded status stable in 2021, but was a drag on returns as interest rates increased from very low levels. This movement coincided with the Bank of Canada beginning to normalize its monetary policy. On net, our LHP assets earned -3.9 per cent in the year. Bond yields are highly correlated to the Plan's discount rate over time; therefore, we would expect changes in the value of our bond portfolio to be offset by changes in our liabilities, helping to keep the funded status stable.

Return Seeking Portfolio: The RSP is composed of a diversified mix of risky assets and is the main return driver for the total fund. It includes public equity, private equity, credit, public market multi-strategy investments, real estate and infrastructure.

Public Equity: Our public equity exposure is designed to complement our private equity strategy and generate returns using liquid market instruments. We obtain public equity exposure through internally managed cash and derivative positions, as well as using external managers. Our public equity portfolio is diversified across developed and emerging markets. Public equities contributed positively to total fund returns in 2021 led by strength in developed markets. Overall, our public equity portfolio delivered a net return of 12.9 per cent for the year.

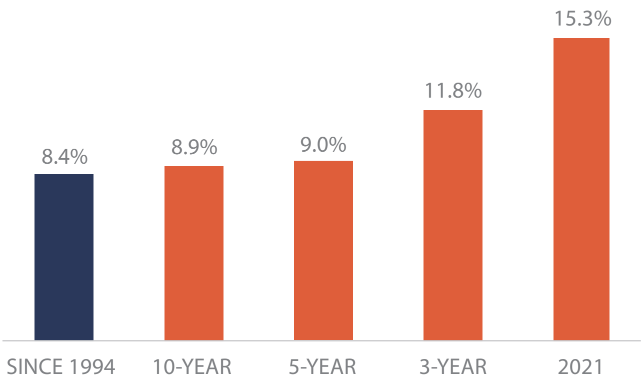
Private Equity: Private equity is expected to generate higher returns than public equity over the long term while providing a smoother volatility profile. Our private equity strategy, which focuses on buyout investments and lower-risk private equity and debt investments, allows us to identify a broad range of investment opportunities and execute upon those that offer the most attractive risk-adjusted returns. We invest directly into private companies, typically alongside partners and indirectly, through private equity funds.

We committed $809 million of capital in 2021, including $775 million to 14 new investments despite ongoing challenges in developing new relationships and completing new transactions as a result of the pandemic. Net assets under management in private equity grew to $4.1 billion at December 31, 2021, compared to $3.2 billion at year-end 2020.

Our private equity portfolio performed very well in 2021. Strong operating performance, growth activity and favourable market conditions drove valuation increases across the portfolio. In addition, we were able to capitalize on the robust market conditions to generate various successful partial and full sales of portfolio investments. The private equity portfolio generated a net return of 52.2 per cent in 2021.

Credit: Credit investments provide attractive risk-adjusted returns and can help deliver stable cash flows for the total fund, allowing us to better fulfill our pension obligations. Our credit exposure is primarily implemented through external strategies complemented by passive internally managed strategies. Credit spreads narrowed meaningfully over the course of the year. Our credit strategy — the bulk of which is exposed to credit risk premia only with limited exposure to movements in risk-free rates — earned a net return of 4.6 per cent in 2021.

TOTAL FUND INVESTMENT PERFORMANCE



The total fund return is net of management fees, transaction costs and investment administration expenses.

OPTrust's long-term target rate of return is 5-6% or 3-4%, net of inflation.

ASSET MIX AND RETURN BY ASSET CLASS AND SUB-PORTFOLIO

	ASSET MIX	2021 RETURN	3-YEAR RETURN
Liability Hedging Portfolio	**12.8%**	**-3.9%**	**6.3%**
Return Seeking Portfolio	**78.6%**	**21.9%**	**12.3%**
Public Equity	15.9%	12.9%	16.5%
Private Equity	15.9%	52.2%	28.7%
Credit	9.6%	4.6%	4.5%
Infrastructure	13.0%	33.0%	14.3%
Real Estate	15.4%	18.5%	8.1%
Multi-Strategy Investments	8.5%	8.2%	2.9%
Other	0.3%	160.2%	54.4%
Risk Mitigation Portfolio	**11.4%**	**-6.5%**	**7.6%**
Funding Portfolio	**-2.8%**		
Total Fund	**100.0%**	**15.3%**	**11.8%**

Asset class weights are presented on an exposure basis, including the effect of derivatives.

Investment administration expenses have not been deducted from asset class returns shown.

Multi-Strategy Investments: We invest in a wide range of liquid alternative strategies to access value-add opportunities within a broad and diversifying set of risk premia. These strategies, which are dynamic and generally less correlated with traditional market returns, increase resilience of the total fund portfolio to different economic and market environments.

Multi-strategy investments generated a net return of 8.2 per cent in 2021. Within this portfolio, most substrategies, including market neutral, alternative risk premia and asset-allocation based strategies, performed relatively well given the alpha-rich environment resulting from dislocation and recovery themes emerging from the pandemic. Insurance-linked strategies were challenged given weather-related events that occurred during 2021. Rebalancing continued within our external manager program to better position the portfolio for 2022.

Real Estate: The real estate portfolio is an important diversifier for the total fund, lowering funded status volatility and providing predictable income to fulfill our pension obligations. Real estate can provide attractive risk-adjusted returns and is also a hedge against inflation over the long term.

Real estate investors are still assessing the impact of COVID-19 on consumer and investor behaviour. A more gradual end to the pandemic, characterized by existing and future waves of the virus, may result in more of our new habits being retained for longer. This reinforces our view that some aspects of economic and social behaviour are likely to take longer to recover than imagined earlier in the pandemic, however as future waves of the virus diminish, the post-pandemic world for real estate will become clearer.

2021 saw a significant ramp-up in real estate investment transactions globally as investors looked to reposition and optimize their portfolio exposures. At the same time, investment returns between the best and worst performing property types remain at unprecedented levels.

As a long-term investor, we remain focused on building resilience in our real estate portfolio by targeting defensive sectors driven by consumer, demographic and technological changes, and by actively modernizing and improving the functionality of our properties, including their environmental performance. We committed to 11 new investments totaling $563 million in 2021. These investments were primarily focused on the multi-family residential and industrial property types and are all within North America. New commitments were partially offset by $76 million in realizations. The real estate portfolio generated a net return of 18.5 per cent in 2021.

Infrastructure: Infrastructure investments add diversification to the total fund and act as a partial inflation hedge. They also provide cash flow and the potential for return enhancement through long-term capital growth.

The platform approach to our infrastructure investment strategy continued to generate attractive returns while also creating the opportunity to deploy $215 million in new capital and commitments in a challenging COVID-19 operating environment. While the bulk of our focus and new acquisition or development activity was through our platforms, we were also able to opportunistically take advantage of more constructive market conditions and sell two of our oil and gas midstream investments. The remainder of the portfolio showed strong performance, particularly our transportation assets after a subdued 2020. The infrastructure portfolio generated a net return of 33.0 per cent in 2021.

Risk Mitigation Portfolio: The assets/strategies within RMP are not expected to deliver high returns over the long term but are expected to enhance portfolio diversification and to mitigate risks associated with tail events. We hold U.S. Treasuries, safe-haven currencies, gold and trend-following strategies in the RMP, as they typically perform well in market stress environments. This portfolio earned a net return of -6.5 per cent in 2021, coming after 2020's exceptional return, as risk-mitigating assets typically do not perform well in a risk-on environment.

Funding Portfolio: This portfolio represents the net funding for the total fund, which allows us to manage our day-to-day liquidity and efficiently implement our desired asset mix. The Funding Portfolio includes exposures such as bond repurchase agreements, implied funding from our derivative positions, money market and liquidity reserves. The -2.8 per cent weight of the Funding Portfolio reflects OPTrust's overall balance sheet leverage. This amount is expected to change year-over-year to reflect the implementation of our investment strategies.

CASE STUDY

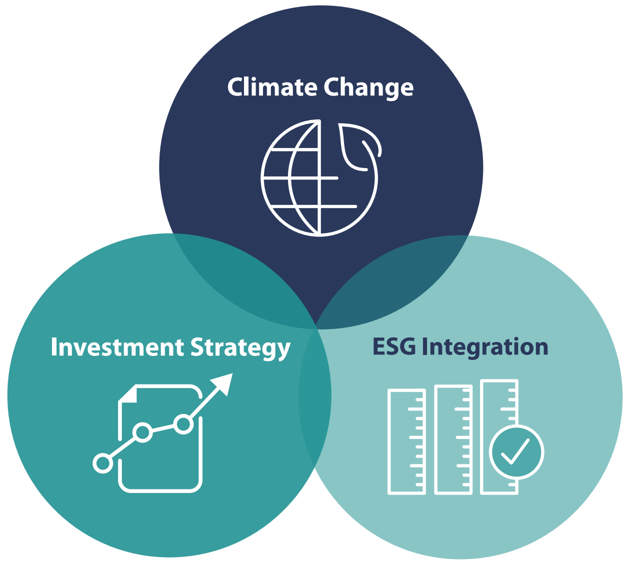
In April 2018, OPTrust invested in BRUC Capital Spain, an investment platform undertaking a roll-up of solar photovoltaic (PV) projects with a Madrid-based management team (BRUC) that would secure exclusive access to a number of development projects at attractive prices. The rationale for the investment was centred around three key pillars, (i) high solar irradiation, (ii) low levelized cost of energy (i.e., subsidy free), and (iii) a strong management team.

To date, OPTrust has committed €245 million to the platform and has cultivated a strong relationship with the BRUC management team as their long-term partner. Over the past three years, BRUC has grown and today has roughly 5 gigawatts of solar PV projects at various stages of development. Through a patient and measured growth strategy, BRUC has evolved into one of the pre-eminent renewable development platforms in Spain. More recently, OPTrust also brought in another high-profile institutional investor to support BRUC's growth going forward, positioning the platform competitively for the future.

OPTrust's Private Markets Group is committed to the continued growth of BRUC in Spain, strengthening the Plan's dedication to creating a sustainable portfolio that also supports a transition to more renewable energy generation. The investment is already generating attractive risk-adjusted returns for OPTrust and is expected to continue to do so in the future.

RESPONSIBLE INVESTING

OPTrust's Responsible Investing program is an integral part of our mission to provide sustainable pension security for our members.



We recognize that environmental, social and governance (ESG) factors can materially affect investment risk, return and our reputation. We are focused on investing to generate sufficient returns to keep the Plan fully funded over the long term by considering both ESG risks and opportunities that impact investment outcomes.

Every investment professional at OPTrust is responsible for including ESG risks and opportunities in their decision making. We also have a Sustainable Investing and Innovation team charged with leading OPTrust's Responsible Investing strategy. The team's approach is centred around:

Climate Change: Leading the renewal and delivery of a robust and integrated climate change strategy across OPTrust.

Investment Strategy: Allocating capital to opportunities at the intersection of sustainability and innovation to complement strategies in our other asset class teams.

ESG Integration: Establishing more integrated, systematic and measurable approaches to responsible investing across our investment portfolio.

RESPONSIBLE INVESTING HIGHLIGHTS

Our responsible investing approach at OPTrust considers governance, ESG integration, active ownership and stakeholder engagement.

Voted at **1,744** company meetings in **51** countries

Engaged **410** companies on key ESG issues

Rolled out our **Responsible Investing Partner Evaluation** (RIPE) framework to 100% of new externally managed investments

Initiated an **ESG data program** to better track and understand our RI performance across the total fund

Revised our **Proxy Voting Guidelines** to keep up with evolving best practices in corporate governance

Strengthened our private markets **ESG capabilities** with a sample ESG policy and policy library

Continued to be an active voice in **investor collaborative initiatives**, including the Ontario Capital Markets Modernization Task Force, UNPRI Asset Owner Technical Advisory Committee, Investor Leadership Network and the Thinking Ahead Institute's climate change working group

Created toolkits to assist investment teams in advancing **Inclusion, Diversity and Equity** (IDE) in their portfolios

Spotlight on climate

Laid the groundwork for our **renewed climate strategy.**

- Struck an executive-level **climate change steering committee** and a working group to facilitate cross-organization co-ordination
- Recognized the Climate Response Working Group, a 30-person team from across OPTrust, with the **annual CEO award** for its collaboration and leadership
- Conducted an internal review of our **climate-related governance and processes,** with the objective of strengthening our approach to the Task Force on Climate-Related Financial Disclosures (TCFD)
- Refreshed **climate scenario analysis** on the total fund to better integrate climate considerations into our annual investment planning
- Undertook bottom-up portfolio mapping to identify **climate risks and mitigation plans** in each asset class team
- Invested in two **sustainability-centred funds** to bolster our exposure to climate solutions

INCLUSION, DIVERSITY & EQUITY

Our Inclusion, Diversity and Equity (IDE) strategic roadmap is in place. The objective of the strategy is to create greater understanding for our employees, members and the communities in which we live and interact.

OPTrust believes unlocking the value of IDE continues to be a business and societal priority that will drive success. Recent data continues to confirm that focusing on diversity remains both the right and the smart thing to do for leading workplaces. Internal and external expectations regarding this work continue to grow in the form of not just the talent we are seeking to attract to OPTrust but also in terms of what our members and others expect of us.

Our strategic framework is comprised of three pillars representing the key tactical areas of focus showcasing the sequential nature of this work.

ALIGNING

Building Inclusion
Strengthen ability to make everyone feel welcome and that they belong

Building Perspectives
Share and learn from the experiences and worldviews of diverse communities

IMPROVING

Talent Practices
Review and update talent systems to disrupt systemic exclusion, bias and racism

People Participation
Increase support, visibility and governance of employee-led groups

SUSTAINING

Measures and Targets
Conduct census internally, with recruitment data to deliver an OPTrust IDE Dashboard

External Partnerships
Work with diverse groups to enhance learning, awareness, branding and talent pool access

We are integrating IDE into all aspects of the team's work by tapping into the curiosity of employees who have expressed a strong desire to want to learn more. Bringing greater understanding and respect to cultural and socio-economic backgrounds is part of this thirst for knowledge. On top of a speaker series, we are creating a *Days of Significance* learning platform and an educational curriculum. This combined learning, along with opportunities for employees to recognize each other through Values In Action (VIA), an employee recognition program that celebrates and shares gratitude for our teammates. We celebrate big and small wins that align with OPTrust's values: collaboration and teamwork, integrity, respect, flexibility, and excellence and continuous improvement.

INCLUSION, DIVERSITY AND EQUITY HIGHLIGHTS

Black History Month recognition and education activities addressing the impacts of unconscious bias

International Women's Day conversation on Women in Leadership and Achieving an Equal Future in a COVID-19 World

Indigenous Peoples Day session highlighting OPTrust's collaboration and co-investment with First Nations partners on the Cascade Power Project

Special keynote speaker and meaningful time spent reflecting on and discussing Canada's first **National Day for Truth and Reconciliation**

Delivered an internal online course on **Being a Strong Leader with Inclusion and Sensitivity**

Conducted a census to help us understand our employee population and how **best to support people**

RISK MANAGEMENT & COMPLIANCE

OPTrust recognizes there is risk in its operations and activities, and risk management is a tool used to advance our mission and objectives. OPTrust seeks to ensure risk management processes and practices are understood and integrated throughout the organization, both at the business and strategic levels.

A robust governance and risk management framework at OPTrust assists in improving decision making, achieving strategic and operational objectives, and enhancing overall performance. OPTrust strives to establish a risk-conscious culture with emphasis on appropriate behaviours, risk analysis and management of risk within approved risk parameters. The Risk team provides advice on strategies for managing enterprise risks, including operational risk, crisis management, liquidity and investment risk, legal and regulatory risk, funding risk and reputational risk.

OPTRUST USES THE "THREE LINES OF DEFENCE" APPROACH TO RISK GOVERNANCE

- The business is the first line and owns the risks and the responsibility for managing them through maintaining effective internal controls.
- The second line of defence is comprised of the Enterprise Risk Management, Investment Risk, Legal, Tax and Compliance functions, which are responsible for facilitating and monitoring the implementation of risk management and compliance practices by the various business lines.
- The third line of defence is internal audit, which provides independent assurance to the Board that risk management systems and reporting have been effectively implemented.

We are guided by our Board Risk Appetite Statement, implemented through our Management Risk Policy, to ensure we appropriately manage our material or mission-critical risks on an ongoing basis, within our risk appetite. We integrate risk management into all aspects of OPTrust strategy and operations and related decision making, engage appropriate stakeholders and subject matter experts, and employ industry best practices.

The Board is committed to ensuring that in executing their responsibilities, Board members, management and all staff conduct their affairs ethically and in compliance with all applicable laws, regulations and corporate policies. Our compliance program plays a critical role in managing legal and regulatory risk to ensure we deliver on our mission and create a fulfilling work experience for our people.

Our risk management and compliance frameworks are grounded in our corporate values, guided by the principles of our Code of Conduct and integrated into business processes in a way which fits with our mission, size and environment.

GOVERNANCE & ACCOUNTABILITY

> Under a joint governance system, the decisions and risks of the Plan are shared by the members and the employers who contribute to it.

GOVERNANCE SYSTEM

The OPSEU Pension Plan was established as a jointly governed pension plan by the Ontario Public Service Employees' Union (OPSEU) and the Government of Ontario, currently represented by the Treasury Board Secretariat (TBS) pursuant to a Sponsorship Agreement dated April 18, 1994. The Plan was a successor to the Public Service Pension Plan designed mainly for OPSEU employees in the Ontario public service. Certain provisions of the Sponsorship Agreement were implemented by the *OPSEU Pension Plan Act, 1994* which came into force on June 23,1994.

The Plan is administered by a Board of Trustees established pursuant to an Agreement and Declaration of Trust dated October 25, 1994. Consistent with the joint governance model, five Trustees are appointed by OPSEU and five by TBS. The Board serves solely as the legal administrator of the Plan and has no power to amend the Plan. Only TBS and OPSEU (collectively, the sponsors) have the power to amend the Plan and any of the other founding documents.

Under a joint governance system, the decisions and risks of the Plan are shared by the members and the employers who contribute to it. For decision-making purposes, OPSEU represents all Plan members and TBS represents all participating employers. This includes the members and participating employers of OPTrust Select, as a separate schedule of benefits under the Plan.

The joint governance model is built into every aspect of OPTrust's governance system. The Board Chair and Vice-Chair positions rotate between OPSEU and TBS nominees.

The standing committees of the Board and any ad hoc committees are comprised of equal numbers of OPSEU and TBS nominees and the Chairs of the standing committees rotate between OPSEU and TBS nominees.

Under the governance system established by the Board, the four standing committees of the Board serve a monitoring/supervisory function and make recommendations to the Board on matters that are assigned to them under their respective Terms of Reference. The Board approves matters recommended by the Committees and is directly responsible for strategic matters such as the strategic plan, the corporate objectives, the annual business plan and the selection of the President and CEO.

In 2021, OPTrust enhanced its existing procedures for managing conflicts. Trustees are required to complete a Conflict of Interest Disclosure and Attestation Form when they join the Board and to update it on an annual basis or when there is a change in their circumstances, such as the assumption of a new role with another organization.

STANDING COMMITTEES OF THE BOARD

The **Governance and Administration Committee (GAC)** monitors plan administration and major pension initiatives and oversees the preparation of actuarial valuations. The GAC also oversees various governance-related activities, recommends and oversees governance reviews, monitors Trustee education and development and oversees the preparation of the Funded Status Report.

The **Audit, Finance and Risk Committee (AFRC)** monitors the budget and provides oversight in the areas of financial reporting, tax, audits, internal controls, corporate insurance, information technology (digital), data management, regulatory compliance and enterprise risk management.

The **Investment Committee (IC)** oversees the investment activities of OPTrust and monitors the progress of strategic investment initiatives. The IC also makes recommendations to the Board for approval of key investment metrics and investment policies.

The **Human Resources and Compensation Committee (HRCC)** provides oversight of OPTrust's People strategy and the management compensation system and reviews and approves the compensation of the President and CEO as well as the compensation of the Executive Team and certain other high earners in the organization.

Two additional committees have been established which operate on an as-needed basis: the **Adjudication Panel**, which gives Plan members access to a review process in the event of certain types of disputes, and the **Concern Assessment Panel**, which provides a forum for addressing complaints under OPTrust's Whistle-Blowing Policy. From time to time, the Board also establishes ad hoc working groups or committees to undertake specific projects.

REGULATORY FRAMEWORK

OPTrust is registered with the Financial Services Regulatory Authority of Ontario under the *Pension Benefits Act* (Ontario) and with the Canada Revenue Agency under the *Income Tax Act* (Canada). OPTrust is also subject to numerous other statutes in Ontario and in jurisdictions where OPTrust invests and has offices (Australia and the U.K.).

BOARD MEMBER CHANGES

There were several changes on the Board in 2021. Mike Grimaldi retired and Jason Glover stepped down from the Board effective March 31, 2021. Effective April 1, 2021, OPSEU appointed Ram Selvarajah and Neil Martin. Randy Sloat was reappointed to the Board by OPSEU effective May 1, 2021.

ORIENTATION AND EDUCATION

New Board members are provided with a comprehensive two-day orientation. Recognizing that Trustees join the Board with different levels of related experience, they are encouraged to take a basic board effectiveness course (e.g., Institute of Corporate Directors) if they have not done so already. Trustees receive an annual budget for conferences and courses and in-house education sessions are regularly built into the Board meeting schedules or offered at other times.

BOARD EFFECTIVENESS REVIEWS

In 2021, the Board established a working group comprised of the Board Chair and Vice-Chair and the Committee Chairs to work with management to enhance various procedural aspects of the Board's operations. The working group ultimately recommended a number of changes to the Board's procedures designed to increase Board effectiveness. The changes to the Board's governing documents were approved in December 2021 and will be implemented in 2022. In 2021, the Board approved a new process for ensuring it has the knowledge, skills and experience to carry out its administrator functions. It also conducted an annual Board effectiveness survey.

MANAGEMENT GOVERNANCE

Management has established the Management Governance Charter which establishes the roles and responsibilities of the participants in the management governance system. The Executive Team, comprised of the heads of each of the divisions, serves in an advisory capacity to the President and CEO. Five management committees aligned with the Board Standing Committees review and approve management policies and serve as information-sharing forums.

COMPENSATION PROGRAM

The contributions made by employees are critical to the successful achievement of OPTrust's mission. OPTrust is committed to creating a diverse and inclusive organization which is attractive to the employees we need to deliver on our mission. The compensation program plays a key role in achieving these objectives.

Compensation structures for bargaining unit staff have been negotiated into the collective agreement. The four-year agreement runs through to December 31, 2022.

For non-bargaining unit employees, our compensation program is comprised of base salary and variable compensation including annual and long-term (when applicable) components.

BENEFIT AND RETIREMENT PROGRAMS

In addition to total compensation, total rewards for all employees (bargaining unit and management) include retirement programs, health benefits and wellness programs.

MANAGEMENT COMPENSATION PRINCIPLES AND OBJECTIVES

We strive to pay, on average, at median, or slightly above, for delivering on OPTrust's target performance objectives, balanced with a more conservative upside potential compared to many of our peers, reflective of our low-risk profile.

The OPTrust compensation principles provide a framework for the design of our compensation program:

- align employee compensation with how well we achieve our business objectives
- focus on total fund and asset class performance measures and how well we achieve our corporate, divisional, and individual objectives
- pay competitively compared to relevant external markets, while considering internal equity and cost effectiveness for our members
- encourage effective risk management that is aligned with the organization's Risk Appetite Statement and other risk metrics
- have a variable pay structure that facilitates pay for performance and rewards employees commensurate with their ability to impact results
- promote OPTrust's values by focusing not just on what is achieved but how it is achieved
- be perceived as fair and reasonable by internal and external stakeholders

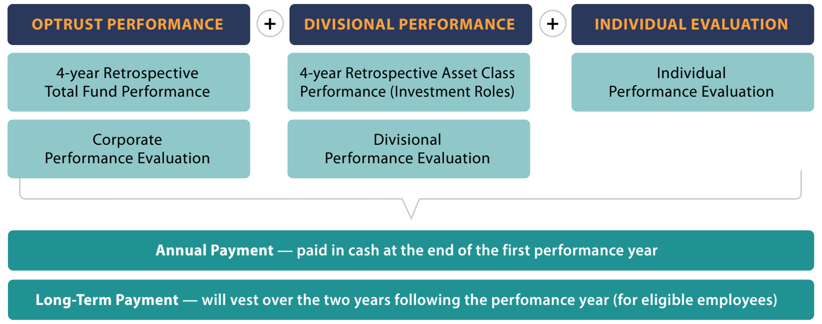
COMPENSATION FRAMEWORK FOR MANAGEMENT

Base Salary

Employees are assigned a salary to provide market-competitive compensation appropriate for the level of responsibility, knowledge and skill required for their role.

Variable Compensation

Effective January 2021, OPTrust implemented a new variable compensation plan which is based on performance assessments in the key areas outlined below. Performance metrics are established at the beginning of the year and the weighting for each category varies based on the level of the employee and their department.



Within the OPTrust Performance category, the four-year Retrospective Total Fund Performance is evaluated through three metrics: funded status, risk-adjusted returns and cumulative value-add of active strategies. For the employees in Investment roles, the Divisional Performance category includes an evaluation of the four-year Retrospective Asset Class Performance.

For all employees, after the end of the year, performance is assessed against objectives at the individual, divisional and corporate levels to determine their payment. The payment is made as a combination of an annual component and, if eligible, a long-term component payable over a three-year period.

Quantitative metrics in OPTrust's variable compensation program will transition over three years from the prior incentive program to the new variable compensation program. The old program included a short-term incentive program that assessed individual performance against objectives aligned to OPTrust's annual business plan and a long-term incentive plan aligned to three risk measures: funded status, efficient risk management and surplus preservation.

COMPENSATION OVERSIGHT

The Board of Trustees approves the compensation principles and philosophy, the design of the compensation program, the performance factors, and the salaries and variable compensation paid to the CEO, members of the Executive Team and other highly paid employees. The Human Resources and Compensation Committee assists the Board in meeting its fiduciary duties by making recommendations to the Board on compensation-related matters and monitoring the implementation of the comp-ensation program. The Board engages an independent compensation advisor to provide advice and assistance to the Human Resources and Compensation Committee and the Board in executing their responsibilities.

The CEO is responsible for overseeing the implementation of the compensation program and for making recommendations to the Board on the payment factors for the quantitative and qualitative metrics. The CEO makes recommend-ations to the Human Resources and Compensation Committee with respect to the salaries and variable compensation of members of the Executive Team and other highly paid employees and the aggregate compensation paid to all other members of management.

COMPENSATION DISCLOSURE

The Board is committed to transparency with respect to the compensation of members of OPTrust's Executive Team. Details about the base salary and other compensation paid to the President and CEO, CFO and the other three highest-paid members of the Executive Team are found on page 37.

Annual Variable: Payments under OPTrust's variable compensation program are reported for the year in which they are earned but are paid in the subsequent calendar year. Annual payment includes transition payments related to moving to the new plan design if applicable.

LTIP (Long-Term Incentive Plan) payments: Long-Term Incentive Plan payments reflect payments made in March 2022 related to prior years LTIP programs. The LTIP programs would include payments from the plan years 2019 and 2020.

Other Benefits and Payments: The amounts disclosed include vacation payouts, other taxable benefits and the employer's share of all employee benefit premiums and contributions (excluding pension contributions) made on behalf of employees. One-off contractual payments may also be included.

Post-Employment Benefits: The disclosed executives all contribute to the OPTrust defined benefit pension plan. Employees who exceed the maximums are allowed under the *Income Tax Act* to also participate in the Supplementary Benefit Arrangement. The post-employment benefits disclosed reflect the value of the benefits earned for the year under both plans. The value is reliant on a variety of factors including pensionable earnings and years of service credit in the Plan.

2021 COMPENSATION PAID

($ thousands)	Base A	Annual B	LTIP Payment C	Other Benefits D	Total A+B+C+D	Post-Employment Benefits E
Peter Lindley President and Chief Executive Officer	375	540	234	6	**1,155**	101
Upton Jeans Chief Financial Officer*	201	141	0	5	**347**	94
Tracy Hatanaka-Lejnieks Chief Financial Officer (Retired)*	140	92	75	16	**323**	22
James Davis Chief Investment Officer	385	815	693	9	**1,902**	42
Stephen Solursh Senior Vice-President and General Counsel	285	247	128	8	**668**	65
Rick Votano Senior Vice-President, Digital	245	224	104	8	**581**	34

* Compensation for Upton Jeans is prorated based on his start date with OPTrust of April 26, 2021. Compensation for Tracy Hatanaka-Lejnieks is prorated based on her end date of June 30, 2021.

BOARD ADVISORS

Actuary
WTW

Investment Advisors
Janet Rabovsky
Richard Talbot

External Auditor
PricewaterhouseCoopers LLP

Internal Auditor
Ernst & Young LLP

Compensation Advisor
Hugessen Consulting Inc.

Information Technology and Risk Advisor
Deloitte Canada

External Legal Advisor
Fasken Martineau DuMoulin LLP

MEMBERS OF THE BOARD OF TRUSTEES

At December 31, 2021

Sharon Pel, Chair[1]

Consultant, Inglewood Advisory Services

Appointed in 2017, Chair since 2020

Governance and Administration Committee (Chair), Investment Committee, Adjudication Panel

Lindsey Burzese, Vice-Chair[2]

Surface Water Specialist

Ministry of the Environment, Conservation and Parks

Appointed in 2018, Vice-Chair since 2020

Investment Committee (Chair), Human Resource and Compensation Committee, Adjudication Panel

Len Elliott[2]

Supervisor, OPS Negotiations, Pensions and Benefits, Health and Safety, OPSEU/SEFPO

Appointed in April 2019

Audit, Finance and Risk Committee (Chair), Governance and Administration Committee, Investment Committee, Adjudication Panel

Deborah Leckman[1]

Senior Investment Professional

Appointed in January 2019

Human Resources and Compensation Committee (Chair), Investment Committee

Neil Martin[2]

Industrial Health and Safety Inspector, Ministry of Labour, Training and Skills Development

Appointed in April 2021

Audit, Finance and Risk Committee, Human Resources and Compensation Committee

Richard Nesbitt[1]

Adjunct Professor at the Rotman School of Management, University of Toronto and a Visiting Professor at the London School of Economics, United Kingdom

Appointed in September 2019

Governance and Administration Committee, Audit, Finance and Risk Committee, Human Resources and Compensation Committee, Adjudication Panel

Bob Plamondon[1]

Consultant and Board Member

Appointed in January 2019

Governance and Administration Committee, Audit, Finance and Risk Committee

Ram Selvarajah[2]

Senior Systems Analyst, Ministry of the Solicitor General

Appointed in April 2021

Governance and Administration Committee, Investment Committee

Randy Marie Sloat[2]

Customer Care Representative (retired)

Ministry of Government and Consumer Services

Appointed in 2012

Governance and Administration Committee, Audit, Finance and Risk Committee, Human Resources and Compensation Committee; Adjudication Panel (OPSEU alternative)

Don Wilkinson[1]

Vice-Chair, Deloitte and Leader of National Asset Management Group (Retired)

Appointed in 2017

Audit, Finance and Risk Committee, Investment Committee, Human Resources and Compensation Committee, Adjudication Panel (Government alternative)

1 Appointed by the Government of Ontario

2 Appointed by OPSEU

MEMBERS OF THE EXECUTIVE TEAM

At December 31, 2021

Peter Lindley
President and Chief Executive Officer

Karen Danylak
Vice-President, Strategy, Communications and Stakeholder Relations

James Davis
Chief Investment Officer

Audrey Forbes
Senior Vice-President, Member Experience

Dani Goraichy
Chief Risk Officer and Senior Vice-President, Actuarial Services and Plan Policy

Tracy Hoskins
Head of People

Upton Jeans
Chief Financial Officer

Stephen Solursh
Senior Vice-President and General Counsel

Rick Votano
Senior Vice-President, Digital

FINANCIAL STATEMENTS

2021 FUNDED STATUS REPORT

Management's Responsibility for Financial Reporting

Management of the OPSEU Pension Plan Trust Fund (OPTrust) is responsible for the integrity and fairness of the data presented in the financial statements and the financial information presented in the *Funded Status Report* (FSR). The financial statements have been prepared in accordance with the Canadian *Chartered Professional Accountants of Canada Handbook* section 4600 — Pension Plans (s4600) and comply with the financial reporting requirements of the *Pension Benefits Act* (Ontario). In the selection of accounting policies that do not relate to its investment portfolio or pension obligations, OPTrust has chosen to comply on a consistent basis with *International Financial Reporting Standards* (IFRS), as issued by the *International Accounting Standards Board* (IASB), to the extent that those standards do not conflict with the requirements of s4600. The financial statements include amounts that must, as necessary, be based on the best estimates and judgment of management with appropriate consideration as to materiality. Where applicable, the financial information presented throughout the FSR is consistent with the financial statements.

Management has recognized the importance of OPTrust maintaining and reinforcing a high standard of conduct in all of its actions, including the preparation and publication of statements fairly presenting the financial position of the OPSEU Pension Plan (the Plan). Systems of internal control and supporting procedures are maintained to provide assurance that transactions are properly authorized, assets are safeguarded against unauthorized use or disposition and proper records are maintained. The systems are augmented by the careful selection and training of qualified staff, the establishment of organizational structures providing for a well-defined division of responsibilities, and the communication of policies and guidelines of business conduct throughout OPTrust.

The Board of Trustees has the ultimate responsibility for the financial statements presented to plan members. The Audit, Finance and Risk Committee, consisting of Trustees appointed by each of the Province of Ontario and OPSEU, reviews the financial statements with management and the external auditor before such statements are recommended to the Board of Trustees for approval. The Audit, Finance and Risk Committee meets on a regular basis with management and the external auditor to review the scope of the audit, discuss auditor's findings, and satisfies itself that the Board of Trustees' responsibilities have been adequately discharged.

PricewaterhouseCoopers LLP, the Plan's external auditor, has conducted an independent examination of the financial statements in accordance with Canadian generally accepted auditing standards and have expressed their opinion upon completion of such examination in their report to the Board of Trustees. The auditors have full and unrestricted access to management, the Audit, Finance and Risk Committee and the Board of Trustees to discuss their audit and related findings as to the integrity of the Plan's financial reporting and the adequacy of the systems of internal control.

Peter Lindley
President and Chief Executive Officer

Upton Jeans
Chief Financial Officer

March 3, 2022

Actuaries' Opinion

Towers Watson Canada Inc. (WTW) was retained by the Board of Trustees of the Ontario Public Service Employees' Union Pension Plan (the Plan) to perform an actuarial valuation of the Plan as at December 31, 2021. The purpose of this valuation is to determine the pension obligations of the Plan as at December 31, 2021, for inclusion in the Plan's financial statements in accordance with Section 4600 of the *Chartered Professional Accountants of Canada (CPA Canada) Handbook*.

We have undertaken such a valuation and provided our related report. As this valuation was undertaken for purposes of the Plan's financial statements under the *CPA Canada Handbook* Section 4600, 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 $21,365 million in respect of service accrued to December 31, 2021.

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

- members' demographic data provided by OPTrust management as at September 24, 2021 for Primary Schedule members and September 28, 2021 for OPTrust Select members, projected to December 31, 2021 using management's estimates of experience for the intervening period;
- the actuarial cost method prescribed by the *CPA Canada Handbook* Section 4600; and
- best-estimate 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 OPTrust management in consultation with WTW and have been adopted by OPTrust 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, 2021, as described in the notes to the financial statements.

We have reviewed the data used for the valuation and have performed tests of reasonableness and consistency. In our opinion, for the purposes of the valuation,

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

Nonetheless, differences between future experience and the assumptions about such future events will result in gains or losses which will be revealed in future valuations, none of which have been anticipated at this time. Our valuation was prepared and our opinions given in accordance with accepted actuarial practice in Canada.

Towers Watson Canada Inc.

Philip A. Morse
Fellow, Canadian Institute of Actuaries

Suzanne Jacques
Fellow, Canadian Institute of Actuaries

Toronto, Ontario
March 3, 2022

Independent Auditor's Report

To the Board of Trustees of OPSEU Pension Plan Trust Fund

Our opinion

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of OPSEU Pension Plan Trust Fund (OPTrust) as at December 31, 2021 and 2020, 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

OPTrust's financial statements comprise:

- the statements of financial position as at December 31, 2021 and 2020;
- 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 OPTrust 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 Funded Status 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 OPTrust'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 OPTrust or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing OPTrust'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 OPTrust'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 OPTrust'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 OPTrust 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 3, 2022

Statements of Financial Position

As at December 31 ($ millions)	2021	2020
ASSETS		
Investments (Note 3)	**27,206**	26,439
Contributions receivable (Note 7)	**56**	52
Other assets	**2**	9
	27,264	26,500
LIABILITIES		
Accounts payable and accrued charges	**26**	38
Investment-related liabilities (Note 3)	**1,325**	3,416
	1,351	3,454
NET ASSETS AVAILABLE FOR BENEFITS	**25,913**	23,046
PENSION OBLIGATIONS (Note 5)	**21,365**	20,682
SURPLUS (Note 6)	**4,548**	2,364
PENSION OBLIGATIONS AND SURPLUS	**25,913**	23,046

For the years ended December 31 ($ millions)	2021	2020
SURPLUS, BEGINNING OF YEAR	**2,364**	1,470
CHANGE IN SURPLUS		
Increase in net assets available for benefits	**2,867**	1,356
(Decrease) in net pension obligations	**(683)**	(462)
NET INCREASE IN SURPLUS	**2,184**	894
SURPLUS, END OF YEAR	**4,548**	2,364

The accompanying notes are an integral part of these financial statements.

The financial statements were authorized for issue by the Board of Trustees on March 3, 2022 and were signed on its behalf by:

Sharon Pel
Chair

Lindsey Burzese
Vice-Chair

Statements of Changes in Net Assets Available for Benefits

For the years ended December 31 ($ millions)	2021	2020
NET ASSETS AVAILABLE FOR BENEFITS, BEGINNING OF YEAR	**23,046**	21,690
Changes Due to Investment Activities		
Investment income (Note 4)	**453**	520
Net gain on investments (Note 4)	**3,089**	1,457
Investment management and administrative expenses (Notes 4 and 9)	**(77)**	(76)
	3,465	1,901
Changes Due to Pension Activities		
Contributions (Note 7)	**582**	551
Benefits paid (Note 8)	**(1,138)**	(1,064)
Pension administrative expenses (Note 9)	**(42)**	(32)
	(598)	(545)
INCREASE IN NET ASSETS AVAILABLE FOR BENEFITS	**2,867**	1,356
NET ASSETS AVAILABLE FOR BENEFITS, END OF YEAR	**25,913**	23,046

The accompanying notes are an integral part of these financial statements.

Statements of Changes in Pension Obligations

For the years ended December 31 ($ millions)	2021	2020
PENSION OBLIGATIONS, BEGINNING OF YEAR	**20,682**	20,220
INCREASE IN PENSION OBLIGATIONS		
Interest accrued on benefits	**1,061**	1,016
Benefits accrued	**566**	540
Change in actuarial assumptions (Note 5)	**115**	42
	1,742	1,598
DECREASE IN PENSION OBLIGATIONS		
Benefits paid (Note 8)	**1,138**	1,064
Experience gains/(losses) (Note 5)	**(79)**	72
	1,059	1,136
INCREASE IN NET PENSION OBLIGATIONS	**683**	462
PENSION OBLIGATIONS, END OF YEAR	**21,365**	20,682

The accompanying notes are an integral part of these financial statements.

Notes to the Financial Statements

1. Description of the OPSEU Pension Plan

The OPSEU Pension Plan (the Plan) is a jointly sponsored pension plan. The April 18, 1994 *Sponsorship Agreement* between the Province of Ontario (the Province or Government of Ontario) and Ontario Public Service Employees Union (OPSEU) documented the agreement between the Province and OPSEU (the Sponsors) to establish the Plan, with the Province and OPSEU as joint sponsors. The *Ontario Public Service Employees Union Pension Plan Act*, 1994 enacted in June 1994 facilitated certain aspects of the agreement. The Plan's primary schedule (Primary Schedule) provides pension benefits for employees of the Province in bargaining units represented by OPSEU and certain other bargaining units and employers. Pursuant to a letter of agreement executed by the Sponsors on April 19, 2018, a second schedule known as OPTrust Select was added to the Plan. OPTrust Select members are employees of participating employers in the broader public and nonprofit sectors.

The Plan and the related pension fund (Trust Fund) were established pursuant to the October 25, 1994 *Agreement and Declaration of Trust* (the Trust Agreement). The Trust Agreement also established the Board of Trustees (the Board) as the legal administrator of the Plan and the Trust Fund. The Board is composed of five appointees of the Province and five appointees of OPSEU. The legal name of the Board of Trustees and its employees is the OPSEU Pension Plan Trust Fund. The Plan, Trust Fund and Board are collectively referred to in these financial statements as OPTrust.

The Plan is registered under the *Pension Benefits Act* (Ontario) and the *Income Tax Act* (Canada) under registration number 1012046. The Plan is a registered pension plan as defined in the *Income Tax Act* and is not subject to income tax in Canada. However, OPTrust, its entities and investments are subject to other federal, provincial and municipal taxes in Canada, and some are subject to tax in other countries.

These financial statements reflect OPTrust's financial position, including the net assets available for benefits, pension obligations and surplus.

The following is a summary description of the Plan. For more complete information, reference should be made to the Plan text.

A. FUNDING

Contributions and investment earnings fund plan benefits. The determination of the value of the benefits and required contributions is based on actuarial valuations for funding purposes.

B. CONTRIBUTIONS

Under the Primary Schedule, the contribution rate for both employers and members since January 1, 2012 is 9.4% of pensionable salary up to the Year's Maximum Pensionable Earnings (YMPE) and 11% of pensionable salary above the YMPE.

Under OPTrust Select, the contribution rate for both employers and members is 3.0% of pensionable salary. For the first two years of participation, new employers are required to contribute an additional 0.2%.

C. PENSION BENEFITS

Pension benefits vest immediately under both schedules and include a lifetime pension payable at age 65.

Under the Primary Schedule, pensions are determined using a formula that considers a member's total pension service and annual salary rate averaged over the best five sequential years of membership. Members can retire early with an unreduced pension if their age plus years of pension service total 90 or if they are at least 60 years of age and have at least 20 years of pension service. Members who do not qualify for an early unreduced pension may start receiving a reduced pension between ages 55 and 65. Members who retire early also receive a temporary bridge benefit until age 65 or death, whichever occurs first.

Under OPTrust Select, there is no bridge benefit or early unreduced retirement provision. Members are entitled to an unreduced pension at age 65 and may start receiving a reduced pension between ages 55 and 65. The lifetime pension is determined by using a formula that considers a percentage of a member's pensionable pay in each year of membership plus any benefit upgrades granted by the Board.

D. INFLATION PROTECTION

Under the Primary Schedule, pensions and deferred pensions are adjusted annually for inflation based on changes to the Consumer Price Index (CPI), to a maximum of 8% in any one year. Where the inflation adjustment exceeds 8% in any one year, the excess is carried forward to any subsequent years when the adjustment is less than 8%.

Under OPTrust Select, pensions paid to retirees and pension benefits accrued for prior years by active members may be adjusted for inflation at the discretion of the Board.

E. DEATH BENEFITS

A 60% survivor pension is provided to an eligible spouse (or eligible children if there is no spouse) at no cost to the pensioner under the Primary Schedule.

Under OPTrust Select, the member's pension is reduced to pay for a spousal survivor pension. A pre-retirement death benefit is provided to the eligible spouse or to the member's designated beneficiary or estate under both schedules.

F. DISABILITY PENSIONS

Under the Primary Schedule, a disability pension is available to members with a minimum of 10 years of pension service in the Plan who meet the established criteria. The amount of the disability pension depends on the years of pension service and the average salary of the disabled member. Disability pensions are not available under OPTrust Select.

G. DEFERRED PENSIONS

Members in the Primary Schedule and OPTrust Select who terminate membership in the Plan before retirement have the right to leave their entitlement in the Plan and receive a pension when they retire. Deferred pensions are increased annually for inflation under the Primary Schedule only.

H. TERMINATION PAYMENTS

Members who terminate membership in the Primary Schedule or OPTrust Select before they become eligible for early retirement are entitled to transfer the commuted value of their pension to a registered retirement vehicle, subject to limits under the *Income Tax Act*. In some cases, members may also receive a refund of contributions.

I. TRANSFERS

Under the Primary Schedule, members who transfer to most management positions or certain professional groups are subject to a mandatory transfer of service to the Public Service Pension Plan, administered by the Ontario Pension Board. In addition, a member of the Primary Schedule who terminates their membership may be entitled to transfer the value of their pension to another pension plan if they are under the age of 55 and the other plan agrees to accept the transfer or if they are under the age of 65 and OPTrust has a reciprocal transfer agreement with that plan. The prescribed transfer options under the *Pension Benefits Act* are available to OPTrust Select members.

2. Significant Accounting Policies

A. BASIS OF PRESENTATION

These financial statements are prepared in accordance with the *Chartered Professional Accountants of Canada Handbook* Section 4600 – Pension Plans (s4600). The recognition and measurement of OPTrust's assets and liabilities are consistent with the requirements of s4600. The financial statements also include disclosures required by Regulation 909 of the *Pension Benefits Act*.

In the selection of accounting policies, OPTrust has chosen to comply with *International Financial Reporting Standards* (IFRS), as issued by the *International Accounting Standards Board* (IASB), to the extent that those standards do not conflict with the requirements of s4600.

These financial statements present the financial position of OPTrust as a separate financial reporting entity independent of participating employers, bargaining units, plan members, pensioners and sponsors.

B. USE OF ESTIMATES

In preparing these financial statements, management must make certain estimates, judgments and assumptions, that primarily affect the reported values of assets and liabilities, income and expenses, and related disclosures. Actual amounts could differ from these estimates. Significant estimates and judgments included in the financial statements relate to the valuation of real estate investments, private equity and infrastructure investments, certain fund investments and the determination of the pension obligations.

Impact of COVID-19 on significant estimates

The COVID-19 pandemic has had an impact on global economies and markets in which OPTrust invests, creating uncertainty related to estimates and assumptions used to measure the fair value of OPTrust's investments. As the impact of COVID-19 evolves, OPTrust continues to monitor the evolution of COVID-19 and management's best estimates and assumptions are reflected in the fair value of its assets and liabilities as reported.

Although global economic recovery has continued throughout 2021, there is still ongoing uncertainty as to the extent and duration of the impacts of COVID-19. With the reopening of economies along with increasing vaccination rates, uncertainty remains in terms of economic recovery rate, momentum of recovery as well as potential impact of future variants.

C. INVESTMENTS

Investments, investment-related assets and investment-related liabilities are financial instruments and are recognized on a trade date basis and stated at fair value. OPTrust uses *IFRS 13 Fair Value Measurement* in determining fair value.

i) Valuation of Investments

The fair value of investments is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The determination of fair value is based on market conditions at a specific point in time and may not be reflective of future values. Fair values determined using valuation models and techniques require the use of assumptions that may not be supported by observable market transactions or available market data. In such cases, fair values may be significantly impacted by the choice of assumptions.

Fair values are determined as follows:

Cash

Cost approximates fair value.

Short-term Investments

Fair value is determined using cost plus accrued interest or quoted closing mid-market prices. Short-term investments include commercial paper, banker's acceptances and certificates of deposits.

Government, Corporate and Real Return Bonds
Fair value is generally determined using market quotes between the closing bid and ask prices. Where quoted prices are not available, estimated values are calculated using discounted cash flows based on current market yields for comparable securities or market information.

Public Equity
Fair value is generally represented by the closing quoted market price. Where a listed market price is not available, fair value is determined using comparable market information and considering liquidity factors.

Pooled and Hedge Funds
Fair value is determined through reference to the net asset values as reported by the external fund manager.

Real Estate, Private Equity and Infrastructure
Investments and related liabilities are valued at least annually using appropriate valuation methodologies and the valuator's best assessment of unobservable inputs, except where public market prices are available.

Investments, net of related debt, exceeding predefined thresholds are valued externally at least once every three years, or annually for significant investments following the year of acquisition. Certain investments may be selected for external valuation on a discretionary basis. Investments are otherwise valued internally. Fund investment and co-investment fair values are based on the value reported by the fund manager, asset manager or investment manager, who uses appropriate valuation methodologies. Fair value is updated for material and asset specific factors known to OPTrust at the valuation date.

The estimated value of mortgages held on real estate investments are valued using discounted cash flows based on indicative market yields of securities with comparable credit risk and term to maturity.

Derivative Instruments
Derivative instruments are financial contracts, the value of which is derived from changes in underlying assets, interest rates, foreign exchange rates, commodities or indices. Market prices are used for exchange-traded derivatives. Where quoted prices are not available, derivatives are valued using appropriate valuation techniques such as option pricing models and discounted cash flows. Inputs used in these valuations include, but are not limited to, spot prices, price volatilities, currency exchange rates, interest rate curves and credit spreads, in determining fair value.

Resell and Repurchase Agreements
Resell agreements (reverse repos) and repurchase agreements (repos) are transactions where OPTrust buys and sells securities and simultaneously agrees to sell and buy them back at a specified price at a future date. Resell and repurchase agreements are carried at cost, which together with accrued interest approximates fair value due to their short-term nature.

Collateral
Cash collateral provided by OPTrust is excluded from cash on these financial statements and an equivalent receivable amount is recognized as cash collateral pledged. Cash collateral received by OPTrust from counterparties is recognized as cash and a liability for the equivalent amount is recognized as cash collateral received.

When OPTrust pledges collateral in the form of securities to counterparties, the asset remains as an investment in OPTrust's financial statements. Collateral received in the form of securities is not recognized in OPTrust's financial statements as the risks and rewards of ownership do not transfer. OPTrust does not sell, repledge or otherwise use any securities collateral received from the securities lending program, but collateral received from transactions executed under resell agreements can be sold or repledged for the duration of each transaction.

ii) Income Recognition
Net investment income includes interest and dividend income from investments, realized gains and losses on disposal of investments, and unrealized gains and losses resulting from changes in the fair value of investments. Investment income is recognized on an accrual basis.

Realized gains and losses arise from the sale of the investment and represent the difference between net proceeds on disposal and cost. Unrealized gains and losses represent the change in the difference between the fair value and cost of the investment held.

iii) Transaction Costs
Transaction costs include incremental costs directly attributable to the acquisition, issue or disposal of investment assets or liabilities. These fees are expensed in the period on an accrual basis and reported as a component of net investment income.

iv) External Management and Performance Fees
External management fees for portfolio management are expensed when OPTrust is directly invoiced in the period incurred and recognized on an accrual basis. Performance fees are recognized on an accrual basis. Performance fees and management fees not directly invoiced are offset against net investment income.

D. PENSION OBLIGATIONS
The value of pension obligations is determined based on actuarial valuations prepared by an independent actuarial firm and verified by OPTrust. Actuarial valuations are prepared every year for financial statement reporting (financial statement valuations) and at least every three years for purposes of determining funding requirements (funding valuations).

For financial reporting purposes, s4600 requires that pension plans report the actuarial value of pension obligations using management's best estimate assumptions and the projected unit credit method, prorated on service. This method calculates the actuarial value of pension benefits accrued up to the financial reporting date, after the projected benefits have been attributed equally to each year of a member's service. This method differs from the modified aggregate method, chosen by OPTrust and used for funding purposes, which includes the members' and employers' expected future contributions, pension benefits to be earned after the reporting date and margins of conservatism in the setting of economic assumptions. The projected benefits for OPTrust Select include the value of future intended benefit enhancements that are currently targeted at full inflation protection.

E. CONTRIBUTIONS
Contributions from members and employers that are due at year-end and transfers into the Plan, are recorded on an accrual basis. The carrying value of the receivable approximates fair value due to its short-term nature.

F. BENEFIT PAYMENTS
Payments of pensions, refunds and transfers are recorded on an accrual basis.

G. SURPLUS/DEFICIT
Surplus or deficit results from the excess or shortfall of the value of net assets available for benefits over the actuarial value of pension obligations.

H. FOREIGN CURRENCY TRANSLATION
Foreign currency transactions are translated into Canadian dollars at the rates of exchange prevailing at the dates of the transactions. The fair value of investments and cash balances denominated in foreign currencies is translated at the rates in effect at year-end. The resulting unrealized gain or loss is included in the statement of changes in net assets available for benefits.

I. FAIR VALUE DISCLOSURES
All financial instruments measured at fair value are categorized into one of three hierarchy levels, described below, for disclosure purposes. Each level is based on the transparency of the inputs used to measure the fair values of assets and liabilities:

Level 1 — inputs are unadjusted quoted prices of identical assets or liabilities in active markets. Investments that are classified as Level 1 generally include cash, actively traded equity securities and exchange traded derivatives which are valued using quoted prices.

Level 2 — inputs are used, other than quoted prices, that are observable for the asset or liability, either directly or indirectly. Investments that are classified as Level 2 include short-term securities, resell agreements, repurchase agreements, government, real return and corporate bonds and over-the-counter (OTC) derivatives. For these investments, fair values are either derived from quoted prices from less actively traded markets, independent price sources, or pricing models that use observable market data.

Level 3 — one or more significant inputs used in valuation methodologies that are unobservable in determining fair values of the assets or liabilities. Investments that are classified as Level 3 include investments in most private equity, infrastructure, real estate, pooled and hedge fund investments.

Determination of fair value and the resulting hierarchy requires the use of observable market data whenever available. The classification of a financial instrument in the hierarchy is based upon the lowest level of input that is significant to the measurement of fair value. The significance of a particular input to the fair value measurement requires judgment and evaluation of factors specific to the investment. The determination of an input's observability also requires considerable judgment.

J. AMENDMENTS TO ACCOUNTING STANDARDS
On January 13, 2021, amendments were made to *IFRS 9 Financial Instruments* and *IFRS 7 Financial Instruments: Disclosures* as a result of the implementation of interbank offered rates (IBOR) reform. These changes focused on the replacement of a number of IBOR rates with alternative benchmark rates (ABR). New disclosure was added to Note 3 to identify investments which are impacted by IBOR reform at December 31, 2021. The adoption of these amendments did not have a material impact on our financial statements. We continue to work towards the recommended target dates for the end of those IBOR rates provided by the regulators and are on track with our transition activities to move to ABRs.

3. Investments

A. FAIR VALUE HIERARCHY

The following schedule presents the fair value of OPTrust's investments categorized within the fair value hierarchy as described in Note 2.

As at December 31 ($ millions)		2021 Level 1	2021 Level 2	2021 Level 3	2021 Fair value	2021 Cost	2020 Level 1	2020 Level 2	2020 Level 3	2020 Fair value	2020 Cost
Fixed income											
Cash		561	—	—	561	561	352	—	—	352	352
Short-term investments		—	4,769	—	4,769	4,767	—	5,329	—	5,329	5,328
Government and corporate bonds											
	Canadian	—	2,883	—	2,883	2,762	—	3,731	—	3,731	3,383
	Foreign	—	—	—	—	—	—	60	—	60	57
Real return bonds	Canadian	—	438	—	438	279	—	438	—	438	279
	Foreign	—	953	—	953	830	—	917	—	917	837
		561	9,043	—	9,604	9,199	352	10,475	—	10,827	10,236
Public equity											
Canadian		129	—	—	129	60	49	—	—	49	39
Foreign		1,699	59	—	1,758	1,312	1,859	—	—	1,859	1,280
		1,828	59	—	1,887	1,372	1,908	—	—	1,908	1,319
Pooled and hedge funds		—	719	2,835	3,554	3,283	—	265	2,671	2,936	2,911
Real estate		—	—	3,981	3,981	3,156	21	—	3,168	3,189	2,796
Private equity		—	—	4,017	4,017	2,518	—	—	3,178	3,178	2,455
Infrastructure		—	—	3,364	3,364	2,452	—	—	2,620	2,620	2,068
		—	719	14,197	14,916	11,409	21	265	11,637	11,923	10,230
Investment-related assets											
Cash collateral pledged		135	—	—	135	135	46	—	—	46	46
Accrued income		5	13	—	18	18	3	24	—	27	27
Due from brokers		—	37	—	37	37	—	11	—	11	11
Derivative instruments		—	224	—	224	133	—	280	—	280	69
Resell agreements		—	385	—	385	385	—	1,417	—	1,417	1,422
		140	659	—	799	708	49	1,732	—	1,781	1,575
INVESTMENT ASSETS		2,529	10,480	14,197	27,206	22,688	2,330	12,472	11,637	26,439	23,360
Investment-related liabilities											
Cash collateral received		(175)	—	—	(175)	(175)	(223)	—	—	(223)	(223)
Due to brokers and other liabilities		(67)	—	—	(67)	(67)	(81)	—	—	(81)	(81)
Derivative instruments		—	(86)	—	(86)	—	—	(72)	—	(72)	(30)
Bonds sold short	Canadian	—	—	—	—	—	—	(60)	—	(60)	(58)
	Foreign	—	—	—	—	—	—	(48)	—	(48)	(50)
Repurchase agreements		—	(997)	—	(997)	(997)	—	(2,932)	—	(2,932)	(2,934)
		(242)	(1,083)	—	(1,325)	(1,239)	(304)	(3,112)	—	(3,416)	(3,376)
NET INVESTMENTS		2,287	9,397	14,197	25,881	21,449	2,026	9,360	11,637	23,023	19,984

B. CHANGES IN FAIR VALUE MEASUREMENT FOR INVESTMENTS IN LEVEL 3

The following table presents a reconciliation of financial instruments measured at fair value using significant unobservable inputs and included in Level 3 of the fair value hierarchy:

For the years ended December 31 ($ millions)	2021 Pooled and hedge funds	2021 Real estate	2021 Private equity	2021 Infra-structure	2021 Total	2020 Pooled and hedge funds	2020 Real estate	2020 Private equity	2020 Infra-structure	2020 Total
Balance, beginning of year	2,671	3,168	3,178	2,620	11,637	4,644	3,075	2,797	2,405	12,921
Net realized gains/(losses)	(56)	172	539	344	999	(150)	201	308	177	536
Change in unrealized gains/(losses)	268	425	827	352	1,872	(119)	(176)	58	(103)	(340)
Purchases	395	523	451	538	1,907	1,062	311	498	289	2,160
Sales/Redemptions	(443)	(307)	(827)	(490)	(2,067)	(2,766)	(243)	(483)	(148)	(3,640)
Transfers in/(out)[a]	—	—	(151)	—	(151)	—	—	—	—	—
BALANCE, END OF YEAR[a]	2,835	3,981	4,017	3,364	14,197	2,671	3,168	3,178	2,620	11,637

a As at December 31, 2021, transfers out of Level 3 into Level 1 was due to private investments becoming publicly traded. There were no transfers in nor out of Level 3 for the year ended 2020.

C. SENSITIVITY TO CHANGES IN ASSUMPTIONS

Sensitivity information is available for certain direct investments in real estate, private equity and infrastructure and is presented in the table below. Sensitivity changes are not provided for investments where fair values are based on information provided by external parties where the Plan has a lack of information rights over assumptions and methodologies used to determine the fair value of the underlying investments.

As at December 31 ($ millions)	Key factor	2021 Change in key factor	2021 Fair value	2021 Increase/(Decrease) to fair value	2020 Fair value	2020 Increase/(Decrease) to fair value
Real estate	Capitalization rate[a]	+/– 0.25%	1,572	(140)/156	1,362	(129)/144
Mortgages	Interest rate[b]	+/– 0.25%	797	(9)/9	893	(11)/11
Private debt[c]	Discount rate[b]	+/– 0.25%	114	(1)/1	227	(1)/1
Infrastructure	Discount rate[b]	+/– 0.25%	2,184	(55)/58	1,973	(45)/48
Private equity	EBITDA multiple[d]	+/– 10%	1,482	244/(244)	839	205/(205)

a A rate of return to derive the value of an investment property based on expected income.
b The rate used in discounted cash flow analysis to determine the present value of future cash flows.
c Private debt is held within the Real Estate asset class.
d EBITDA is defined as earnings before interest, taxes, depreciation and amortization. The EBITDA multiple is used to determine the fair value of a company based on the subject company's EBITDA.

D. DERIVATIVE CONTRACTS

OPTrust utilizes derivatives to manage its asset mix exposure, enhance returns and manage financial risk. Derivative contracts are transacted by OPTrust either directly with counterparties in the OTC market or on regulated exchanges and execution platforms. The following are the types of derivative contracts that OPTrust has entered into:

Futures

Futures are standardized contracts traded on regulated future exchanges and are subject to daily cash settlement of changes in fair value. Futures contracts include the following:

Interest rate futures are contractual obligations to either buy or sell interest rate sensitive financial instruments or indices at a specified price at a future date. OPTrust utilizes interest rate futures contracts to manage its fixed income exposure.

Equity index futures are standardized contracts to either buy or sell a specific equity index at a specified price at a future date. OPTrust utilizes equity index futures contracts to manage its exposure to public equity markets.

Commodity futures are standardized contracts to either buy or sell a predetermined amount of a commodity at a specified price at a future date. OPTrust utilizes commodity futures contracts to manage its exposure to commodity markets.

Forwards

A forward contract is a contract between two parties to buy or sell an asset at a specified price at a future date. OTC currency forward contracts are contractual agreements between two parties to exchange a notional amount of one currency for another at a specified price for settlement at a future date. OPTrust utilizes foreign exchange forward contracts to modify currency exposure for both economic hedging and active currency management.

Options

Options are contractual agreements under which the seller (writer) grants the purchaser the right, but not the obligation, either to buy (call option) or sell (put option) a security, currency or another financial instrument at a specified price at or by a future date. They may be acquired in standardized amounts on regulated exchanges or may be customized and acquired in the OTC market. OPTrust utilizes options to manage its directional and volatility exposures for both economic hedging and active investing.

Swaps

Swaps are OTC contracts between two parties to exchange a series of cash flows. Swap contracts include the following:

An interest rate swap is a contractual agreement between two parties to exchange a series of fixed for floating cash flows based on a notional amount of principal. OPTrust utilizes interest rate swaps to manage interest rate exposures and duration exposures.

A credit default swap is a contractual agreement between two parties to provide protection against a change in value due to a credit event of referenced debt instruments. The purchaser pays premiums to the seller on the credit default swap in return for payment related to a change in value due to credit events. OPTrust utilizes credit default swaps to promote credit risk diversification.

A total return swap is a contractual agreement between two parties to provide the investment return on a referenced asset. The receiver of the total return on the asset pays a floating rate of interest to the payor of the asset total return. OPTrust utilizes total return swaps to promote asset risk diversification.

The notional amounts of derivative contracts represent the nominal or face amount that is used to calculate the cash payments made on that contract. The fair values of the derivative contracts included in the financial statements are determined by using the notional values and changes in the market rates or prices relative to the original terms of the contract. The notional values do not necessarily reflect the future cash flows to be exchanged nor do they indicate OPTrust's exposure to market or credit risk.

The following schedule presents the notional and fair value of OPTrust's derivative contracts held:

			2021			2020		
As at December 31 ($ millions)			Notional amount	Fair value assets	Fair value liabilities	Notional amount	Fair value assets	Fair value liabilities
Interest rate contracts	Futures	– long positions	229	—	—	2,998	—	—
		– short positions	6,103	—	—	1,757	—	—
	Options	– long positions	—	—	—	1	4	—
	Swaps		—	—	—	767	1	(6)
Equity contracts	Futures	– long positions	1,980	—	—	1,842	—	—
		– short positions	12	—	—	—	—	—
	Options	– short positions	—	—	—	3,030	—	—
	Swaps		559	4	—	287	8	—
Commodity contracts	Futures	– long positions	1,457	—	—	1,508	—	—
		– short positions	31	—	—	11	—	—
Currency contracts	Forwards		20,107	89	(86)	11,211	125	(66)
Credit contracts	Credit default swaps							
		– long positions	—	—	—	139	—	(3)
		– short positions	1,393	131	—	1,529	145	—
TOTAL DERIVATIVES			31,871	224	(86)	25,080	283	(75)

The following schedule presents the notional values for OPTrust's derivative positions by term to maturity:

	2021					2020				
As at December 31 ($ millions)	Within 1 year	1 to 5 years	5 to 10 years	Over 10 years	Total	Within 1 year	1 to 5 years	5 to 10 years	Over 10 years	Total
Interest rate contracts	5,760	572	—	—	6,332	4,756	73	358	336	5,523
Equity contracts	2,551	—	—	—	2,551	5,159	—	—	—	5,159
Commodity contracts	1,488	—	—	—	1,488	1,519	—	—	—	1,519
Currency contracts	20,107	—	—	—	20,107	11,211	—	—	—	11,211
Credit contracts	—	1,393	—	—	1,393	—	1,668	—	—	1,668
TOTAL	29,906	1,965	—	—	31,871	22,645	1,741	358	336	25,080

E. SIGNIFICANT INVESTMENTS

The following schedule presents OPTrust investments having a fair value or cost exceeding 1% of the fair value or cost of net investment assets as at December 31.

	2021			2020		
As at December 31 ($ millions)	Number of investments	Fair value	Cost	Number of investments	Fair value	Cost
Fixed income	1	273	163	9	2,306	2,149
Pooled and hedge funds	4	1,808	1,678	3	1,396	1,410
Private equity	2	545	203	—	—	—
Infrastructure	2	1,722	936	2	1,250	735

As at December 31, 2021, the investments where the individual investment has a cost or fair value exceeding 1% of the cost or fair value of net investment assets are as follows:

Fixed income — Government of Canada

Pooled and hedge funds — MAN FRM Bespoke Alpha LP, PIMCO Multi-Strategy Credit Fund, UBS Global Emerging Markets Opportunity Fund and Carlyle Ontario Credit Partnership, L.P.

Private equity — Kinetic TCo Pty Limited and Amerivet Partners Management Inc.
Infrastructure — Globalvia Infraestructuras, S.A. and BRUC OPT Energy Partners S.L.

F. RISK MANAGEMENT

OPTrust is subject to certain investment risks and engages in risk management practices to help ensure that sufficient assets will be available to fund pension benefits. OPTrust has identified our general approach to risk along with the level of risk we are willing to accept for each key risk category. We have also established a framework for effective risk management. This encompasses the monitoring, managing and reporting of enterprise risks including investment risks. Our risk approach, principles and framework are reviewed and approved by the Board.

The Board has delegated responsibility for managing risk to the President and Chief Executive Officer (the "CEO") but retains responsibility for approving OPTrust's approach to risk and monitoring risks identified by management as top enterprise risks, which have the potential to prevent OPTrust from meeting one or more of its strategic objectives. The CEO has delegated day to day responsibility for implementing the investment-related aspects of risk management to the Chief Risk Officer and Senior Vice-President Actuarial Services and Plan Policy, who ensures investment risks are measured and monitored against limits and guidelines, and to the Chief Investment Officer, who ensures that the investment risks are accurately priced and incorporated into the investment decision-making process.

There is a potential risk that OPTrust will not have sufficient assets available to fund future pension benefits. OPTrust manages this risk by focusing on the funded status of the Plan, measured as the ratio of assets to liabilities. Since the funded status of the Plan is a function of both assets and liabilities, and both are affected by the investment environment, managing investment risks is central to ensuring assets will not fall short of liabilities.

Investment Risk
Investment risk includes the following types of risk:

- Market risk (including interest rate, foreign currency, equity price and commodity price risks)
- Credit risk; and
- Liquidity risk.

Market Risk
Market risk is the risk that the value of an investment will be adversely affected by changes in interest rates, foreign exchange rates, inflation rates, equity and commodity prices. OPTrust manages market risk through investment management practices designed to optimize the relationship between risk and return and the diversification of investments across a variety of asset classes. Risk mitigation strategies aimed at lowering the total fund's risk level are actively employed.

(a) Interest Rate Risk
Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The potential exposure results from either changes in floating interest rates which increase or decrease cash flows or changes in the asset values for fixed rate securities (e.g., bonds, mortgages and bank loans). During periods of rising interest rates, the market value of the existing fixed income securities will generally decrease.

A 1% increase or decrease in interest rates, with all other variables held constant, would result in a decrease or increase in the value of the fixed income portfolio of $720 million (2020 – $747 million) respectively. The change in fair value will be offset by a change in the value of our pension liability which is also correlated to a change in interest rates.

The following table illustrates how fair value is allocated among the various types of interest-bearing investments based upon the contractual maturity of the securities:

	2021					2020				
As at December 31 ($ millions)	Within 1 year	1 to 5 years	5 to 10 years	Over 10 years	Total	Within 1 year	1 to 5 years	5 to 10 years	Over 10 years	Total
Short term investments	4,769	—	—	—	4,769	5,329	—	—	—	5,329
Government and corporate bonds	—	—	290	2,593	2,883	122	163	986	2,520	3,791
Real return bonds	—	—	140	1,251	1,391	—	—	9	1,346	1,355
Resell agreements	385	—	—	—	385	1,417	—	—	—	1,417
TOTAL	5,154	—	430	3,844	9,428	6,868	163	995	3,866	11,892

OPTrust manages interest rate risk relative to its liabilities by balancing investments between interest-sensitive investments and those subject to other risks. There are also certain real estate, private equity and infrastructure investments which may have interest rate components making them subject to interest rate exposure.

The following schedule presents OPTrust's exposure to financial instruments referencing benchmark interest rates subject to IBOR reform that have yet to transition to ABRs:

	2021	
As at December 31 ($ millions)	Fair value	Yet to transition
Non-derivative assets exposed to US LIBOR Loans[a]	352	218

a Loans are part of the Real Estate portfolio.

(b) Foreign Currency Risk
Foreign currency risk is the risk that the value of foreign investments will be affected by changes in foreign currency exchange rates for Canadian dollars.

OPTrust's market value exposure to foreign currencies is as follows:

	2021			2020
As at December 31 ($ millions)	Gross exposure	Impact of derivatives[a]	Net exposure	Net exposure
Canadian Dollar	13,009	7,730	20,739	18,076
Foreign currency exposure				
United States Dollar	8,043	(5,874)	2,169	1,520
Swiss Franc	50	945	995	933
Japanese Yen	190	708	898	1,037
Indian Rupee	162	101	263	269
Hong Kong Dollar	164	60	224	(13)
Euro	2,313	(2,418)	(105)	(54)
Europe – other	405	(383)	22	189
Asia Pacific – other	1,023	(970)	53	98
Emerging Markets – other	522	101	623	968
	12,872	(7,730)	5,142	4,947
NET INVESTMENTS	25,881	—	25,881	23,023

a The impact of derivatives reflects the foreign currency exposure represented by the notional amount economically hedged using currency forwards.

The impact of a 5% absolute change in the Canadian dollar against the top five currency exposures held at year-end, holding all other variables constant would have resulted in a $217 million change in net assets available for benefits as at December 31, 2021 (2020 – $180 million).

		2021	2020
As at December 31 ($ millions)	Change versus Canadian Dollar	Change in net assets available for benefits	Change in net assets available for benefits
United States Dollar	+/– 5%	+/– 103	+/– 73
Swiss Franc	+/– 5%	+/– 47	+/– 44
Japanese Yen	+/– 5%	+/– 43	+/– 49
Indian Rupee	+/– 5%	+/– 13	+/– 13
Hong Kong Dollar	+/– 5%	+/– 11	+/– 1
TOTAL		+/– 217	+/– 180

Currency risk is managed at the total OPTrust level. OPTrust economically hedges most of its currency exposure using currency forwards. The remaining unhedged exposures include currencies that are used to diversify total portfolio risk, emerging market currencies and opportunistic exposures.

(c) Equity Price Risk

Equity price risk is the risk that the fair value of a financial instrument will fluctuate because of changes in equity market prices whether those changes are caused by factors specific to the individual financial instrument, its issuer, or factors affecting all similar financial instruments traded in the market. OPTrust is exposed to equity price risk through its investment in public and private equities.

The table below shows the impact of a 10% change in public and private equity markets.

As at December 31 ($ millions)			2021	2020
Equity market[a]	Market index	Change in market index[b]	Change in net assets available for benefits	Change in net assets available for benefits
Public equities	MSCI World Developed Index	+/– 10%	+/– 386	+/– 379
Public equities	MSCI World Developed Index	+/– 10%	+/– 343	+/– 272
TOTAL			+/– 729	+/– 651

a Equity market is based on the specific exposure of the investment. In 2020, equity market was based on the portfolio mandates of the investment managers.

b For each equity category, the expected effect of a 10% change in the market index is estimated using market data since January 2004. Currency exchange rates are not affected by the change in market indices.

OPTrust manages equity price risk through adherence to approved policies and guidelines, which includes ensuring thresholds are being met through monitoring equity exposures in developed and emerging markets, as well as total fund.

(d) Commodity Price Risk

Commodity price risk is the risk that the fair value of investments will fluctuate due to changes in market prices of commodities.

The table below shows the impact of a 10% change in gold and broad commodity indices:

As at December 31 ($ millions)			2021	2020
Commodity market	Market benchmark	Change in market index[a]	Change in net assets available for benefits	Change in net assets available for benefits
Gold	S&P GSCI Gold Total Return Index	+/– 10%	+/– 128	+/– 133
Broad Commodity Exposure	Bloomberg Commodity Index	+/– 10%	+/– 12	+/– 13
TOTAL			+/– 140	+/– 146

a The expected effect of a 10% change in the commodity market index is estimated using market data since January 2004. Currency exchange rates are not affected by the change in market indices.

OPTrust manages commodity price risk through adherence to approved policies and guidelines, which includes ensuring thresholds are being met through monitoring commodity exposures in the total fund.

Credit Risk

Credit risk is the risk of financial loss due to a counterparty, borrower, issuer, endorser or guarantor failing to make payments under its contractual obligations. OPTrust has exposure to credit risk through short-term investments, bonds, resell agreements and OTC derivatives.

The credit risk exposure by credit rating of our counterparties, without taking account of any collateral held is as follows:

	2021					2020				
As at December 31 ($ millions)	Short-term investments	Bonds	Resell agreements	Derivatives[a]	Total	Short-term investments	Bonds	Resell agreements	Derivatives[a]	Total
AAA/R-1 High	3,397	953	—	—	4,350	4,625	917	—	—	5,542
AA/R-1 Mid	—	1,890	26	2	1,918	286	2,066	635	23	3,010
A/R-1 Low	1,372	1,431	359	222	3,384	418	1,930	780	253	3,381
BBB/R-2 Low or lower	—	—	—	—	—	—	233	2	—	235
TOTAL	4,769	4,274	385	224	9,652	5,329	5,146	1,417	276	12,168

a Excludes exchange traded derivatives.

OPTrust mitigates credit risk on debt securities through adherence to approved policies and guidelines, which includes guidelines on exposure to single issuers.

Credit risk from OTC derivatives and resell agreements is managed by requiring counterparties to post collateral in order to back the fair value of these derivative contracts.

Credit risk for investments 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. OPTrust also monitors how the positive fair value of OTC derivatives and resell agreements may change in the future to ensure adequate collateral is in place.

OPTrust's collateral arrangements that support certain investment activities are as follows:

(a) Derivatives

Collateral is received from and pledged to counterparties to manage credit risk from OTC derivatives in accordance with the Credit Support Annex (CSA), which forms part of the International Swaps and Derivatives Association (ISDA) Master Agreements. All uncleared derivatives are now subject to global regulatory requirements requiring a CSA in conjunction with an ISDA. All of the ISDAs OPTrust has in place with counterparties are fully collateralized for OTC derivatives, and as a result has a right to offset credit risk against collateral received due to a default, insolvency, bankruptcy or other early termination events. In the case of exchange-traded derivatives, there is no provision to offset against obligations to the same counterparty.

(b) Resell and Repurchase Agreements

Resell and repurchase agreements include collateral received and pledged from and to counterparties.

(c) Securities Lending Program

OPTrust participates in a securities lending agreement whereby it lends securities to approved borrowers. OPTrust secures its exposure through the receipt of security collateral of at least 105% of the value of the securities lent. All securities lent are recallable on demand at the option of OPTrust. Credit risk associated with the borrower is mitigated by requiring the borrower to provide collateral with market values exceeding the market value of the loaned securities. OPTrust continues to recognize securities on loan and does not recognize securities received as collateral.

The fair value of collateral received and pledged for derivatives, resell and repurchase agreements as well as for securities loaned as at December 31, is as follows:

As at December 31 ($ millions)	2021	2020
Derivatives		
Collateral received[a]	(172)	(219)
Collateral pledged[b]	495	485
Resell and Repurchase Agreements		
Associated receivable from resell agreements	385	1,417
Collateral received[c]	(385)	(1,420)
Associated liability from repurchase agreements	(997)	(2,932)
Collateral pledged[c]	997	2,948
Securities Lending Program		
Securities loaned	194	282
Collateral received	(207)	(305)

a Includes cash collateral received of $(172) million (2020 – $(219) million).

b Includes cash collateral pledged of $131 million (2020 – $44 million).

c Includes net cash collateral pledged/(received) of $(1) million (2020 – $(2) million).

(d) Offsetting Arrangements

Financial assets and liabilities are offset and the net amount reported in the statement of financial position where OPTrust currently has a legally enforceable right to set-off the recognized amounts and there is an intention to settle on a net basis or realize the asset and settle the liability simultaneously. In the normal course of business, OPTrust enters into various master netting agreements or other similar arrangements that do not meet the criteria for offsetting in the statement of financial position but still allow for the related amounts to be set-off in certain circumstances, such as bankruptcy or the termination of the contracts.

The following table presents the recognized financial instruments that are offset, or subject to enforceable netting arrangements as at December 31, 2021 and 2020. Similar arrangements include repurchase agreements, resell agreements, securities lending and any related rights to financial collateral.

	2021				
				Related amounts not set-off in the statement of financial position	
As at December 31 ($ millions)	Gross amounts of recognized financial instruments	Gross amounts of recognized financial instruments set-off	Net amounts of financial instruments presented	Financial collateral (received)/ pledged	Net amount
Financial assets					
Derivative instruments	255	(31)	224	(172)	52
Resell agreements	385	—	385	(385)	—
Securities lending	194	—	194[a]	(194)	—
TOTAL FINANCIAL ASSETS	834	(31)	803	(751)	52
Financial liabilities					
Derivative instruments	(117)	31	(86)	86	—
Repurchase agreements	(997)	—	(997)	997	—
TOTAL FINANCIAL LIABILITIES	(1,114)	31	(1,083)	1,083	—

As at December 31 ($ millions)	2020				
Financial assets					
Derivative instruments	318	(38)	280	(219)	61
Resell agreements	1,417	—	1,417	(1,417)	—
Securities lending	282	—	282[a]	(282)	—
TOTAL FINANCIAL ASSETS	2,017	(38)	1,979	(1,918)	61
Financial liabilities					
Derivative instruments	(110)	38	(72)	72	—
Repurchase agreements	(2,932)	—	(2,932)	2,932	—
TOTAL FINANCIAL LIABILITIES	(3,042)	38	(3,004)	3,004	—

a These securities are included in public equity investments.

Liquidity Risk

Liquidity risk is the potential that OPTrust will not be able to meet payment obligations for pension payments, operating expenses or investment activities as they come due without the forced sale of assets. OPTrust has exposure to liquidity risk through its investment commitments, which are required to be funded in future periods, as well as through holding certain investments including pooled and hedge funds, private equity, infrastructure and real estate investments, which by nature are less liquid than public market assets (see Note 10). An additional source of liquidity risk exposure is OPTrust's use of derivatives with their potential margin calls which are impacted by daily market movements.

OPTrust forecasts and manages cash flows centrally to ensure it meets its obligations when due without unintended early liquidation of assets. OPTrust's cash and liquidity positions are monitored daily for compliance with guidelines and limits established in a liquidity framework. Both short-term and long-term cash and liquidity requirements are assessed within this framework. In addition, OPTrust conducts various stress tests to examine how they may impact liquidity.

Liquidity risk is managed by holding cash and cash equivalents, liquid money market securities and unencumbered high-quality liquid securities that can be sold under repurchase agreements to raise funds. A core liquidity reserve is maintained for deployment in the event of severe market disruption.

The remaining terms to contractual maturity of OPTrust's investment-related liabilities are as follows:

	2021			
As at December 31 ($ millions)	Within 1 year	1 to 5 years	5 to 10 years	Total
Cash collateral received	(175)	—	—	(175)
Due to brokers and other liabilities	(51)	(16)	—	(67)
Derivative instruments	(86)	—	—	(86)
Bonds sold short	—	—	—	—
Repurchase agreements	(997)	—	—	(997)
TOTAL	(1,309)	(16)	—	(1,325)

	2020			
Cash collateral received	(223)	—	—	(223)
Due to brokers and other liabilities	(60)	(21)	—	(81)
Derivative instruments	(67)	(4)	(1)	(72)
Bonds sold short	—	(78)	(30)	(108)
Repurchase agreements	(2,932)	—	—	(2,932)
TOTAL	(3,282)	(103)	(31)	(3,416)

OPTrust maintains unsecured credit facilities to meet potential liquidity requirements.

4. Net Investment Income

The following schedule presents the net investment income of OPTrust's investments by asset class:

For the years ended December 31 ($ millions)	2021 Investment income	2021 Net gain/ (loss) on investments[a]	2021 Net investment income/ (loss)[b/c]	2020 Investment income/(loss)	2020 Net gain/ (loss) on investments[a]	2020 Net investment income/ (loss)[b/c]
Fixed income						
Cash and short-term investments	16	(4)	12	40	(11)	29
Government and corporate bonds						
Canadian	90	(235)	(145)	190	601	791
Foreign	5	(17)	(12)	8	72	80
Real-return bonds						
Canadian	9	—	9	10	41	51
Foreign	8	48	56	6	135	141
	128	(208)	(80)	254	838	1,092
Public equity						
Canadian	1	44	45	1	10	11
Foreign	39	128	167	34	234	268
	40	172	212	35	244	279
Pooled and hedge funds	4	186	190	1	(278)	(277)
Real estate	153	448	601	95	(70)	25
Private equity	70	1,296	1,366	31	334	365
Infrastructure	58	638	696	104	(30)	74
Derivative instruments	—	557	557	—	419	419
	285	3,125	3,410	231	375	606
	453	3,089	3,542	520	1,457	1,977
Investment management expenses						
External manager fees			(12)			(11)
Transaction costs			(12)			(15)
			(24)			(26)
NET INVESTMENT INCOME			3,518			1,951

a Includes net realized gain of $1,721 million and net unrealized gain of $1,368 million in 2021 and net realized gain of $1,285 million and net unrealized gain of $172 million in 2020.
b Certain investment-related disbursements of $40 million in 2021 (2020 - $40 million) have been netted against net investment income/(loss).
c Net of management fees not directly invoiced and performance fees for portfolio management.

5. Pension Obligations

A. FINANCIAL STATEMENT VALUATION

OPTrust annually reviews the actuarial assumptions used in the financial statement valuation to ensure that they reflect management's best estimate of expected trends. The key economic assumptions used for the valuation are as follows:

As at December 31	2021	2020
Inflation rate	**2.00%**	2.00%
Discount rate (real)	**3.20%**	3.20%
Discount rate (nominal)	**5.20%**	5.20%
Salary increases (nominal)	**2.75%**	2.75%

The discount rate is based on the long-term expected return of plan assets proposed by management and approved by the Board.

The inflation rate is based on the expected CPI rate increases.

Salary increases reflect the long-term inflation rate plus general Plan member salary increases.

Experience losses of $79 million (2020 – $72 million gain) on OPTrust's pension obligations are due to differences between actual experience and assumptions. The assumption change loss of $115 million (2020 – $42 million) on OPTrust's pension obligations is due to an increase in the provision for expenses.

The financial statement nominal discount rate remains unchanged at 5.20% as at December 31, 2021 which reflects current market conditions and return expectations.

B. FUNDING VALUATION

The funding valuation is based on the modified aggregate method. This method considers a time horizon that includes accumulation of benefits and receipt of contributions in respect of current members in future periods. Generally, the actuarial assumptions used to determine the pension obligations for funding purposes are more conservative than those used for the financial statement valuation. Pension obligations are valued using economic assumptions developed by reference to long-term market conditions. The funding valuation is used to identify gains or losses. Gains or losses are first split between the Primary Schedule and OPTrust Select based on the accrued liability. Gains and losses are shared equally between the Sponsors.

Gains attributed to the Primary Schedule will be allocated at the discretion of the Sponsors to fund benefit improvements, reduce contributions, or reduce any existing funding deficiencies. Funding deficiencies resulting from losses are funded over a maximum of 15 years from increased contributions.

Gains attributed to OPTrust Select are allocated at the discretion of the Sponsors after all intended benefit enhancements have been provided to members. The Sponsors can fund benefit improvements, reduce contributions, or reduce any existing funding deficiencies. Funding deficiencies resulting from losses primarily reduce the level of benefit enhancements from those intended.

In accordance with the *Pension Benefits Act*, the *Income Tax Act* and regulations, an actuarial valuation for funding purposes is required to be filed at least every three years to assess OPTrust's financial position, and to determine the funding requirements. In 2022, OPTrust is expected to file with the regulator, the December 31, 2021 funding valuation, as prepared by Towers Watson Canada Inc., showing that the Plan is fully funded, and the next funding valuation will not be required to be filed until December 31, 2024.

6. Capital

OPTrust defines capital as the funded position of the Plan, whether in surplus or deficit. Surplus is generated during periods of favourable economic performance and drawn down during periods of unfavourable economic performance in order to maintain OPTrust's ability to pay its pension obligations without unduly affecting contribution levels. OPTrust is not under regulatory requirements as it relates to capital. The surplus was $4,548 million as of December 31, 2021 (2020 – $2,364 million). The objective of managing capital is to ensure the Plan is fully funded to pay the plan benefits over the long term. A funding valuation is used to manage capital by identifying gains or losses as described in Note 5. OPTrust prudently manages its investments to satisfy its long-term funding requirement in accordance with its *Statement of Investment Policies and Procedures* (SIP&P) and other policies and guidelines. The SIP&P was established in 1995 and was last amended in 2021 to revise the asset mix disclosure.

OPTrust uses different scenarios to monitor the market risks in the Plan. The *Risk Appetite Statement* (RAS) sets limits on how market risks can affect the funded status of the Plan in three scenarios. Funded status is the percentage of net assets available for benefits over actuarial liabilities. RAS A and RAS B are stress scenarios which represent severe stagflation and deflationary market conditions. RAS C measures pension stability and is a tail risk estimation of our funded status. In each scenario, the value of assets and liabilities is recalculated and the change in funded status is monitored. The drawdown in funded status for these three scenarios is monitored and used as a strategic risk limit.

The table below highlights the potential reduction in funded status in the three scenarios.

As at December 31	2021	2020
	% Potential reduction to funded status[d]	% Potential reduction to funded status[d]
Risk appetite statement scenario A[a]	15.9%	16.0%
Risk appetite statement scenario B[b]	15.7%	13.2%
Risk appetite statement scenario C[c]	12.4%	11.3%

a Under Scenario A, the assumption is that the MSCI World Index decreases by 30% while the 10-year government yield increases by 100 basis points.
b Under Scenario B, the assumption is that the MSCI World Index decreases by 30%, while the 10-year government yield decreases by 100 basis points.
c Scenario C is based on the average loss of the worst 10% of outcomes simulated using historical market scenarios starting from January 2004.
d These are absolute value reductions from funded status.

7. Contributions

For the years ended December 31 ($ millions)	2021	2020
Members		
Current service[a]	256	248
Prior service	17	16
Long-term income protection[b]	18	14
	291	278
Employers		
Current service[a]	257	248
Prior service	7	7
Long-term income protection[b]	18	14
	282	269
Transfers from other plans	9	4
TOTAL CONTRIBUTIONS	582	551

a All contributions paid by members for current service are required contributions.
b The employer pays member contributions for long-term income protection.

As at December 31, 2021 employers' and members' contributions receivable were $32 million (2020 – $30 million) and $24 million (2020 – $22 million) respectively. OPTrust reconciles contributions for each employer on a member-by-member basis.

8. Benefits Paid

For the years ended December 31 ($ millions)	2021	2020
Retirement pensions	926	893
Transfers to Public Service Pension Plan	110	82
Refunds, commuted value transfers and death benefits	95	82
Transfers to other plans	7	7
TOTAL BENEFITS PAID	1,138	1,064

9. Administrative Expenses

Investment administrative expenses[a]

For the years ended December 31 ($ millions)	2021	2020
Administration	48	43
Professional services[b]	3	6
Custodial fees	2	1
TOTAL INVESTMENT ADMINISTRATIVE EXPENSES	53	50

Pension administrative expenses[a]

For the years ended December 31 ($ millions)	2021	2020
Administration	33	29
Professional services[b]	2	3
System development[c]	7	—
TOTAL PENSION ADMINISTRATIVE EXPENSES	42	32

a Includes corporate expenses.
b Total professional services include external audit expense of $428 thousand (2020 – $504 thousand) and actuarial expense of $359 thousand (2020 – $397 thousand).
c Includes $5 million of impairment charges (2020 – $0).

10. Commitments, Guarantees, Indemnifications and Contingencies

A. COMMITMENTS

In the normal course of business, certain OPTrust entities may enter into commitments to fund certain investments over the next several years in accordance with the terms and conditions agreed to, which may be considered material. As at December 31, 2021, these commitments totaled $2,993 million (2020 – $2,453 million). OPTrust also has future lease commitments for office premises.

B. GUARANTEES

OPTrust enters into guarantee agreements related to certain investments. OPTrust is required to make payments to a third party if the investment companies fail to pay or perform a stated obligation to that party.

OPTrust's investment commitments, guarantees and lease commitments are as follows:

As at December 31 ($ millions)	2021	2020
Investment commitments	2,993	2,453
Guarantees	86	410
Lease commitments	5	8
TOTAL INVESTMENT COMMITMENTS, GUARANTEES AND LEASE COMMITMENTS	3,084	2,871

C. INDEMNIFICATIONS

OPTrust indemnifies its Trustees and staff against certain claims that may be made against them to the extent that these individuals are not covered under other arrangements.

D. CONTINGENCIES

As at December 31, 2021, OPTrust is involved in litigation and claims which arise in the normal course of business. The outcome of such litigation and claims is often inherently difficult to predict. Any liability that may arise from these litigations has been recognized as appropriate or has been determined to have an insignificant impact on the financial statements.

11. Related Party Disclosures

In the normal course of business OPTrust purchased bonds at the prevailing market prices that were issued by the Province of Ontario, a sponsor of the Plan and whose employees are members of the Plan. The fair market value of the bonds as at December 31, 2021, was $1,298 million (2020 – $2,037 million). Investment income recorded on the bonds amounted to $40 million for the year-ended December 31, 2021 (2020 – $121 million).

In 2019, OPTrust entered a joint venture partnership with GWL Realty (GWL) in the ownership of its corporate headquarters in the amount of $118 million. In 2021, the amounts paid to the joint venture with GWL amounted to $4 million (2020 – $3 million).

12. Key Management Personnel Compensation

Key management personnel consist of senior executives having authority and responsibility for planning and directing the activities of OPTrust. The aggregate key management personnel compensation is shown below:

For the years ended December 31 ($ thousands)	2021	2020
Salaries, short-term employee benefits and termination benefits	5,865	5,752
Other long-term benefits	592	2,915
Post-employment benefits	2,520	1,392
TOTAL	8,977	10,059

Ten-Year Financial Review (Unaudited)

As at December 31 ($ millions)	**2021**	2020	2019	2018	2017	2016	2015	2014	2013	2012
CHANGES IN NET ASSETS										
Changes due to investment activities	**3,465**	1,901	2,217	145	1,742	1,037	1,311	1,818	1,615	1,237
Changes due to pension activities	**(598)**	(545)	(464)	(498)	(497)	(391)	(393)	(289)	(368)	(235)
INCREASE/(DECREASE) IN NET ASSETS	**2,867**	1,356	1,753	(353)	1,245	646	918	1,529	1,247	1,002
NET ASSETS										
Investments										
Cash and short-term investments	**5,330**	5,681	2,725	3,406	3,332	2,417	1,460	2,750	2,275	2,251
Government and corporate bonds and debentures	**2,883**	3,791	9,162	6,285	5,573	4,227	3,854	2,001	1,629	1,887
Real return bonds	**1,391**	1,355	1,059	866	430	438	468	446	577	1,177
Bank loan notes	**—**	—	—	—	—	168	156	145	90	—
Public equity	**1,887**	1,908	1,699	1,425	2,318	3,422	5,497	5,738	5,749	4,664
Pooled and hedge funds	**3,554**	2,936	4,866	5,863	4,573	2,597	959	732	456	126
Real estate	**3,981**	3,189	3,091	2,927	2,823	2,884	2,857	2,394	2,167	2,148
Private equity	**4,017**	3,178	2,797	2,288	1,920	1,595	1,691	1,284	794	608
Infrastructure	**3,364**	2,620	2,405	2,476	2,136	2,065	2,350	2,055	2,337	1,852
Investment-related assets	**799**	1,781	805	324	481	132	108	154	151	149
	27,206	26,439	28,609	25,860	23,586	19,945	19,400	17,699	16,225	14,862
Contributions receivable	**56**	52	49	52	48	53	51	52	58	56
Other assets	**2**	9	8	11	5	4	5	4	5	5
TOTAL ASSETS	**27,264**	26,500	28,666	25,923	23,639	20,002	19,456	17,755	16,288	14,923
Liabilities										
Accounts payable and accrued charges	**(26)**	(38)	(28)	(39)	(44)	(49)	(54)	(78)	(69)	(64)
Investment-related liabilities	**(1,325)**	(3,416)	(6,948)	(5,947)	(3,305)	(908)	(1,003)	(196)	(267)	(154)
TOTAL LIABILITIES	**(1,351)**	(3,454)	(6,976)	(5,986)	(3,349)	(957)	(1,057)	(274)	(336)	(218)
NET ASSETS AVAILABLE FOR BENEFITS	**25,913**	23,046	21,690	19,937	20,290	19,045	18,399	17,481	15,952	14,705
Pension obligations	**(21,365)**	(20,682)	(20,220)	(18,453)	(18,265)	(17,316)	(16,756)	(15,937)	(14,958)	(14,189)
SURPLUS	**4,548**	2,364	1,470	1,484	2,025	1,729	1,643	1,544	994	516

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This report summarizes certain provisions of the OPSEU Pension Plan. Please note that this report does not create any rights to benefits not provided for in the actual terms of the Plan. In the event of any conflict or omission, the legal requirements of the OPSEU Pension Plan will govern in all cases.

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