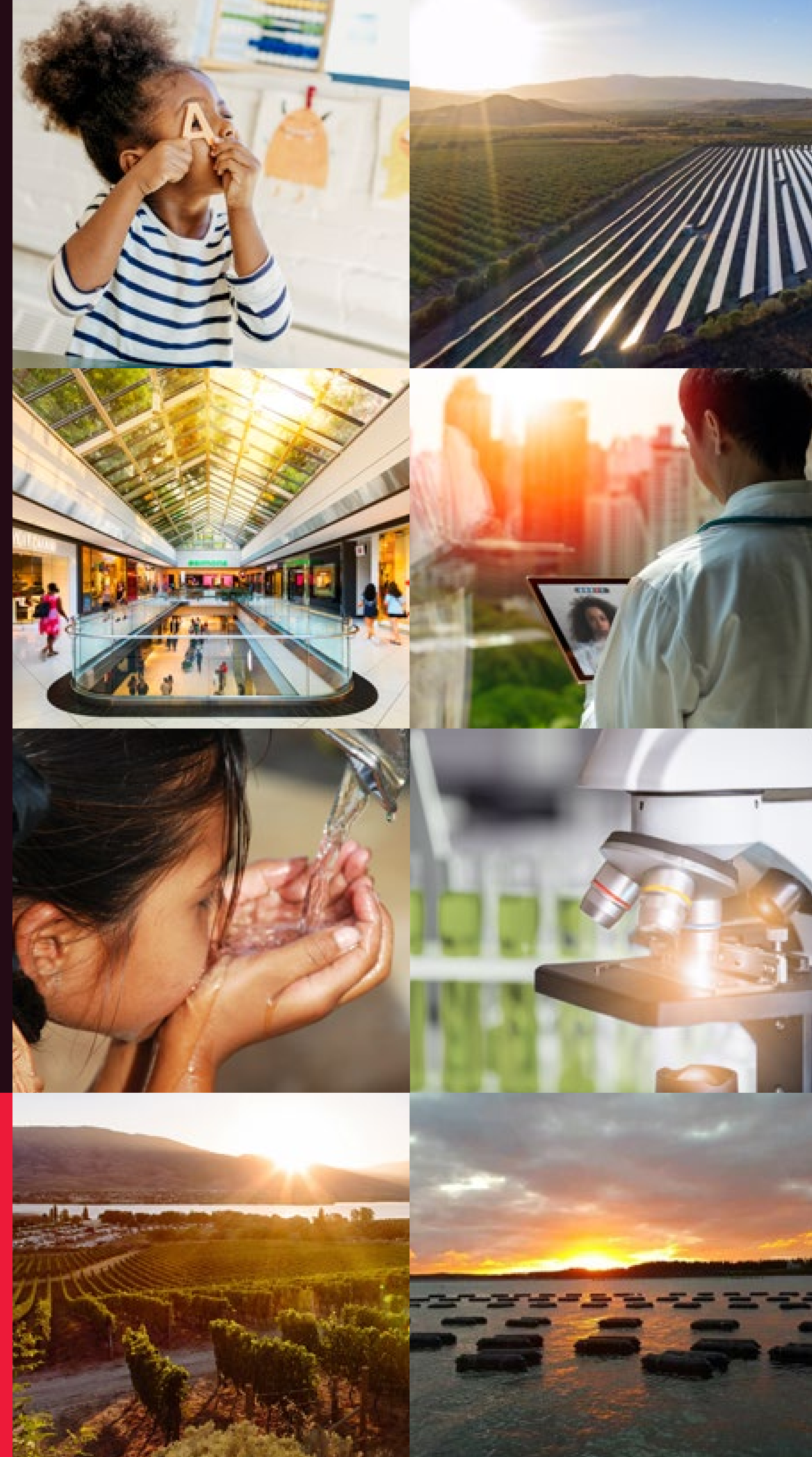
2021 Annual Report

Investing to make a mark



ONTARIO TEACHERS' PENSION PLAN

We are Ontario Teachers'

We deliver retirement security to

333,000

working members and pensioners.

We have

$241.6 billion

in net assets.

We invest in

50+ countries

through five locations around the world.

We are a global, independent organization

Sponsors' role

Ontario Teachers' Federation (OTF) and the Ontario government are the plan's joint sponsors. Together, OTF and the government ensure the plan remains appropriately funded, and decide:

- the contribution rate paid;
- member benefits, including inflation protection; and
- how to address any funding shortfall or surplus.

Board's role

Our board members are appointed by OTF and the Ontario government, and they oversee the management of Ontario Teachers'. Board members are required to:

- act independently of both the plan sponsors and management; and
- make decisions in the best interests of all plan beneficiaries.

Management's role

Management sets long-term investment and service strategies with three main responsibilities:

- investing assets in a manner to ensure the plan can pay present and future pensions;
- administering the plan and paying pension benefits to members and their survivors; and
- operating the business in line with the long-term enterprise strategies.

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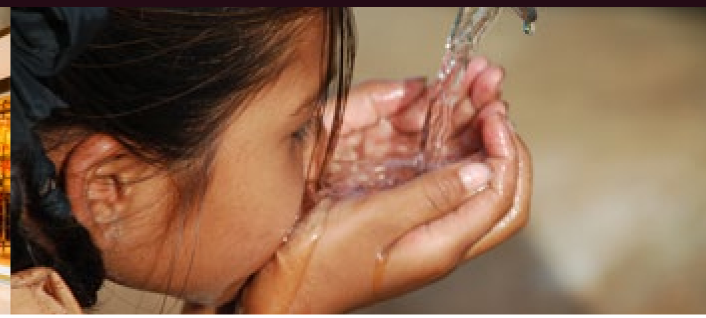
Investing to make a mark

Investing today, for a better tomorrow

At Ontario Teachers', we believe investing capital isn't enough. That's why we invest to shape a better future for the teachers we serve, the businesses we back and the world we live in.

Cadillac Fairview

We are working with Cadillac Fairview, our real estate subsidiary, to scale, innovate and make its portfolio more sustainable.



Chilean Water

In Chile, we are working with integrated water companies to help deliver clean drinking water to 6 million residents.

Asia Pacific Healthcare Group

Through APHG, we provide lab testing to 75% of New Zealand's population and deliver 40% of COVID-19 testing.

Kry

Through Kry, we are making quality online healthcare accessible to millions of Europeans.

Busy Bees

Through Busy Bees, we are providing quality childcare and a safe, nurturing environment for 55,000 children.

Atlantic Aqua Farms

Through Atlantic Aqua, we meet the growing demand for low-carbon protein while protecting ocean life.

Our bold and ambitious plan

Target

$300B

in net assets by 2030

Target

50%

of private investing activity outside of North America

Target

$70B+

in new private investments over the next five years

Our purpose:

Invest to shape a better future

Our mission:

Deliver outstanding service and retirement security for our members

Our vision:

Be a trailblazer: Bold. Ambitious. Global.

THREE CORE STRATEGIES GUIDE OUR EFFORTS

Culture

We're creating a culture of experimentation, empowerment and entrepreneurship.

Growth

We're focused on delivering long-term growth and performance to remain fully funded.

Impact

We believe we have a responsibility to create a lasting, positive impact on the world.

OUR SHARED VALUES

Inclusive **Performance-driven** **Curious** **Agile** **Courageous**

2021: An exceptional year for the plan

Fully funded

for the ninth year in a row

$241.6B

in net assets

11.1%

One-year total-fund net return

9.3%

10-year total-fund net return

A record

$5.5B

value added beyond our benchmark

Delivering retirement security for teachers

Served	Members rated us	
333,000	**8.7/10**	**93%**
working members and pensioners.	in the Quality Service Index.	of members were satisfied with our service.

Creating a greener future

Committed to reach

net zero by 2050

Set ambitious interim targets to reduce carbon emissions intensity by

45% by 2025 | **67% by 2030**

Over $5B

invested or committed to green and transition assets to help the world decarbonize

> “The plan continues to be on solid footing, and we remain focused on long-term growth.”

Report from the Chair

It is a privilege to serve Ontario's current and retired teachers.

Teachers are the stewards of Ontario's most precious resources: our children and their education. We have been inspired by the resiliency and strength they have demonstrated through what continue to be extraordinary and difficult times.

The plan is secure in a challenging time

Ontario Teachers' delivered a strong return this year, despite continued economic uncertainty and a challenging market environment. The nature of our pension plan requires steady, long-term returns so that members can rely on stability in benefits and contribution rates now and in the future. The plan continues to be on solid footing – fully funded for the ninth year in a row – and we remain focused on long-term growth.

We are navigating a rapidly changing and uncertain economic environment. Macro forces that have far-reaching impacts on investments are top of mind for the board. Issues such as inflation and the challenges it presents to the plan, global economic instability brought about by the pandemic, a rapidly changing geopolitical landscape and increasing climate concerns dominated our boardroom discussions this year. We remain laser focused on big picture trends and issues, while setting a proactive, long-term focus on the post-pandemic horizon.

At the end of 2021, for the first time in almost two years, the board held in-person committee meetings. We were socially distanced in a large makeshift boardroom, masked, vaccinated and sanitized. It was a bit unusual, somewhat surreal, but overall a welcomed step towards pre-pandemic normalcy.

An active year for deals

2021 proved to be an incredibly busy year for our investment teams and the board's investment committee, mirroring the frenzied activity in private markets seen globally. In line with our strategic goals to diversify our portfolio and expand our global footprint, the organization made numerous high-quality international investments. As Ontario Teachers' continues to increase investment activities internationally in the near term, we can expect an increasingly diversified portfolio, strengthened relationships and growing awareness of our brand globally.

As stewards of the plan's sustainability over generations, we put climate change at the top of the board agenda. In 2021, with the board's support, the organization announced new measurable goals to reach net-zero greenhouse gas emissions by 2050, as well as interim targets to keep our efforts on track. These industry-leading targets are ambitious by design and will take consistent effort in the years to come.

Strength in our team

The board welcomed Monika Federau, who joined as a board member in April 2021. Monika brings a wealth of executive experience and expertise in financial and consumer services from her time at Intact Financial Corporation. Her appointment marks the first time in our board's history where women are in the majority.

I want to recognize the people at Ontario Teachers' who, despite difficult circumstances, showed exceptional determination to deliver strong results. Our investment teams successfully managed and supported complex transactions with limited travel, site visits, and in-person meetings with partners, advisors and management teams, while our Member Services team continued to provide excellent service to members.

The board has full confidence that Ontario Teachers' is positioned for continued success under Jo Taylor and his executive team. We are convinced that their leadership will enable us to deliver on our strategic goals and continue positioning the organization for growth.

As a board, we are committed to upholding the highest standards of good governance and fulfilling our responsibilities and obligations to protect the retirement security of the plan's members. The board remains steadfast in this commitment and will continue to be actively involved in guiding and supporting the plan as it navigates the complexities of today, tomorrow and the years ahead. I want to thank my fellow board members for their perseverance and wisdom during this time.

Steve McGirr
Chair

Teachers are the stewards of Ontario's most precious resources:

our children and their education.

> “We again outpaced our benchmark, achieving a total-fund net return of 11.1% in 2021, and are fully funded for the ninth straight year.”

Report from the CEO

In 2021, we delivered strong results for our members despite the challenges brought about by a second year of a global pandemic. We had excellent investment performance, maintaining our fully funded status, and delivered a high level of service for our members – all while making meaningful progress on our new multi-year strategy. I am incredibly proud of our team and what was accomplished.

Strong performance

We achieved a total-fund net return of 11.1% for the year, far exceeding the annual rate of return that is required to keep the plan sustainable over the long term. This builds on consistent, stable returns over the longer term, including 8.4% over five years and 9.3% over 10. We secured strong relative performance, exceeding our benchmark by 2.3%. Our results over one-, five- and 10-year time frames have outpaced our benchmark, demonstrating genuine value added for members.

We ended 2021 fully funded for the ninth straight year. Maintaining fully funded status is a critical measure of the plan's long-term financial health and sustainability. Our preliminary funding surplus as at January 1, 2022 totaled $17.2 billion, and our funding ratio equaled 107%.

We also delivered our goal of service excellence for our members. We secured a strong Quality Service Index score of 8.7/10, and 93% of our members were satisfied with the service that they received.

Ambitious global growth

Last year we introduced a new strategy, setting out our global ambition for the next five years. Central to that plan is the goal to reach $300 billion in net assets by 2030. We are well on our way to achieving it with $241.6 billion of net assets at the end of 2021.

Last year was one of the busiest years for our global investment teams. We made almost 50 private investments on five continents and made some adjustments to our investment strategy. For instance, we significantly increased investments in core infrastructure, inflation sensitive assets and disruptive technology through our Teachers' Innovation Platform. Some examples include Caruna, Finland's biggest electricity distributor; the National Highways Infra Trust, owner and operator of toll roads in India; and CD Finance, a microfinancing business serving rural farmers in China. We made bigger and bolder private equity investments by focusing on lead or co-lead deals in companies such as Mitratech, a leading provider of legal and compliance software. We also scaled our credit asset class and started to expand this team internationally.

To deliver on our plans, we need to attract and retain high-quality global talent. We brought in numerous senior leaders to the organization, while also promoting high-performing talent. For the executive team this included Tim Deacon (Chief Financial Officer) and Kathryn Fric (Chief Risk Officer) joining during the year, while Sharon Chilcott was promoted to be my Chief of Staff.

Investing to make a mark

I believe we have a responsibility to build stronger businesses that shape a better world. We have a clear legacy as a leader in good governance and plan to build on this strength and establish the fund as a leader in climate and social impact.

Climate change will be the defining issue of our generation and we intend to play a meaningful role in the decarbonization of the global economy. In 2021, we committed to reach net-zero greenhouse gas emissions by 2050 and set ambitious, industry-leading targets for near- and medium-term emissions (for 2025 and 2030). The carbon footprint of our portfolio shows that we are making good progress and have already reduced emissions intensity by 32% compared to our 2019 baseline. We are putting significant effort into growing our green investment portfolio while working closely with our portfolio companies to develop plans to decarbonize their own activities.

Just as important is equity. We are fostering a more diverse, equitable and inclusive workplace, and we are influencing our partners, peers and portfolio companies to do the same. With a 44% female workforce and 46% of our employees identifying as Black, Indigenous and People of Colour (BIPOC), we have already made good progress. That said, we do need to keep making progress on this important objective. At the same time, we are looking for investments that create a more equitable future including businesses such as ApplyBoard, which connects students to global education opportunities, and Kry, a digital healthcare provider that offers high-quality online healthcare.

Optimistic about the future

In a world with so much uncertainty, I remain optimistic about our future. At our core, we are a growth organization, with a clear strategy to deliver our future. I would like to thank the entire Ontario Teachers' team for their continued commitment and for delivering these results to preserve the retirement security for teachers in Ontario.

Jo Taylor
President and CEO

We made bigger, bolder investments as we work towards our goal of reaching

$300B

in net assets by 2030.

Creating a more equitable future starts with us

We believe supporting diversity, equity and inclusion (DE&I) is crucial to creating better businesses and a better world.

DE&I matters deeply, and we're working to foster a truly diverse, equitable and inclusive workplace, and to influence our partners, peers and portfolio companies to do the same. Our belief is that taking an active role in DE&I improves decision making, enables innovation, supports a dynamic and engaging work environment, and ultimately leads to stronger business performance – all of which are essential aspects of delivering on our pension promise.

While we have made good progress on DE&I, we are committed to developing strategies across regions, divisions and levels to ensure diverse representation on our teams.

We committed to have at least 30% female representation across all board seats we control among our 100-plus portfolio companies. We reached that milestone in 2021, a full year earlier than targeted.

46%

of our employees identify as Black, Indigenous and People of Colour (BIPOC)

Our diversity, equity and inclusion approach

Diversity

We are committed to attracting and drawing strength from a diversity of backgrounds, focusing on gender and beyond.

Female representation at Ontario Teachers' continues to be above the industry average:

55%	50%	44%
Board	Executive team	All levels

Equity

We are committed to equity in our processes and programs to ensure fair outcomes for every individual.

Partnerships with leading organizations including BlackNorth Initiative, 30% Club, Catalyst and the Investor Leadership Network help us implement best practices that support a diverse and inclusive environment.

Inclusion

We are committed to building an inclusive workplace where everyone feels respected, accepted and empowered.

Central to our approach are our Employee Resource Groups (ERGs). They hosted over 25 innovative events to support education, awareness and allyship, and to build community. These included a conversation on Anti-Asian discrimination and an incredible Pride Month where we celebrated our peoples' coming out stories.

New partners in 2021:

ONYX

AWB

PRIDE AT WORK CANADA

FIERTÉ AU TRAVAIL CANADA

#10000 BLACK INTERNS

Management's Discussion & Analysis

ONTARIO TEACHERS' PENSION PLAN

Plan funding report

A look at the health of the plan

This section provides information on recent funding valuations, assumptions, and related demographic and economic considerations that play a role in plan funding discussions. A funding valuation is an assessment of the financial health of a pension plan on a defined date. It determines whether the plan's projected assets are sufficient to pay all promised pensions in the future.

Funding highlights

$17.2 billion
Preliminary surplus

107%
Funding ratio

Pension funding sources since 1990

79.9% Net investment income
10.5%[1] Government/designated employer contributions
9.6% Member contributions

1 The additional 0.9% includes original plan deficit funding and contributions related to conditional inflation protection.

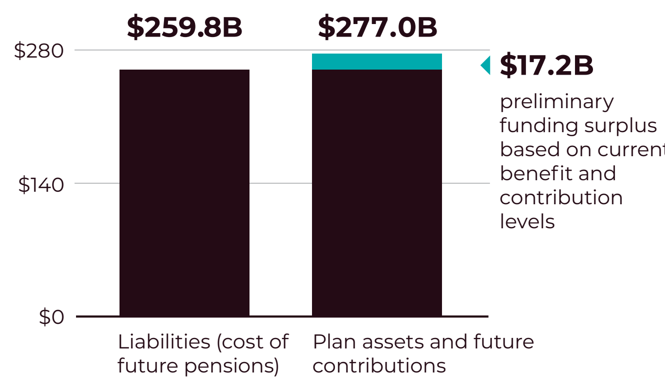
Funding status as at January 1, 2022

As at January 1, 2022, the plan had a preliminary surplus of $17.2 billion. A preliminary funding valuation is one that is not finalized or filed with the regulators. The January 1, 2022 valuation is not required to be filed; however, the sponsors may choose to do so, in which case the report would be filed prior to the end of September 2022.

The next required funding valuation filing is as at January 1, 2024.

Details are provided in the Funding Valuation Summary table on the next page.

FUNDING VALUATION
As at January 1, 2022



January 1, 2021 filed valuation

In 2021, OTF and the Ontario government decided to file the funding valuation with the regulators. The $8.5 billion surplus was classified as a contingency reserve to help facilitate stability in members' contributions and benefits in case a future valuation shows a decline in assets and/or an increase in pension costs. Classifying the surplus as a contingency reserve can be thought of as a way of "saving for a rainy day."

FUNDING VALUATION SUMMARY

As at January 1 (Canadian $ billions)

	2022 (prelim.)	2021 (filed)
Net assets available for benefits	$241.6	$221.2
Smoothing adjustment[1]	(12.0)	(8.6)
Value of assets	**$229.6**	**$212.6**
Future basic contributions	47.4	46.1
Total assets	**$277.0**	**$258.7**
Liabilities (cost of future pensions)	(259.8)	(250.2)
Surplus/contingency reserve[2]	**$17.2**	**$8.5**
Assumptions (percent)		
Inflation rate	2.00	2.00
Real discount rate[3]	2.45	2.45
Discount rate	4.50	4.50

1 The plan's funding valuations smooth asset gains and losses over a three-year period, with one-third of gains and losses being recognized immediately and the remaining two-thirds being recognized in equal installments over the following two years.

2 If the sponsors choose to file the valuation as at January 1, 2022, they will decide how to allocate the surplus, including whether or not to classify the surplus as a contingency reserve. The January 1, 2021 surplus was classified as a contingency reserve.

3 Real rate shown as the geometric difference between the discount rate and the inflation rate.

Discount rate

A funding valuation uses several actuarial assumptions to project the value of future pension plan liabilities and contributions. Assumptions, using professional judgment, are made about future inflation, salary increases, retirement ages, life expectancy and other variables.

One of the most important assumptions is the discount rate, which plays a key role in assessing whether the pension plan has enough assets to meet its future pension obligations. The discount rate is used to calculate the present value of future pension benefits that the plan expects to pay to members as well as contributions it anticipates receiving. Plan liabilities are sensitive to changes in the discount rate, with a lower rate resulting in increased liabilities. The discount rate is a long-term assumption and is derived from the expected rate of return on investments. It takes into consideration provisions for plan maturity and risk tolerance as well as major adverse events, such as the 2008 financial crisis.

We continue to live in an uncertain and unpredictable investment and geopolitical environment with inflation levels the highest we've seen in Canada since the 1990s. Notwithstanding current challenges, the long-term outlook remains stable. As a result, the board decided to hold the real discount rate steady at 2.45% after having lowered it from 2.6% for the January 1, 2021 valuation.

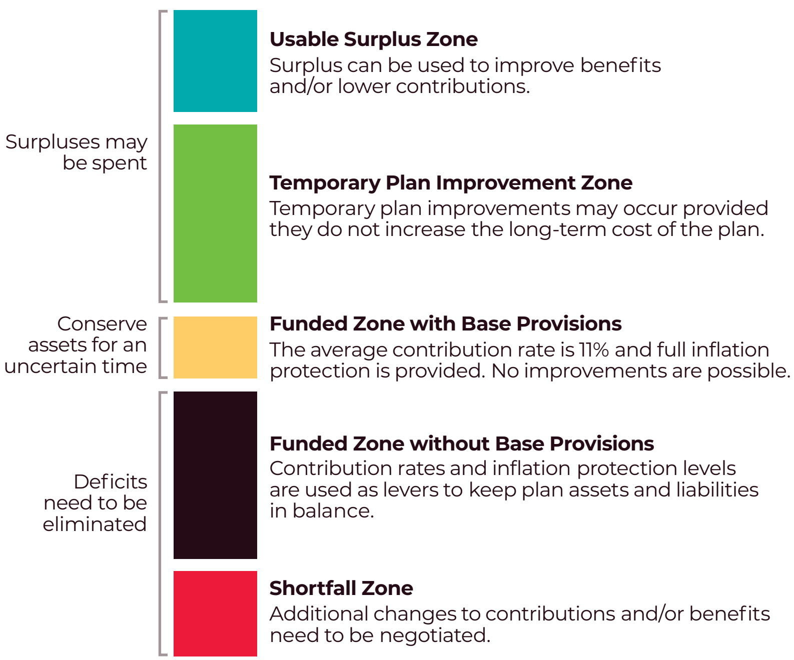
Funding Management Policy (FMP)

The FMP is an important document that provides the sponsors with a guidance framework for decision making when there is a funding surplus or shortfall. A key component in the FMP is the concept of funding zones, each defined by a range. The funding zones provide a point of reference for whether action is required by the sponsors and, if so, guidance is provided on how to use any surplus funds or resolve any shortfall. Specifically, it is used to answer the question – when is it possible or necessary to increase or decrease benefits, lower or raise contributions, or simply conserve assets for an uncertain time?

The FMP outlines preferred mechanisms associated with its various funding zones, and it is ultimately the sponsors' responsibility to decide what actions to take.

The FMP has important implications from an investment perspective, adding clarity to our strategic asset allocation decisions with a key focus being on the plan's ability to absorb risk. In the absence of the FMP, this level of clarity would be difficult to achieve.

FUNDING MANAGEMENT POLICY ZONES



Intergenerational equity

The design and implementation of an innovative funding risk mitigant, conditional inflation protection (CIP), adds flexibility to the plan and promotes intergenerational equity. It recognizes and virtually neutralizes the impact of the changing ratio of active to retired plan members on the plan's funded status.

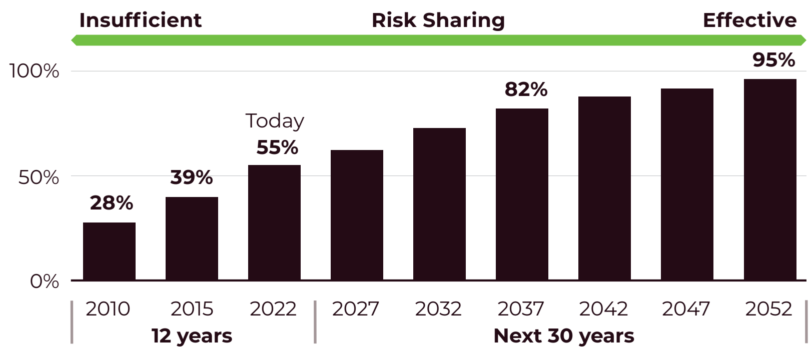
The plan sponsors prudently and proactively introduced CIP in 2008, recognizing that if significant investment losses or a funding shortfall occurred, an increase in contribution rates alone was unlikely to be sufficient and increases would be borne solely by active plan members.

CIP allows flexibility in the amount of inflation increase provided to pensioners for benefits earned after 2009. The level of increase is a sponsor decision and is conditional based on the funded status of the plan. Pension credit that members earned before 2010 remains fully indexed to inflation. For more details on how CIP works, please view note 4b to the consolidated financial statements.

While promoting intergenerational equity, CIP is also an effective lever for mitigating funding risks. Over time, as the proportion of service that members have earned after 2009 continues to grow, the risk of significant investment losses or a funding shortfall is distributed more broadly among the membership – that is, risk is shared by more retired members.

The graphic on this page illustrates the increasing impact of CIP risk sharing over time. Over the next 15 years, the percentage of the plan's total liability that is subject to CIP will increase from 55% to 82%.

PERCENTAGE OF TOTAL LIABILITY SUBJECT TO CIP ON POST-2009 SERVICE



Stress resistant

As CIP applies to more pension beneficiaries, it will be able to absorb a greater loss, making it a more effective risk management tool.

	1990	2021	2031
Increase in contributions required for 10% loss in assets	1.9%	5.5%	5.7%
Decrease in level of CIP required for 10% loss in assets	n/a	28%	19%
Asset loss capable of being absorbed by fully invoked CIP (Canadian $ billions)	n/a	$51	$104

As an example, a 10% asset loss in 2031 could be absorbed by lowering inflation protection increases for benefits earned after 2009 from 100% to 81%. As another example, in the most extreme case, if CIP levels were lowered to 50% on benefits earned during 2010–2013 and 0% on benefits earned after 2013, this funding lever would be powerful enough to absorb a 2031 asset loss of $104 billion.

MEMBER PROFILE

182,000
Working members

151,000
Pensioners

333,000
Total number of working members and pensioners

6,000+
New members in 2021

44
Average age of working member

5,000+
New retirees in 2021

73
Average age of retirees

1.2 to 1
Ratio of working to retired members

32
Average years retirees expected to collect a pension

59
Average retirement age

26
Typical years of credit at retirement

4–109
Age range of pensioners

146
Retired members over age 100

$49,400
Average starting pension

31
Pensions in pay for more than 50 years

Delivering outstanding service to our members

What does outstanding service mean at Ontario Teachers'? It means producing simple, personal and insightful member experiences. To get there, we make sure our efforts to support our members shape everything we do.

Our consistently high service quality scores speak to the strategy we rely on to serve our members. We start by listening and understanding their needs at every stage of their pension journey. With these insights, we evolve to create the seamless omnichannel service experiences they want and need.

Ultimately, delivering outstanding service means providing superior member experiences despite the circumstances. In 2021, investing in the right people, strategies and technologies was key in serving our members during another challenging year.

Proudly delivering high-quality service

Our commitment to service excellence was clearly rewarded by our members for another year. Despite nearly two years of disruption and significant pandemic-related challenges, we received a strong Quality Service Index (QSI) score (8.7/10) that is consistent with previous years. The percentage of our members satisfied with our service in 2021 (93%) was also consistent with high scores over the last few years.

QSI is our primary performance measurement that evaluates the quality of our member experience, service and communications. It involves an independent survey of a sample of members throughout the year.

QUALITY SERVICE INDEX

	2021	2020	2019
Total QSI (on a scale of 0 to 10)	**8.7**	8.8	8.8
Percentage satisfied	**93**	94	94

We are able to deliver outstanding service year over year by having a team of dedicated and adaptable service experts who demonstrate their commitment to our members every day.

Pension Obligation and Performance Index

As administrators of one of Canada's largest payrolls, with pension and benefit payments of $6.9 billion in 2021, we pride ourselves on providing pensioners with timely, reliable payments. Our Pension Obligation and Performance Index result for 2021 was 98.3. This means that approximately 98% of our pension payments were made accurately and on time.

Highlights

In 2021, we enhanced our online experience with new digital capabilities and accelerated the efforts already underway to meet shifting demands, improve business operations and build for the future.

Our omnichannel strategy continues to play a vital role in helping us deliver the seamless and personalized service our members expect from us. Listening, analyzing and acting on the insights our members provide helps us create experiences that serve our members better across all channels. With the right strategy and technology in place, our employees can be more efficient and engaged, which ultimately leads to even better service. We'll continue advancing our omnichannel strategy and digital-first capabilities to improve member experiences next year and beyond.

We redesigned our website with the goal of making it easier and faster for members to find what they're looking for, in addition to empowering members to make timely and informed decisions with confidence. The new site is integral to advancing our omnichannel strategy and digital-first service model. After members told us that navigating our website was complex and that they lacked self-service options, we made significant improvements to offer a simpler and more intuitive online experience. We'll continue to make improvements as our members' needs change and technology evolves.

We digitized 50% of all paper records, which allows us to securely store and access files while decreasing our environmental footprint, minimizing operating costs and accommodating our hybrid working model. We'll digitize the remaining 50% to achieve our goal of having paperless records by 2023.

We expanded virtual retirement workshops to feature a new topic, "Being a member – your life as a teacher" and added French presentations. By making these presentations digital, we reached more members across the province and nearly doubled the number of attendees this year compared to in-person presentations in 2019.

Our employer satisfaction rate was 95% in 2021, thanks to effective collaboration and teamwork, and despite pandemic-related challenges.

"The site was very informative, and I'll probably visit it more than I ever have. Accessing my personal information was much simpler, and it was well organized for me to see the overall picture for 2021."

GRACE SMITH, RETIRED MEMBER

"'Your moment – getting you ready for retirement' was the best virtual presentation I have attended since last March, and I have been to quite a few! Excellent work!"

JEANNE CLARK, WORKING MEMBER

"We get a quick response with detailed instructions on how to fix issues. Training provided is very useful, and videos/references are also great tools for learning and understanding proper reporting practices."

MEGHAN COX, MANAGER OF FINANCIAL SERVICES,
RAINY RIVER DISTRICT SCHOOL BOARD

Effective risk management

Operating strategically with enterprise risk management

Ontario Teachers' exists to provide lifelong pension benefits to its members. To deliver on our pension promise, we must successfully manage risks and be adequately compensated for taking them.

Risk management is an important capability at Ontario Teachers' and plays a key role in all our activities. The board, with the support of the executive team, helps establish a strong risk culture and sets the appetite for risk, including how much risk the organization is willing to accept in order to achieve our strategic objectives. Risk management is a responsibility shared by all our employees.

Through enterprise risk management (ERM), our team understands important enterprise risks and how they are being managed against the established board risk appetite. Given the value and forward-looking, longer-term insight it provides, ERM has been further integrated into our strategic and operational planning decisions.

ERM provides management with the tools to:

- establish a consistent framework to better understand and assess the broad range of enterprise risks we face, while also considering opportunities;
- manage rapid changes to our business environment, including identifying emerging risks; and
- create a competitive advantage through a strong and agile risk-conscious culture and create value over a longer time horizon.

Ontario Teachers' enterprise risk categories

Governance risk

Associated with the structure and functioning of Ontario Teachers', including the policies, laws and regulations affecting the plan.

Strategic risk

Associated with decision making for the long-term strategic direction of Ontario Teachers'.

Investment risk

Risk associated with effective management of the plan's assets, including market, credit, liquidity and geopolitical risk.

Operational risk

The risk of direct or indirect loss resulting from inadequate or failed internal processes, people or systems, or from external events.

Reputational risk

The risk associated with a change in perception of Ontario Teachers' or its public image.

Examples of how we handle key enterprise risks

Our continued focus on the following enterprise risk areas during 2021 supports our long-term success.

Employee wellness

We believe that having a strong culture that values building mental, emotional and physical health is important. Not only are healthier employees happier at work, but their overall well-being enhances our ability to deliver on our strategy. As such, building a culture that helps employees feel healthy and supported is a top priority.

Destigmatizing mental health and taking a holistic approach to work–life balance are central ways in which we seek to improve overall employee health. A broad range of wellness resources are available to employees, including regular webcasts with medical practitioners, 24/7 virtual healthcare and virtual wellness sessions on topics such as mental health, fitness and nutrition. In addition, Ontario Teachers' provided employees several wellness days to focus on mental, physical and emotional health.

Geopolitical risk

As a global investor, we carefully monitor and seek to mitigate the potential impacts of country-wide, regional and global economic, political and social shifts on our activities. In 2021, the Global Investment Strategy department was created to enhance our global competitive advantage and navigate an increasingly complex environment. To help drive total-fund strategic adaptation and response, the Global Investment Strategy department seeks to develop and build conviction on strategic responses to emerging global themes that cross asset classes and regions. It also identifies and tracks salient global geopolitical themes which shape the overall investment and business environment.

Cybersecurity risk

Our dedicated team of cybersecurity professionals manages a comprehensive program designed to protect our organization against global cybersecurity threats with around-the-clock monitoring, alerting and investigation of potentially suspicious security events. In 2021, this team has continued to enhance our cybersecurity controls and program to respond to the evolving threat landscape.

INNOVATION HELPS US PREPARE FOR UNKNOWN RISKS

Our real-time, interactive scenario analysis platform analyzes complex market and portfolio data every day, allowing us to detect risks. It also supports investment "fire drills" that simulate stress periods to prepare us for real-life situations that could affect our operations or portfolio.

> "Our efforts to balance and diversify our portfolio proved timely, and position us well to weather the impacts of the current inflationary environment."

Q&A with the CIO Ziad Hindo

How did Ontario Teachers' portfolio perform this year?

Our portfolio had very strong performance in 2021. Despite continued challenges associated with the pandemic and a volatile investment landscape, we achieved a one-year total-fund net return of 11.1%. We saw solid results across private assets, particularly in private equity, inflation sensitive assets and the Teachers' Innovation Platform.

On a relative basis, our returns outpaced our benchmark by 2.3%. In dollar terms, our investment activities contributed an additional $5.5 billion to the fund than what we would have expected through passive management. This is an outstanding result for our members.

Why have your returns against your benchmark fluctuated in recent years?

Exceeding our benchmarks is a key goal for our team, but as an active manager we recognize that we cannot do this every year. What is most important is that we exceed our benchmark over a longer-term horizon, and here our relative returns have been strong.

Since 1990 when the plan was established, we have exceeded our benchmark by an average of 1.7% per year. Over the 30+ years that the fund's assets have been actively managed an additional $36.7 billion (after all investment costs) has been added to the fund as a result of our active investment decisions.

What does the current high inflation environment mean for pensions?

In 2021, the global economy regained most of the ground lost during the pandemic-induced economic shock. The rebound in economic activity has been broadly seen across major economies and industries, supported by favourable conditions such as record monetary and fiscal stimulus, corporate capital expenditure activity and positive credit conditions. While this situation has helped to avert an economic collapse, it has also led to inflation at a rate much higher than we have seen in recent years, driven by factors such as global supply chain bottlenecks, widespread labour shortages and rising energy prices.

Inflation represents a significant risk to the fund, given its adverse impact on both the asset and liability side of the balance sheet. A higher inflationary environment is associated with increased uncertainty around economic growth and interest rates, as well as having a negative effect on portfolio performance. Inflation that is higher than assumed in our valuation also increases the cost of future pension payments.

Our team proactively took action to adjust the asset mix to adapt to the changing inflationary environment. We did this by increasing our allocation to inflation sensitive assets such as natural resources and commodities, and to real assets like infrastructure and real estate. These types of assets have features that partially offset the impact of inflation. Our efforts to balance and diversify our portfolio proved timely, and position us well to weather the impacts of the current inflationary environment.

What are you doing to demonstrate leadership on climate change?

Climate change is an urgent issue faced by all investors. We have a multi-faceted climate strategy that is rooted in driving real-world emission reductions. Our strategy reflects our commitment to be accountable and to act immediately to reduce the environmental impact of our portfolio.

Over the last decade, we have developed substantial climate-related expertise. We have invested significantly in companies that enable the net-zero transition, reduce emissions and build a sustainable economy (“green assets”) and decarbonize high-emission assets (“transition assets”), and we worked to make our portfolio companies greener and more resilient. Last year we invested or committed over $5 billion in additional green and transition assets.

In 2021, we committed to achieving net-zero greenhouse gas emissions by 2050. We also set industry-leading interim targets that will decrease our portfolio emissions intensity by 45% by 2025 and two-thirds by 2030. Since 2019, our baseline year, we have decreased our portfolio carbon emissions intensity by 32%.

Moving forward, we’re increasing our focus on investing in green and transition assets to help decarbonize the broader economy. Our acquisition of a 50% stake in a portfolio of high-quality renewable energy assets in the U.S. from NextEra Energy is an example of this. We are also setting portfolio companies on a clear path to implement net-zero plans and meaningfully reduce their own emissions. We believe that these commitments will have positive long-term impacts on our portfolio, economies and communities. Read more on our climate action on page 32.

How does the fund benefit from investments in disruptive technology?

Teachers’ Innovation Platform (TIP) makes late-stage and growth equity investments in technology companies that are shaping future markets. Through TIP, the fund partners with mission-driven entrepreneurs and helps their companies to scale in a thoughtful and sustainable way.

TIP has made great progress since first being established in 2019. We now have a team of more than 20 employees in Toronto, London, Hong Kong and Silicon Valley, a portfolio of 17 companies worldwide, and partnerships with leading global technology funds. The investment returns have been impressive, including 39% in 2021. Through TIP, we have also been able to access new insights that have helped us to become a bolder and more ambitious organization.

A look at our portfolio

Solid and stable returns

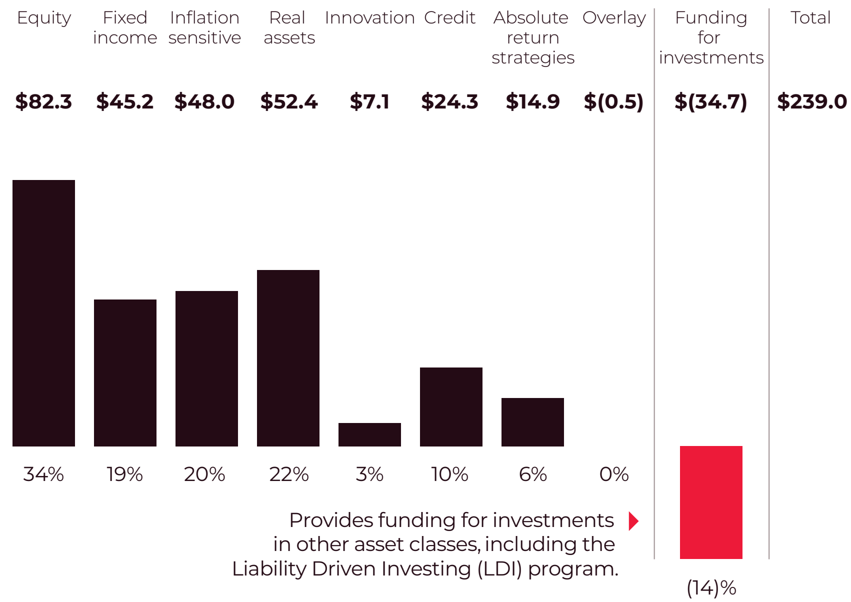
Ontario Teachers' investment program is tailored to generate strong risk-adjusted returns to pay members' pensions over generations, while also having a positive impact on the people, places and communities we touch. Since Ontario Teachers' inception in 1990, almost 80% of the plan's pension funding has come from investment returns, with the remainder coming from member and government/designated employer contributions.

Ontario Teachers' is an active global investor with investments in more than 50 countries. We are agile, innovative investors who harness our scale, network and in-house experts to help the companies we invest in grow and thrive. Our investment departments invest across seven different asset classes that provide diversification and volatility management and help us to focus on both total-fund net returns and generating value above our performance benchmarks.

Ontario Teachers' investment portfolio earned an 11.1% total-fund net return in 2021, compared to the fund's benchmark return of 8.8%.

NET INVESTMENTS[1]

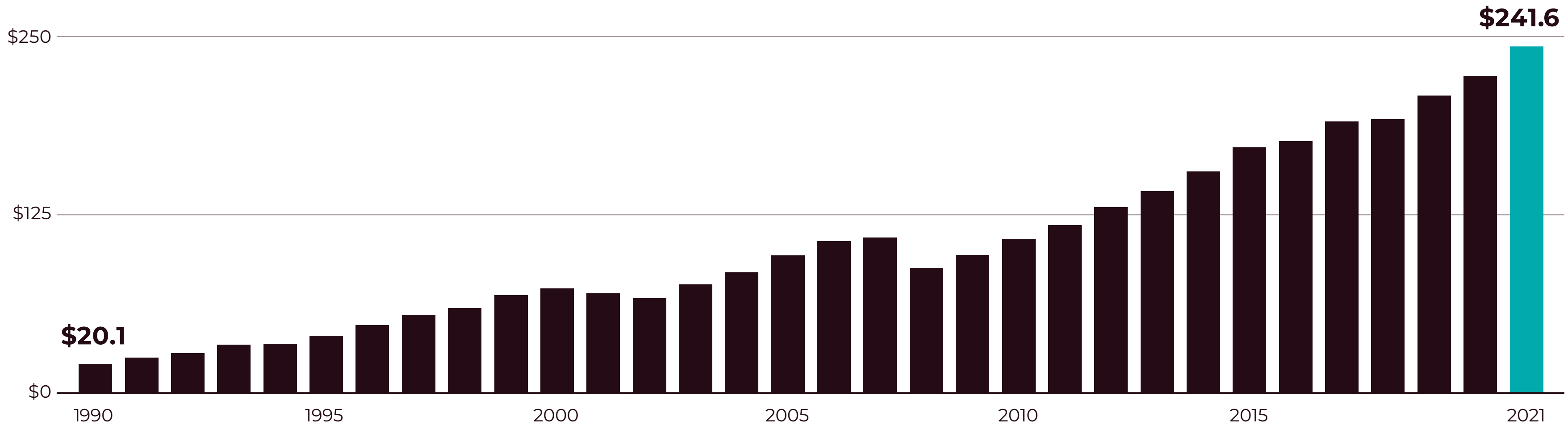
As at December 31, 2021 (Canadian $ billions)



1 Comprises investments less investment-related liabilities. Total Net Assets of $241.6 billion at December 31, 2021 (2020 – $221.2 billion) include Net investments and other net assets and liabilities of $2.6 billion (2020 – $3.3 billion).

NET ASSETS[1]

As at December 31 (Canadian $ billions)



1 Net assets include investment assets less investment liabilities (net investments), plus the receivables from the Province of Ontario, and other assets less other liabilities.

Ontario Teachers' 2021 results highlights

$241.6B
Net assets

11.1%
Total-fund net return

2.3%
Return above benchmark

9.3%
10-year total-fund net return per annum

$5.5B
Value added[2] beyond our benchmark

$24.7B
Net investment income

2 Value-add is after deducting management fees, transaction costs and administrative costs allocated to the Active programs (includes annual incentives but does not include long-term incentives).

Investment strategy

Our investment strategy considers our risk profile, our plan assets and our liabilities. Our long investment time horizon supports our primary goal of generating the returns required to fund our members' current and future pensions. We combine our expertise in bottom-up asset selection with a top-down approach to risk and portfolio construction.

Key objectives

Growth

- Maintain fully funded status of the plan
- Achieve stable total-fund returns
- Reach $300 billion in net assets by 2030
- Target 50% of our private investment activity outside of North America

Culture

- Be a truly diverse organization
- Operate as one global interconnected team across asset classes and geographies

Impact

- Achieve net-zero greenhouse gas emissions by 2050
- Help lead the decarbonization of the global economy by investing in green and transition assets
- Invest sustainably to create a more equitable future

Our competitive advantage

We are **agile, innovative investors** who bring deep in-house expertise and flexible, responsive teams to make fast, transparent decisions that deliver stable returns.

We have **extensive knowledge, deep and specialized expertise and networks** in our core sector, sub-sector and geographic focus areas.

We take a **total-fund approach** that harnesses the breadth and depth of our insights and networks across asset classes and regions to bring our full fund to bear.

We are **progressive thinkers** with a focus on targeted impact areas. We seek long-term sustainable growth through investments that drive positive outcomes.

Proactive risk management

Proactive risk management underpins our investment strategies, including our asset-mix selection, active management of our portfolio to add value, diversification and balance, as well as our approach to liquidity management including our investment funding strategy.

Ontario Teachers' needs to take an appropriate amount of risk to achieve the required rate of return to meet our liabilities. Ontario Teachers' actively manages plan funding and investment risk together. Our Risk department, which reports to the CEO, provides guidance on appropriate risk levels and an overall total risk budget that allows the plan to meet its investment objectives. The Total Fund Management department allocates this risk budget across investment teams and regions based on where they see the best risk-adjusted opportunities.

The Investment Committee of the board reviews and approves the risk budget annually, monitors overall investment risk exposure, and reviews and approves risk management policies that affect the total portfolio, as well as new investments that result in significant risk exposure.

Management oversees investment and risk decisions through various committees. The CEO-Led Risk Committee (Investments) oversees the alignment of the investment program with the board's Enterprise Risk Appetite Statement and Ontario Teachers' mission, vision and values. Management's Investment Committees are composed of senior investment professionals who oversee investment, risk and oversight decisions across the investment portfolio.

Ontario Teachers' has continually advanced its risk culture with sophisticated tools and processes to support risk measurement and management on a coordinated basis throughout the organization, across all asset classes and departments, as well as within each portfolio.

Building a greener future

Addressing climate change is one of the biggest challenges of our time. In 2021, we, along with governments, businesses and other major investors, committed to achieving net-zero greenhouse gas emissions by 2050. We also went a step further, establishing bold interim targets to reduce the carbon intensity of our portfolio by 45% by 2025 and 67% by 2030, both compared to a 2019 baseline. Our industry-leading targets demonstrate the scale of the impact we want to have on this critical global issue.

We aspire to help lead the decarbonization of the broader global economy. Our efforts will include investing in green and transition assets, and supporting portfolio companies in reducing their emissions. We will also continue to allocate the proceeds of green bond issuances to green assets. In 2021, Ontario Teachers' Finance Trust (OTFT) issued a €500 million 30-year green bond.

Decreased our portfolio carbon emissions intensity by

32%

since 2019

Learn more about our portfolio carbon footprint on page 135.

Invested or committed

$5B

in green and transition assets

How we invest to make a mark

NextEra Energy

Viable low-carbon energy sources are essential for the transition to a low-carbon economy. In 2021, our Greenfield & Renewables team acquired a 50% stake in a portfolio of U.S.-based renewable assets from NextEra Energy, the world's largest generator of wind and solar energy and a leader in battery storage. These assets replace higher-carbon energy sources and fulfill the energy needs of a more sustainable future.

Fulcrum BioEnergy

Sustainable fuels are a major focus area for our newly established Sustainability & Energy Transition team. The team's inaugural investment last year was in Fulcrum BioEnergy, a U.S.-based company that converts municipal garbage into renewable fuel that can replace traditional jet fuel, diesel and gasoline. Through its patented production process, Fulcrum is accelerating our shift away from fossil fuels while addressing the pressing needs of waste management across North America.

Capital Energy

Significant amounts of capital are required to finance the development of renewable energy generation capacity needed to facilitate the transition to a low-carbon economy. To help fill this need, our Credit team, alongside partner Incus Capital, provided a €140 million corporate loan to Capital Energy, the first 100% renewable vertically integrated electricity firm on the Iberian Peninsula. Capital Energy currently has a portfolio of wind and solar projects with a capacity of around 34 gigawatts.

Asset-mix selection

Recognizing that asset-mix selection is an important driver of long-term performance, we devote considerable attention to choosing our asset mix and the emphasis we place on each asset class and geography.

With board oversight, the management team manages the asset mix under our total-fund strategy. Management determines exposure to each asset class within ranges approved by the board.

Significant changes to the asset mix in 2021 include:

- Increased exposure to real assets from $44.9 billion to $52.3 billion, with the majority of this growth coming in the infrastructure portfolio, to gain further diversification and access to more reliable inflation-linked cash flows.
- Increased inflation sensitive asset class from $36.6 billion at the end of 2020 to $48.0 billion at the end of 2021, to help diversify and protect the portfolio from inflation shocks.
- Increased exposure to credit asset class from $18.0 billion to $24.3 billion, with a focus on high-yield and levered loans, which have higher return and risk than traditional investment grade credit, as well as providing exposure to various other factors.
- Increased allocation to private equity from $41.8 billion to $55.1 billion while decreasing the allocation to public equities from $42.4 billion to $27.2 billion.

As our investment departments overlap with several asset classes, we have provided a matrix illustrating their relationship followed by a chart showing our detailed asset mix.

MAPPING DEPARTMENTS TO ASSET CLASSES

INVESTING DEPARTMENTS Asset classes	Equities	Capital Markets	Infrastructure & Natural Resources	Real Estate	Teachers' Innovation Platform (TIP)
Equity	●	●	●		
Fixed income		●			
Inflation sensitive		●	●		
Real assets		●	●	●	
Innovation					●
Credit	●	●	●		
Absolute return strategies		●			

DETAILED ASSET MIX
As at December 31

	2021		2020	
	Effective Net Investments at Fair Value (Canadian $ billions)	**Asset Mix %**	Effective Net Investments at Fair Value (Canadian $ billions)	Asset Mix %
Equity				
Public equity	**$27.2**	**11%**	$42.4	19%
Private equity	**55.1**	**23**	41.8	19
	82.3	**34**	84.2	38
Fixed income				
Bonds	**33.3**	**14**	17.2	8
Real-rate products	**11.9**	**5**	17.4	8
	45.2	**19**	34.6	16
Inflation sensitive				
Commodities	**26.5**	**11**	17.7	8
Natural resources	**9.4**	**4**	7.4	4
Inflation hedge	**12.1**	**5**	11.5	5
	48.0	**20**	36.6	17
Real assets				
Real estate	**26.3**	**11**	25.2	12
Infrastructure	**26.1**	**11**	17.8	8
Real-rate products	**–**	**–**	1.9	1
	52.4	**22**	44.9	21
Innovation	**7.1**	**3**	3.5	2
Credit	**24.3**	**10**	18.0	8
Absolute return strategies	**14.9**	**6**	13.6	6
Overlay[1]	**(0.5)**	**–**	0.8	–
Funding for investments[2]	**(34.7)**	**(14)**	(18.3)	(8)
Net investments	**$239.0**	**100%**	$217.9	100%

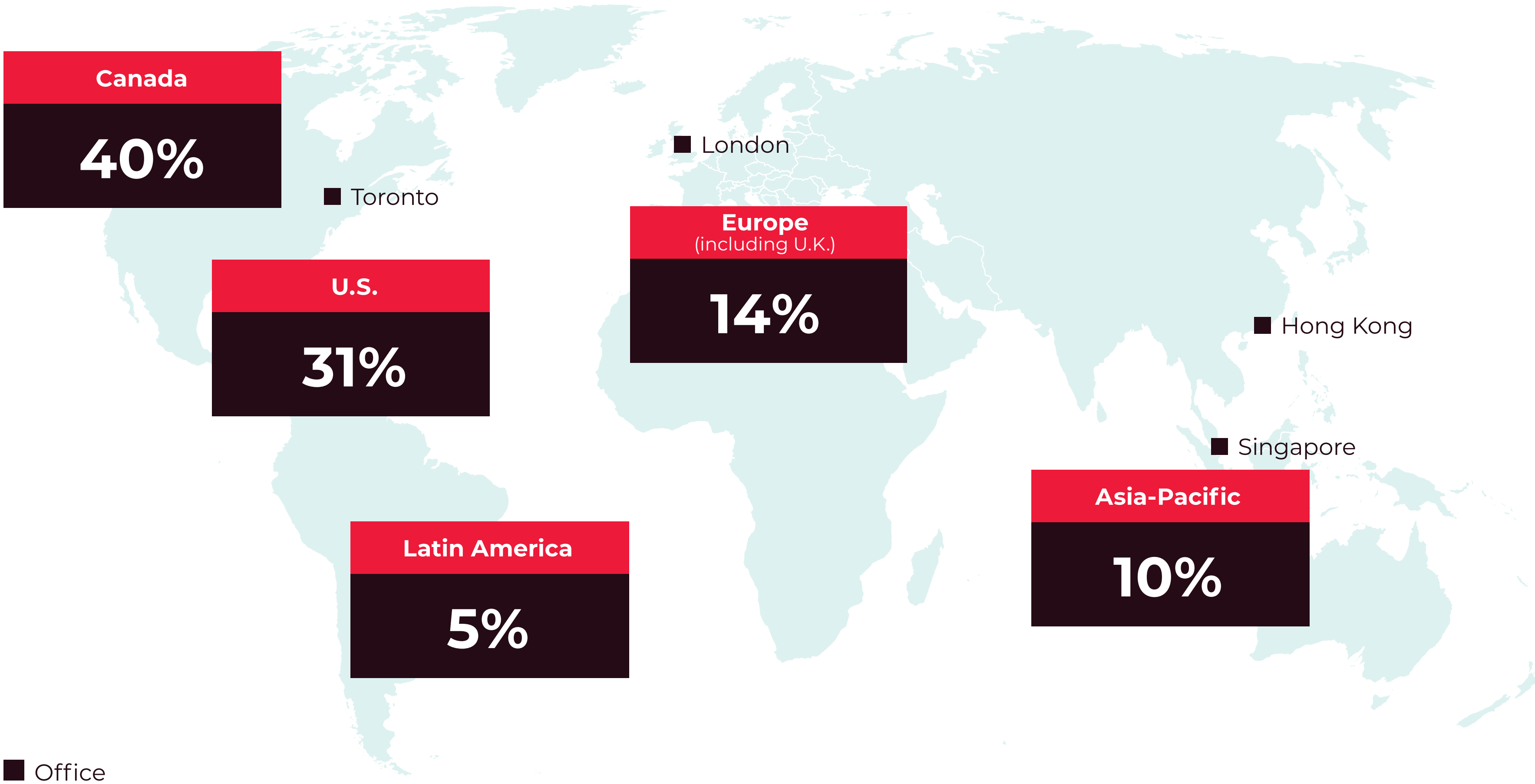
1 Includes strategies that manage the foreign exchange risk for the total fund.

2 Includes term debt, bond repurchase agreements, implied funding from derivatives, unsecured funding, and liquidity reserves.

Diversification

Total-fund diversification, through effective portfolio construction, is fundamental to our success. Diversification allows us to spread risk across key factors such as time periods, asset classes, geography and economic outcomes, which reduces volatility and the adverse impact of any one investment loss on the fund overall.

GEOGRAPHIC EXPOSURE[1]
As at December 31, 2021



1 Based on country of primary listing, location of head office or location of property.

Currency

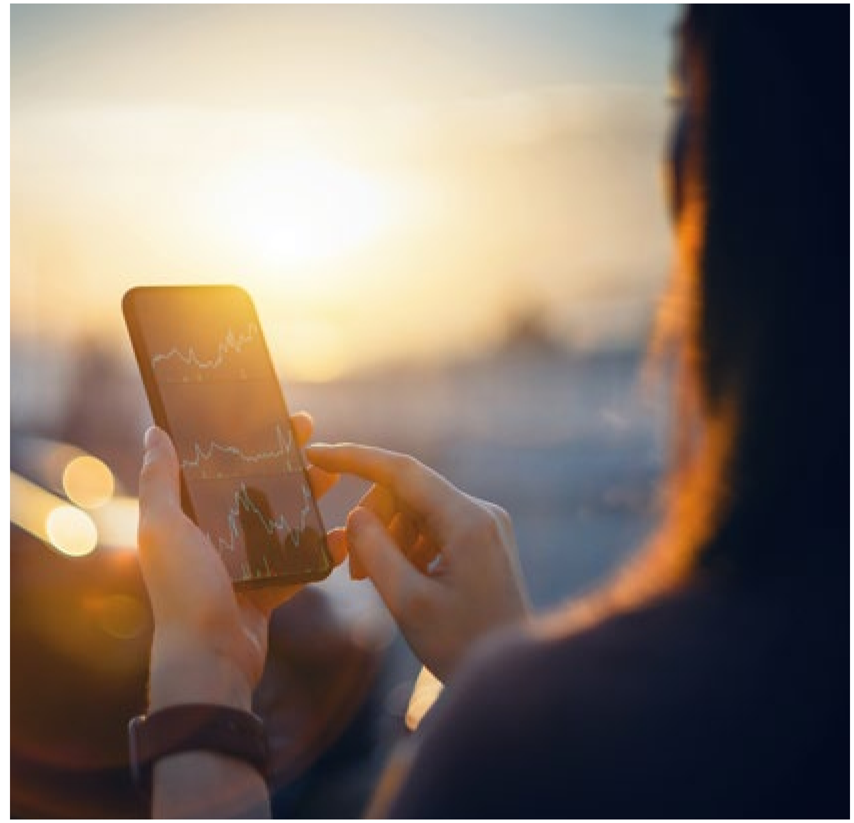
We manage currency from a total-fund perspective and consider currency risk as part of our overall portfolio construction. In certain circumstances, we will hedge to reduce our exposure to the currency risk that comes from investing globally.

CURRENCY NET EXPOSURE[1]

As at December 31, 2021 (Canadian $ billions)

	2021	2020
Canadian Dollar	**152.4**	139.6
United States Dollar	**45.0**	35.4
Euro	**10.3**	8.8
Chinese Renminbi	**6.4**	7.0
British Pound Sterling	**4.4**	4.6
Chilean Peso	**3.2**	3.7
Mexican Peso	**2.8**	2.2
Japanese Yen	**2.4**	4.0
Australian Dollar	**2.0**	1.9
Brazilian Real	**2.0**	1.7
Danish Krone	**1.8**	1.8
Other	**6.1**	7.7

1 Includes foreign currency exposure from investments, net receivable from brokers and investment-related cash. Please see note 2g to the consolidated financial statements for more information on market risk management including foreign currency risk.



Building our businesses in Europe

In 2021, we adopted a bold diversification strategy that calls for us to further Ontario Teachers' international growth in the next five to 10 years. As part of that effort, our team in London is evaluating attractive opportunities in the Europe, Middle East and Africa (EMEA) region that would help us fulfill that plan.

With more than 30 portfolio companies and fund investments across the region, we are looking to grow our investment portfolio as a lead investor across infrastructure, private and public equity, venture capital and growth equity, credit, real estate and other alternative investments. To that end, we invested or committed more than $11 billion in gross capital in the region in 2021. We continue to strengthen relationships with existing investment partners and to make new connections in strategically prioritized areas.

"2021 was an exciting year. Our London investment teams worked hard to deliver on our global ambition. With focused efforts, we've secured unique opportunities that will drive solid returns, strong growth and a more sustainable future."

Nick Jansa, Senior Managing Director, Europe, the Middle East and Africa

More than

$30B

invested in assets in EMEA

How we invest to make a mark

Logoplaste

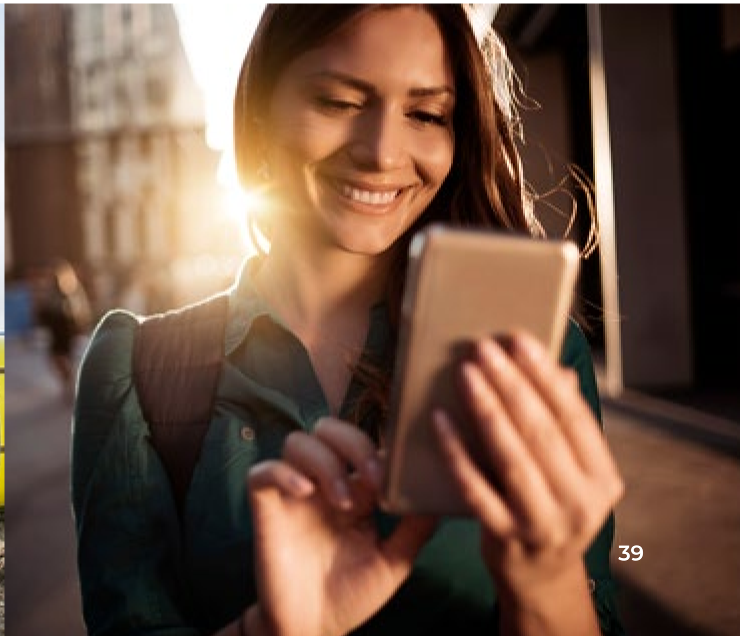
Packaging remains essential to protecting and delivering goods of all kinds; the challenge is making it more sustainable. Logoplaste designs and makes rigid plastic packaging for a range of blue-chip clients. We partnered with Logoplaste because it pioneered “wall-to-wall” manufacturing, where packaging is manufactured in the same plant as the product it is designed to hold. These embedded plants increase a business’s efficiency, lower costs and reduce carbon emissions.

SGN

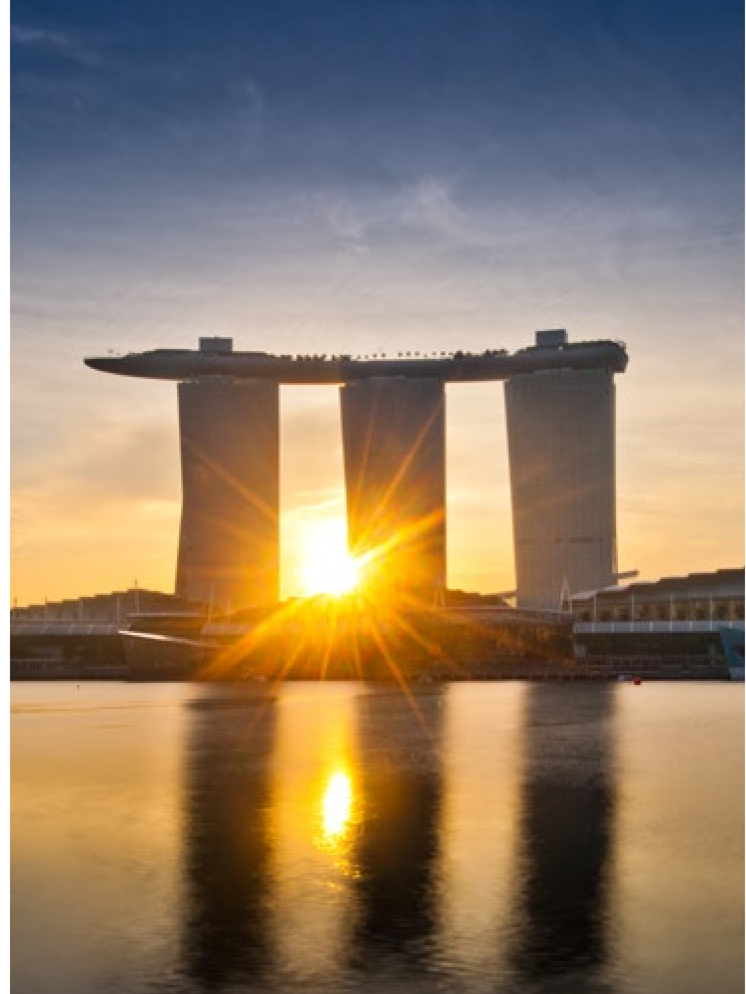
Central heating is responsible for up to a third of the U.K.’s greenhouse gas output. Switching carbon-emitting natural gas for hydrogen is one of the ways to keep homes and businesses warm and safe while tackling climate change. SGN is leading a trio of pioneering research projects that are helping the U.K. take strides towards a net-zero gas network.

Beamery

Amid labour and skills shortages, employers around the world are vying to recruit the best talent. Last year, our Teachers’ Innovation Platform team led a US$138 million round in Series C funding for Beamery, a company that uses artificial intelligence to help employers identify, attract and retain top talent. Our investment will help Beamery continue to develop cutting-edge technology to unlock the potential of the global workforce.



Putting down more roots in Asia-Pacific



2021 marked the first full year of operations for our Singapore office. Together with our existing office in Hong Kong, our growing regional presence has enabled us to invest in additional asset classes and to pursue multiple attractive investment opportunities, from electricity transmission in Australia and lab-testing in New Zealand to toll roads in India.

Our expansion in this economically critical and fast-growing region is part of our strategy to reach $300 billion in net assets by the end of this decade and to significantly grow our international footprint. We're also looking to make a positive impact in the Asia-Pacific region through investments in core infrastructure as well as projects and companies that support the greening of the region's economy.

> ***"We are excited to add another long-term investor in Ontario Teachers' to our register. We believe they are an ideal sponsor given their deep expertise investing in leading financial services businesses and value-added partnership model. This significant commitment from Ontario Teachers' further validates the quality of our proposition and our commitment to the long-term growth of the business."***

Brenard Grobler, CEO, Greenstone

More than

$20B

invested in assets in Asia-Pacific

How we invest to make a mark

NHIT

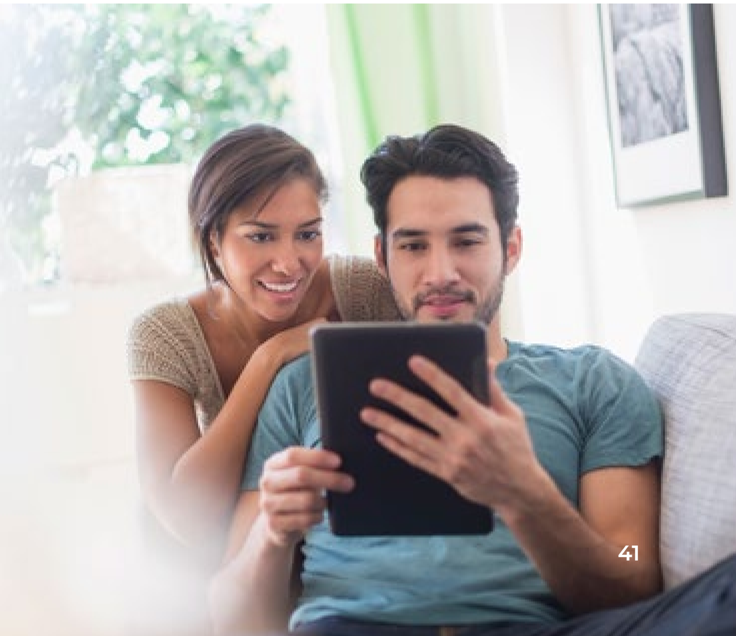
The Indian government has prioritized infrastructure investments to position the country as an economic powerhouse. In 2021, we made our second investment in the country's infrastructure, acquiring a 25% stake in the National Highways Infra Trust (NHIT). NHIT owns and operates a portfolio of five toll roads spanning 390 kilometres across four Indian states for a concession period of 30 years.

GreenCollar

Carbon-credit trading is a market-friendly solution to fighting climate change. We invested in Australia's GreenCollar, which is developing markets and methodologies to encourage the conservation of land, water and coral reefs. By putting the environment on the balance sheet, GreenCollar helps farmers and local communities invest in sustainability projects and generate carbon credits for governments and companies looking to offset their emissions.

Greenstone

Aging populations benefit from greater access to insurance options. That's why we agreed to acquire a 33.4% stake in Greenstone, which distributes life, funeral, income protection and other insurance products in Australia and New Zealand. The company uses technology and data analytics to provide simple and affordable insurance products to more than 650,000 clients.



Exploring opportunities across the Americas

Canada is home for Ontario Teachers', and we're strongly committed to our home market. Our Canadian portfolio includes real estate subsidiary Cadillac Fairview, which we've owned for more than two decades, as well as newer investments like ApplyBoard, a startup using technology to boost global access to education opportunities.

We've also made key investments across the Americas, from power infrastructure in the U.S. to water infrastructure in Chile. We've made significant investments recently in electrical grids in the U.S. and Brazil, and we're partnering with entrepreneurs from Silicon Valley to Waterloo, Ontario, to scale up game-changing technologies.

"We are excited about the value Ontario Teachers' will bring as we continue to serve Canada's rapidly growing retiree population. Its long-term capital profile, track record of delivering retirement solutions and our shared vision of making a positive impact on the lives of retired Canadians makes Ontario Teachers' a natural partner for us."

Steven Ranson, President and Chief Executive Officer, HomeEquity Bank

More than

$190B

invested in assets in the Americas

How we invest to make a mark

IDEAL

Core infrastructure investments are critical to the development of emerging economies. In 2021, we increased our stake in Impulsora del Desarrollo y el Empleo en América Latina, S.A.B. de C.V. (IDEAL), a Mexican company that focuses on boosting development and employment in Latin America. IDEAL owns, finances and operates infrastructure projects including toll roads, water-treatment plants and multimodal transit terminals.

Acorn Health

Autism affects 1 in 44 children in the U.S., according to the CDC. Last year, we acquired a majority stake in Acorn Health, which provides life-changing applied behaviour analysis therapy to children diagnosed with autism. With 51 clinics across seven U.S. states, Acorn is helping thousands of American kids lead fuller and more independent lives.

HomeEquity Bank

As Canada's population ages, the need for new solutions to generate income in retirement becomes more pressing. That's why we agreed to acquire the parent of HomeEquity Bank, which offers reverse mortgages that enable Canadian seniors to remain in their own homes as they age. HomeEquity Bank is Canada's leading bank offering reverse mortgage solutions including the flagship CHIP Reverse Mortgage.

2021 performance

NET INVESTMENTS AND RATES OF RETURN BY ASSET CLASS
As at December 31

	Net Investments (Canadian $ billions)	Rates of Return (percent)			
		1-Year		4-Year	
	2021	Actual	Benchmark	Actual	Benchmark
Equity	**$82.3**	21.3%	15.5%	13.4%	10.9%
Public equity	**27.2**	9.0	13.1	8.7	9.0
Private equity	**55.1**	29.0	17.5	17.6	12.5
Fixed income	**45.2**	(6.3)	(6.3)	5.4	5.4
Bonds	**33.3**	(9.4)	(9.4)	5.5	5.5
Real-rate products	**11.9**	(1.4)	(1.4)	4.6	4.6
Inflation sensitive	**48.0**	11.4	10.9	3.5	3.3
Commodities	**26.5**	7.9	7.9	4.4	4.4
Natural resources	**9.4**	28.1	24.1	5.7	4.8
Inflation hedge	**12.1**	8.0	8.0	1.1	1.1
Real assets	**52.4**	5.4	5.3	2.5	4.4
Real estate	**26.3**	2.5	8.8	(0.2)	4.7
Infrastructure	**26.1**	7.9	1.2	5.8	4.1
Innovation	**7.1**	39.0	39.0	–	–
Credit	**24.3**	3.5	1.2	4.9	3.9
Absolute return strategies	**14.9**	–	–	–	–
Overlay	**(0.5)**	–	–	–	–
Funding for investments	**(34.7)**	–	–	–	–
Total-fund net return	**$239.0**	11.1%	8.8%	8.1%	8.0%

The total-fund net return is calculated after deducting transaction costs, management fees and investment administrative costs, and is reported in Canadian dollars for five periods: one, four, five and 10 years, and since the current investment program began in 1990. Asset-class and local returns are before deducting investment administrative costs. Local returns are also before the translation to Canadian currency.

Ontario Teachers' produced a solid one-year total-fund net return of 11.1%, which was largely driven by strong results across asset classes, with particularly good returns from private equity, inflation sensitive assets and the Teachers' Innovation Platform.

Ontario Teachers' compares its performance to a Canadian dollar-denominated composite benchmark, which is calculated by aggregating results from each of the asset-class benchmarks. This year, Ontario Teachers' beat its benchmark return by 2.3%, or $5.5 billion. The performance beyond the benchmark was the largest in Ontario Teachers' history and was driven largely by outperformance by our private equity, infrastructure, credit and inflation sensitive asset classes, which all meaningfully exceeded their individual benchmarks.

INVESTMENT PERFORMANCE
(percent)

	2021	2020	4-Year	5-Year	10-Year	Since Inception
Total-fund net return	**11.1**	8.6	8.1	8.4	9.3	9.7
Benchmark return	**8.8**	10.7	8.0	8.1	8.4	8.0
Return above or (below) benchmark	**2.3**	(2.1)	0.1	0.4	0.9	1.7

Benchmarks

Benchmarking is important because it allows board members, plan members and other stakeholders to evaluate the effectiveness of our strategies and activities relative to the risks taken. Appropriate benchmarks are established by a committee, chaired by the CEO. Any material or non-technical changes to total plan benchmarks must be approved by the Ontario Teachers' board.

Ontario Teachers' seeks to outperform its respective benchmark rates of return on a total-fund and asset-class basis. This outperformance is described as value-add. A complete list of benchmarks is available on our website.

Investment cost management

Ontario Teachers' is committed to cost effectiveness and believes costs should be managed and linked to the investment value creation process. The board and management employ various tools to ensure that costs are appropriate and well managed. Costs are also evaluated against peer plans on a regular basis by independent benchmarking studies.

The amount of invested capital, asset-class weightings and investing style are factors that affect asset management costs. Generally, the absolute costs of management increase as more capital is invested, which can be partly offset by economies of scale.

Managing assets in-house, combined with our strategic partnership model with external managers, is a cost-effective means of implementing our investment strategies. However, our substantial investments in private assets and commitment to active management result in higher costs than if assets were deployed in lower-cost public securities and passive mandates. Ontario Teachers' also incurs costs to maintain our international offices, which are an integral factor in our ability to identify and participate in investment opportunities globally.

The strategic planning process aligns costs with strategy. Annual budgets are reviewed by the Audit & Actuarial Committee of the board.

Expense policies are in place to ensure costs incurred are appropriate, and opportunities to improve asset management efficiency are regularly sought out.

Investment costs

Investment costs include administrative expenses, transaction costs and management fees.

	2021		2020	
	Canadian $ millions	**Cents per $100 of average net assets**	Canadian $ millions	Cents per $100 of average net assets
Administrative expenses	**$ 732**	**33**	$ 631	31
Transaction costs	**607**	**27**	340	16
Management fees	**691**	**31**	481	23
Total investment costs	**$ 2,030**	**91**	$ 1,452	70

What is included in administrative expenses?
Investment administrative expenses include staff salaries, incentives and benefits, premises and equipment, professional and consulting services, information services, communication and travel, and custodial, audit and board fees. Ontario Teachers' believes that certain investment programs can be most efficiently delivered using in-house talent. The costs related to employing in-house investment teams and associated supporting functions such as legal, operations and finance represent the majority of administrative expenses.

Investment administrative expenses were 33 cents per $100, a slight increase from 31 cents per $100 in 2020. This was due to higher salaries and benefits driven by employee growth including strategic hires in international offices. Annual and long-term incentives were also up year over year due to strong total-fund performance.

What are transaction costs?
Transaction costs are those directly attributable to the acquisition or sale of investments. Due diligence and advisory services, in areas such as financial, legal, tax, regulatory and ESG, are the most significant transaction costs that support private asset transactions. In the case of public securities, transaction costs primarily consist of commissions.

Transaction costs were $607 million in 2021, compared to $340 million in 2020. The increase in transaction costs was driven largely by a significant increase in private asset deal activity and an increase in average deal size which contributed to a higher overall average cost per transaction.

What are management fees?
Ontario Teachers' selectively allocates capital to key public and private market external managers to access specialized talent and investment opportunities where it isn't cost-efficient or practical to do it in-house. Through these relationships, Ontario Teachers' incurs both traditional management fees, which are typically based on the amount of capital allocated, and performance-based fees, which are based on returns above a predetermined threshold and can vary significantly from year to year. Management fees also include incremental costs incurred with external parties that are directly attributable to existing investments and are not related to acquisition or sale. We attempt to strike the right balance by negotiating so that these fees encourage alignment between the interests of Ontario Teachers' and the external managers.

In some cases, management and performance fees are incurred by entities in which Ontario Teachers' has invested, rather than directly by Ontario Teachers'. All such fees are reflected in the plan's net investment income. When directly invoiced, or when information is otherwise available from capital notices or other manager communications, management and performance fees are reported as such in Ontario Teachers' financial statements.

In 2021, management fees, including performance fees, were $691 million, up from $481 million in 2020. The increase was primarily due to strong investment performance from external managers resulting in higher performance fees.

Asset-class review

The board approves ranges for allocations to various asset classes. Management determines exposure within the board-approved bands, based on the underlying risk factors in each asset class, expected returns, and the risk balance and other limits in the total-fund portfolio.

There are seven asset classes:

Equity

Public and private equities aim to deliver long-term investment growth and value-added performance

Fixed income

Provides security and steady income, hedges against interest rate risks inherent in the plan's liabilities and stabilizes total returns

Credit

Corporate and emerging market debt investments that capture a set of risk premiums

Inflation sensitive

Contributes to both diversification and protection against unexpectedly high inflation

Real assets

Real estate and infrastructure investments provide stable inflation-linked cash flows and capital preservation

Innovation

Late-stage venture capital and growth equity investments in rapidly growing, high-potential technology companies

Absolute return strategies

Internal and external strategies that seek to capitalize on market inefficiencies and have a low correlation to markets

Equity

This asset class comprises public and private equities. Investment activities have been carried out either by the Capital Markets or the Equities investment departments.

It was a strong year of returns in most global equity markets, despite the prolonged pandemic. The Canadian S&P/TSX 60 closed out 2021 with its best annual performance in over a decade, up 21.8%, while the U.S. S&P 500 rose 26.9% in 2021. Canada's financial and energy industries accounted for the rise, while in the U.S. the strong performance was broader based.

The Equity asset class had a total return of 21.3% (25.4% local return), compared to its benchmark of 15.5% (local benchmark 19.4%). The four-year annualized rate of return is 13.4%, exceeding the benchmark of 10.9%.

Net investments in the Equity asset class totaled $82.3 billion at the end of 2021, compared to $84.2 billion a year earlier. The slight year-over-year decrease in equity holdings is primarily due to a decrease in allocation to passive public equities and a few private equity dispositions during the year, partially offset by a high volume of private acquisitions and strong investment returns from both private and public equities.

Returns for our public equity and private equity are separated and described below.

Public equity

The public equity portfolio produced a return of 9.0% (local return 14.8%), below its benchmark return of 13.1% (19.1% local benchmark). The underperformance relative to the benchmark can be partially attributed to a lower overall weighting to the energy sector, which was a top performer in 2021, and some overweight positions in Chinese equities. The indices for Chinese stocks countered the global upward trend by having negative returns during the year. The four-year annualized rate of return is 8.7%, compared to a benchmark of 9.0%.

Public equity portfolio highlights
As at December 31, 2021 (based on total assets)

$27.2 billion
Net investments

9.0%
Return

14.8%
Local return

13.1%
Benchmark

19.1%
Local return benchmark

Portfolio split by sector

20%	Information Technology
15%	Consumer Discretionary
15%	Industrials
13%	Consumer Staples
10%	Financials
10%	Healthcare
7%	Materials
5%	Communication Services
2%	Energy
2%	Utilities
1%	Real Estate

Public equity net investments totaled $27.2 billion at December 31, 2021, compared to $42.4 billion at the end of 2020. The drop was primarily due to a decrease in passive exposure to public equities, which was offset by positive investment returns.

Private equity

The Private Capital team invests directly in private companies, either on its own or with partners, and indirectly through private equity funds. It seeks to add value to its portfolio companies by assisting in long-term strategic planning, creating and encouraging high-performing management teams and boards, and ensuring good governance practices.

The private equity portfolio produced a return of 29.0% (local return 31.1%), outpacing its benchmark return of 17.5% (19.5% local benchmark). This outperformance was driven by solid financial performance across the private equity portfolio including funds, as well as increased valuations for private companies. Portfolio companies demonstrated a stronger than expected recovery from the pandemic due to an increased demand for products and services. The four-year annualized rate of return is 17.6%, compared to a benchmark of 12.5%.

Private equity net investments totaled $55.1 billion at December 31, 2021, compared to $41.8 billion at the end of 2020. Assets increased primarily because of high acquisition volumes and higher asset valuation across sectors.

Private equity portfolio highlights
As at December 31, 2021 (based on total assets)

$55.1 billion
Net investments

29.0%
Return

31.1%
Local return

17.5%
Benchmark

19.5%
Local return benchmark

Portfolio split by sector

25%	Industrials
20%	Telecom, Media and Technology
18%	Consumer and Retail
17%	Financial Services
12%	Healthcare
8%	Energy and Power

Fixed income

Ontario Teachers' uses fixed income investments to provide security and steady income, hedge against interest rate risks and stabilize total returns. We own a diversified portfolio of Canadian government bonds, provincial bonds and real-return bonds. Real-return bonds provide returns that are indexed to inflation, as measured by the Consumer Price Index, and include debt issued primarily by the Canadian federal government and other high-quality Canadian issuers.

The negative performance in fixed income can be attributed to the overall low interest rate environment. This means cash flow from this asset class was less than in previous years; additionally, there was a slight increase in interest rates at the end of the year, which puts downward pressures on bond prices. The four-year annualized rate of return was 5.4%.

Fixed income assets totaled $45.2 billion at the end of 2021, an increase of $10.6 billion compared to a year earlier. However, our sensitivity to interest rate risk declined as we moved our holdings into shorter maturity bonds.

Liability Driven Investment program

Ontario Teachers' employs a Liability Driven Investment (LDI) program to mitigate the risk of changes in the real discount rate. As long-term real interest rates are an important input in the discount rate decision, an allocation to real-rate products is maintained, and reviewed annually, with the purpose of hedging against changes to the discount rate. This approach reduces risk and helps us manage the plan's funding ratio volatility through a reduction in exposure to changes in interest rates.

The LDI program is mainly funded using bond repurchase agreements. This allows Ontario Teachers' to retain economic exposure to the underlying real-rate bonds in a cost-effective manner.

Fixed income portfolio highlights
As at December 31, 2021 (based on total assets)

$45.2 billion
Net investments

(6.3)%
Return

(6.7)%
Local return

(6.3)%
Benchmark

(6.7)%
Local return benchmark

Portfolio split by sector

74%	Canadian Government
26%	Real-Rate Products
5%	Provincial Bonds
(5)%	Foreign Developed Market Sovereign Debt

Credit

This asset class includes levered loans, high-yield, investment grade and emerging market debt. Credit is a component of a company's capital structure that contains characteristics of both equities and fixed income. Investing in credit allows Ontario Teachers' to capture default, liquidity and funding risk premiums.

The total return for the year was 3.5% (local return of 4.4%), which exceeded the benchmark of 1.2% (local benchmark of 2.0%). Returns for 2021 came partially from levered loans, which experienced strong returns due to a benign default environment and active management outperformance relative to benchmarks. Additionally, strong returns from external credit managers were largely driven by significant allocations made in 2020 to distressed opportunities related to COVID-19, along with a general bias across the portfolio to higher-quality credits.

Last year, we significantly grew our credit portfolio, ending 2021 with $24.3 billion in net assets, up from $18.0 billion at the end of 2020. There was a significant reallocation out of investment grade debt and into leveraged loans and high-yield credit, which meaningfully reduced the interest rate exposure of the credit allocation and shifted assets into areas where we could generate stronger total returns through active management.

Due to the overall tight level of credit spreads, we are focused on scaling higher-margin active exposures including private credit, structured credit, and expanding globally in Europe and Asia.

Credit portfolio highlights
As at December 31, 2021 (based on total assets)

$24.3 billion
Net investments

3.5%
Return

4.4%
Local return

1.2%
Benchmark

2.0%
Local return benchmark

Portfolio split by sector

47%	High Yield
40%	Levered Loans
12%	Emerging Market Sovereign Debt
1%	Investment Grade

Inflation sensitive

The inflation sensitive asset class includes natural resources (energy, metals, timberland, agriculture, aquaculture and natural climate solutions), gold, commodities and inflation hedges. These types of assets are grouped together due to the positive relationship they tend to exhibit with inflation fluctuations: they can provide stable risk-adjusted returns, diversification and protection against unexpectedly high inflation.

The return of 11.4% (12.4% local return) was above the benchmark return of 10.9% (local benchmark 11.9%). Performance was solid across most of the inflation sensitive asset class, although the natural resources portfolio had particularly strong returns. The strong performance was partially offset by gold holdings, which experienced a negative return in 2021. The four-year annualized return of 3.5% exceeds the benchmark return of 3.3%.

Inflation sensitive net assets totaled $48.0 billion at the end of 2021, compared to $36.6 billion a year earlier. The fund proactively increased our allocation to inflation sensitive assets to partially protect the fund against inflationary pressures seen throughout the global economy.

Inflation sensitive portfolio highlights
As at December 31, 2021 (based on total assets)

$48.0 billion
Net investments

11.4%
Return

12.4%
Local return

10.9%
Benchmark

11.9%
Local return benchmark

Portfolio split by sector

55% Commodities
25% Inflation Hedge

Natural Resources:
9% Energy
5% Timberland
4% Agriculture and Aquaculture
2% Mining

Real assets

Real assets include real estate and infrastructure investments. Strategically, these assets provide returns that are often linked to inflation and are therefore a partial hedge against the cost of paying inflation-protected pensions.

At December 31, 2021, the total value of Ontario Teachers' real assets was $52.4 billion, compared to $44.9 billion at year-end 2020. Real asset investment returns for 2021 were 5.4% (local return of 9.0%), compared to a benchmark return of 5.3% (local benchmark return of 8.9%). The four-year annualized rate of return is 2.5%, below the benchmark of 4.4%.

Returns for our infrastructure and real estate assets are separated and described below.

Infrastructure

Ontario Teachers' seeks to build an infrastructure portfolio that will steadily increase in value, provide predictable cash flow and correlate to inflation. Our infrastructure assets include investments in toll roads, airports, container terminals, power generation, electricity distribution and transmission, gas distribution and transmission, water distribution and wastewater plants, and are distributed globally on five continents.

Infrastructure assets delivered a one-year return of 7.9% with a local return of 15.9%, outperforming the benchmark return of 1.2% (local benchmark return of 8.6%). The outperformance of the portfolio vis-à-vis its benchmark was driven by solid company performance and asset management. The four-year annualized rate of return is 5.8%, exceeding the benchmark of 4.1%.

Infrastructure portfolio highlights
As at December 31, 2021 (based on total assets)

$26.1 billion
Net investments

7.9%
Return

15.9%
Local return

1.2%
Benchmark

8.6%
Local return benchmark

Portfolio split by sector

46%	Transportation and Logistics
41%	Energy Infrastructure
11%	Water and Wastewater Treatment
2%	Other Infrastructure

The net value of the infrastructure portfolio increased to $26.1 billion at the end of 2021, compared to $17.8 billion a year earlier. Growth in the portfolio was driven by investment returns and the significant number of infrastructure acquisitions completed during the year.

Powering a low-carbon future

As populations continue to grow around the world, so does the need for electricity and energy. Powering homes, businesses and communities in a sustainable way requires electricity networks that are reliable, secure and adaptable.

By backing electric utilities on several continents, our long-term capital is playing an important role in helping to meet growing global demand for sustainable power. In turn, utilities deliver stable investment income and strong long-term performance to our portfolio and provide it with protection against inflation.

> ***“Ontario Teachers’ is a proven, well-established infrastructure investor with extensive experience investing in regulated electricity transmission and distribution businesses. We value their extensive experience and long-term time horizon.”***

Matti Ruotsala, Chairman of the Board, Caruna

More than

$12B

committed or deployed in core infrastructure in 2021

How we invest to make a mark

Caruna

Electricity is essential to quality of life and economic development. As energy use increases, access to sustainable and reliable electricity will be more vital than ever. We acquired a 40% stake in Caruna, Finland's largest electricity distribution business, to help it improve the security of its 88,000-kilometre network so that it can continue to serve its 700,000 customers. Caruna has buried a large part of its overhead network and will continue this work in the coming years.

Spark Infrastructure

The transition to a low-carbon future will require us to increase our reliance on renewable energy sources. Supporting the electrical grid during this transition is critical. In 2021, we invested in Spark Infrastructure, which holds stakes in several Australian energy infrastructure companies that power over five million homes and businesses, as well as a growing renewables platform. Our investment will help Spark as it works to secure and expand its energy infrastructure assets across Australia.

Evoltz

Expanding renewable energy will become critical to economic growth in Brazil, Latin America's largest economy. Last year, we acquired Evoltz, whose portfolio of power transmission assets is spread across 10 Brazilian states and extends more than 3,500 kilometres. Evoltz represents another significant addition to our expanding portfolio of infrastructure assets that are helping deliver stable returns and power a low-carbon future.

Real estate

The real estate portfolio is managed by Ontario Teachers' wholly owned subsidiary, The Cadillac Fairview Corporation Limited (Cadillac Fairview), which maintains a diversified portfolio of high-quality properties that provide dependable cash flows.

Real estate assets delivered a one-year net return of 2.5% (local return of 3.1%), compared to a benchmark return of 8.8% (local benchmark return of 9.4%). The underperformance vis-à-vis our benchmark can be attributed to Cadillac Fairview's relative overconcentration in Canadian retail and office properties, which underperformed the stronger performing industrial or residential sectors included in the benchmark due to numerous closures as a result of the pandemic. Since real estate returns were significantly negatively impacted in 2020 and 2021, the four-year annualized rate of return for the real estate portfolio was (0.2)%, compared to the four-year average benchmark of 4.7%.

The net asset value of real estate holdings was $26.3 billion at year-end 2021, compared to $25.2 billion the previous year. The increase in net real estate assets resulted from development capital and several international investments, primarily in the United States.

Operating income was $0.9 billion, 4% higher than 2020 due mainly to lower rental abatements for the Canadian portfolio as the impact of closures/restrictions caused by the COVID-19 pandemic were less severe in 2021. Net real estate income was $0.6 billion for 2021, a $4.7 billion improvement over 2020, when significant write downs were recorded.

At year end, the Canadian retail occupancy rate (spaces less than 15,000 square feet and for lease terms greater than one year) was 83% (85% in 2020), while the Canadian office occupancy rate was 92% (94% in 2020). Retail occupancy has declined since the onset of the COVID-19 pandemic and is partially offset by short-term occupancy (lease terms of less than one year). Office properties income and occupancy have not been significantly impacted by the COVID-19 pandemic given the high-quality tenant base in the portfolio.

Real estate portfolio highlights
As at December 31, 2021 (based on total assets)

$26.3 billion
Net investments

2.5%
Return

3.1%
Local return

8.8%
Benchmark

9.4%
Local return benchmark

Portfolio split by sector

52%	Canadian Retail
29%	Canadian Office
6%	Emerging Markets
6%	U.S. Investments
2%	U.K. Investments
5%	Other

Development of a major office complex, 160 Front Street West in Toronto, continued with minor pandemic-related delays. In line with Cadillac Fairview's focus on scaling and diversifying its global real estate platform, it committed $3.1 billion of international investment in 2021 (for a total of $6.0 billion of outstanding commitments as at December 2021) and deployed $0.8 billion.

Innovation

The innovation asset class comprises investments made by Teachers' Innovation Platform (TIP), including direct investments and co-investments, funds and strategic partnerships, and platforms. TIP focuses on late-stage venture and growth equity investments in companies that use technology to disrupt incumbents and create new sectors. They seek to access significant global opportunities for investment in new businesses and sectors that are emerging as a result of unprecedented technological change.

The asset class had a one-year return of 39.0%, or a 40.6% local return. The results were driven by strong performance in direct investments and fund investments. Given the uniqueness of the TIP investment program, we will not report a benchmark during the incubation period, after which it will be measured against an active benchmark like the other asset classes. Four-year annualized rate of return figures are not available for the innovation asset class as TIP was founded in 2019.

Innovation net assets totaled $7.1 billion at the end of 2021, compared to $3.5 billion at December 31, 2020. The growth in the portfolio is due to strong performance from existing investments as well as a number of new and add-on acquisitions during the year.

Innovation portfolio highlights
As at December 31, 2021 (based on total assets)

$7.1 billion
Net investments

39.0%
Return

40.6%
Local return

Portfolio split by sector

40%	Direct Investments – North America
18%	Direct Investments – Asia-Pacific
10%	Direct Investments – Europe, Middle East and Africa
32%	Funds

Supporting purpose-driven entrepreneurs

Advances in technology are giving us the power to address complex problems. In the two years since we launched our Teachers' Innovation Platform, we've partnered with entrepreneurs around the world who are improving access to education, producing more sustainable food, and much more.

TIP makes venture capital and growth equity investments in companies that are purpose-driven and ready to tackle real-world problems. We partner with founders looking to expand their product offering, scale geographically, and become leaders in their markets. We invest across North America, Europe and Asia, often leading rounds but occasionally participating as a co-investor with like-minded partners. While we are flexible about how much we invest and for how long, we consistently look for entrepreneurs developing cutting-edge technologies and those with a mission to build a more sustainable future.

"With support from Ontario Teachers', we're using new science to rewrite food design rules and make plant-based food better tasting, more nutritious and crave worthy. It's a revolution with benefits for people and the planet."

Jonathan McIntyre, CEO, Motif FoodWorks

More than

$1.9B

invested in TIP in 2021

How we invest to make a mark

ApplyBoard

We believe students all over the world should have access to quality education. In 2021, we led a $375 million financing round for ApplyBoard, a Canadian company that empowers students by simplifying the search, application and acceptance process. So far, ApplyBoard's technology has connected over 200,000 students in more than 125 countries to new educational opportunities.

Motif FoodWorks

The global appetite for healthy and more sustainable foods is increasing. U.S.-based Motif FoodWorks is looking to satisfy that appetite by harnessing science and technology to improve the taste, appearance and nutrition of plant-based foods. We led a US$226 million Series B funding round for Motif last year. Our investment will help the company as it continues to develop meat and dairy alternatives for health- and climate-conscious consumers.

CD Finance

Rural economic development is essential to lift millions out of poverty. Through CD Finance, we're helping farmers in rural China with microfinancing solutions to help them build a better future for their families and their communities. CD Finance offers technology and cloud services that help farmers boost their incomes, and its efforts have already helped 7 million people in China.

Absolute return strategies

Ontario Teachers' uses absolute return strategies to generate positive returns that have low correlation to other asset classes. Internally managed absolute return strategies generally look to capitalize on market inefficiencies. We also use external hedge fund managers to earn uncorrelated returns, to access unique strategies that augment returns and to diversify risk.

In 2021, assets employed in absolute return strategies totaled $14.9 billion at year end, compared to $13.6 billion in 2020.

Overlay

Overlay includes strategies that manage the foreign exchange risk for the total fund.

Funding for investments

Funding for Investments allocation represents the net implicit funding for the overall asset mix. It includes exposures such as bond repurchase agreements used for managing day-to-day liquidity, implied funding from derivatives used to efficiently gain passive exposure to global equity and commodity indices, short-dated and term unsecured funding guaranteed by Ontario Teachers', and liquidity reserves. These activities can result in a negative exposure for Funding for Investments in the overall asset mix, and the amount is expected to vary from year to year based on the implementation of the asset mix.

THE FUNDING FOR INVESTMENTS ALLOCATION ALLOWS ONTARIO TEACHERS' TO:

- hedge the interest rate risk associated with our pension liabilities;
- achieve the optimal overall risk-return profile for the investment portfolio;
- obtain exposure to certain markets more efficiently;
- increase our holdings of lower-risk asset classes that generate attractive risk-adjusted returns; and
- maintain sufficient liquidity.

Liquidity management

Liquidity and funding allow us to take advantage of investment opportunities, which is why they are carefully managed. Our Total Fund Management (TFM) department uses its holistic view of the portfolio to determine how resources can be effectively utilized to support liquidity and funding. This includes ensuring we have sufficient cash on hand to meet current liabilities and liquidity in place for disruptive market events.

Ontario Teachers' has a governance framework and reporting requirements for liquidity. We test our liquidity position daily through simulations of major market events, and our board's Investment Committee receives regular updates on our liquidity position. Since changes to rules and regulations affecting banks may indirectly impact Ontario Teachers', we continuously adapt and enhance the way that we manage, oversee, measure and report on liquidity and funding risks.

Investment funding strategy

Ontario Teachers' investment funding strategy is focused on diversifying our sources of investment funding, managing the cost and maturity profile, maintaining a presence in key funding markets, and supporting the overall management of the currency exposure of our global investment program. It contains both short- and long-term funding sources, which collectively diversify and mitigate risk.

Examples of short-term funding include bond repurchase agreements, commercial paper and securities lending agreements, while long-term funding includes unsecured term-debt issuance (as described below).

OTFT, an independent entity, plays an important role in our overall strategy. OTFT issues commercial paper and term debt that is fully, unconditionally and irrevocably guaranteed by Ontario Teachers'. OTFT operates a global term-debt program with issuances in currencies such as USD, EUR and CAD, and it completed its inaugural GBP issuance in 2021. The OTFT program aligns well with the global nature of the overall investment portfolio. Furthermore, OTFT also issues green bonds, which support our net-zero ambition.

In addition to OTFT, Ontario Teachers' Cadillac Fairview Properties Trust (OT-CFPT) provides further investment funding diversity through its issuance of term debt. OT-CFPT is backed by a high-quality Canadian real estate portfolio and is non-recourse to Ontario Teachers'.

More information on our investment funding strategy is available in note 2h to the consolidated financial statements and on our website.

Governing with excellence

Legislative and regulatory update

Regulatory oversight

The Financial Services Regulatory Authority (FSRA) regulates financial services and pensions in Ontario. Since its launch in 2019, FSRA has created several advisory committees to provide advice and feedback to FSRA on key matters related to the pension sector. Ontario Teachers' continues to engage with FSRA's management and board, including through these advisory committees, on issues such as FSRA's priorities, family law matters related to pensions, member communications and prudent investment.

Legislative updates

Temporary tax relief measures for Canadian registered pension plans introduced in 2020 were extended for 2021. Beyond this, there were no material changes to pension or tax legislation applicable to Ontario Teachers'.

Pension plan updates

The plan sponsors, OTF and the Ontario government, will from time to time make amendments to the pension plan. The plan was amended in December 2021 to allow members to purchase credit in the plan for certain periods of reduced work due to their childcare responsibilities or because of a disability. The amendment will come into effect on September 1, 2022 and will permit purchases of eligible periods that end on or after September 1, 2017.

The plan sponsors also agreed to a plan amendment to extend the re-employment limit to 95 days for certain types of employment in education for the period from September 1, 2021 to June 30, 2022.

Advocacy

We interact with regulatory agencies and government officials around the world on a variety of investment and pension administrative matters, advocating for clear and consistent rules and sharing our expertise on relevant public policy issues.

Taxation

The global tax landscape is constantly evolving. Ontario Teachers' responds to shifting tax policies and increasing scrutiny by tax authorities by taking a conservative approach to tax risk and planning. We comply with all applicable tax laws and regulations in the countries where we invest and monitor emerging trends and changes in tax laws to confirm that our investments remain in compliance.

As a global investor, we believe it is important for governments to pursue clarity and predictability in tax laws, and we welcome the opportunity to engage in consultations on tax policy matters with authorities and policy-makers worldwide. More detail on our approach to taxation is available on our website.

Canadian Institute of Actuaries (CIA) Standards

The CIA Actuarial Standards Board (ASB) adopts the Standards of Practice (Standards) for the profession. The Standards set out the requirements for determining the commuted values of pension benefits (i.e., lump sums payable in lieu of pensions). Revised Standards came into effect on February 1, 2022. The revised Standards address the determination of commuted values in economic environments where bond yields are negative.

Stewardship and leadership

Ontario Teachers' believes good governance is good business because it helps companies deliver long-term value. We measure ourselves against best practices for governance, internal controls, risk management and stewardship because this helps us deliver long-term value to members.

Since its inception, Ontario Teachers' has been overseen by independent, professional board members who are required to make decisions in the best interest of all beneficiaries of the plan. The plan sponsors, the Ontario government and OTF, each appoint five board members and they jointly select the chair. This governance structure plays a crucial role in the plan's success.

Role of the board

The board is independent and oversees management of the pension fund and administration of the pension plan. Board members are professionals with financial and governance expertise and are typically drawn from the fields of accounting, actuarial science, banking, business, economics, education, information technology and investment management.

The board is responsible for administering the pension plan and managing pension funds in accordance with the *Teachers' Pension Act* (Ontario), the *Pension Benefits Act* (Ontario) and the *Income Tax Act* (Canada) as well as all other matters set out in the Partners' Agreement. Day-to-day investment management and plan administration is delegated to the President and CEO and his executive team. No member of management is a board member.

Board members approve strategic plans, budgets, risk appetite, the acceptable range of risk, investment policies, benchmarks, performance, compensation planning and succession plans recommended by management. They monitor investment, operational, strategic and governance risks and ensure appropriate mitigation plans are in place. They review and approve the unaudited mid-year consolidated financial statements and the audited year-end consolidated financial statements.

The board conducts regular preliminary funding valuations to assess the pension plan's long-term financial health. The results of the preliminary funding valuations are reported to the plan sponsors. The board works closely with the independent actuary in setting actuarial assumptions for these valuations, including the discount rate, with input from management. The Canadian Institute of Actuaries Standards of Practice require that each assumption is independently reasonable and that assumptions are appropriate in aggregate.

2021 board highlights

Ontario Teachers' filled the last remaining vacancy on its board by welcoming a new member in 2021. Monika Federau joined the Board after recently retiring from her role as Chief Strategy Officer for Intact Financial. She is a member of our Governance, Human Resources & Compensation and Investment Committees.

The board continued to adapt in 2021 to deal with the effects of COVID-19. They also refreshed the board skills matrix and attended several board education sessions with a focus on climate.

Board members met 10 times in 2021 for full board meetings, 11 times for Investment Committee meetings and twice for strategy sessions. In addition, the Human Resources & Compensation Committee met six times, the Audit & Actuarial Committee met five times, the Governance Committee met three times, the Operational Risk Committee met three times and the Benefits Adjudication Committee held two general meetings and one virtual hearing.

Board committees

Through six standing committees, board members review progress against management's stated objectives and confirm that management's strategies and decisions are in the best interests of all plan beneficiaries.

Audit & Actuarial Committee

Responsible for oversight of financial reporting, accounting systems, internal controls over financial reporting, and certain corporate governance-related matters.

Benefits Adjudication Committee

Considers and determines appeals, as provided in Section 87 of Schedule 1 of the *Teachers' Pension Act*, from the decisions of Ontario Teachers' staff concerning a person's entitlement to, or the amount of, a pension benefit.

Governance Committee

Assists Ontario Teachers' in fulfilling its governance responsibilities, which involves reviewing and reporting to the board on Ontario Teachers' system of governance, including changes to the Partners' Agreement, the Corporate Governance Principles and Proxy Voting Guidelines, the Code of Conduct and the Anti-Bribery/Anti-Corruption Policy.

Human Resources & Compensation Committee

Provides oversight and recommendations on succession, compensation, performance results, employee relations and overall human resource matters, focusing on issues pertaining to the CEO, and executives reporting directly to the CEO and the Chief Investment Officer.

Investment Committee

Assists Ontario Teachers' in fulfilling its responsibilities as manager of the pension fund, including overseeing the investment of assets, investment-related liabilities and management of surplus (or deficit) of the plan.

Operational Risk Committee

Assists the board in fulfilling its strategic oversight responsibilities in relation to information technology; data governance; procurement and vendor risk management; enterprise project management; operations including the trade lifecycle; continuity management; and security, both cyber and physical.

Board members

Board and committee meeting attendance was 99.8% in 2021. Please visit otpp.com for full biographies of board members and committee mandates.

Steve McGirr, Chair, ICD.D
Appointed 2015 | Chair since 2019 | Attendance 100%

Former Senior Executive Vice-President and Chief Risk Officer, CIBC; Senior Advisor, Lazard Canada Inc.; Member, Queen's University Cabinet; Former director and Investment Committee chair of Wellspring Cancer Support Network

Member, Investment Committee

Bill Chinery, ICD.D
Appointed 2015 | Attendance 100%

Former CEO, BlackRock Asset Management; Director, IA Financial Group; Member, Advisory Committee of GreenSky Capital Inc.

Chair, Investment Committee; Member, Audit & Actuarial and Governance Committees

Patti Croft, ICD.D
Appointed 2016 | Attendance 100%

Former Chief Economist, RBC Global Asset Management, Sceptre Investment Counsel, TD Canada Trust, and Phillips, Hager and North; Vice-Chair, Ontario Pension Board; Former director and founding member, Women in Capital Markets; Former director, International Foundation for Employee Benefit Plans, Canadian Medical Association Holdings Inc. and the Boilermakers' National Pension Plan Canada

Chair, Governance Committee; Member, Human Resources & Compensation and Investment Committees

Cathy Cranston, ICD.D
Appointed 2019 | Attendance 100%

Former Treasurer, BMO Financial Group; Director, Toromont Industries Ltd.; Former director, Bank of Montreal Mortgage Corporation, BMO Trust Company, Bank of Montreal (Barbados) Limited, BMO InvestorLine, BMO Harris Investment Management Inc., and BMO Nesbitt Burns Financial Services Inc.

Chair, Human Resources & Compensation Committee; Member, Investment and Operational Risk Committees

Monika Federau
Appointed 2021 | Attendance 100%

Former Chief Strategy Officer for Intact Financial Corporation; Director, UNICEF Canada; Member of both the Advisory Board of the Smith School of Business at Queen's University and the Advisory Board of the Intact Centre for Climate Adaptation

Member, Governance, Human Resources & Compensation and Investment Committees

Cindy Forbes, ICD.D
Appointed 2020 | Attendance 100%

Former Global Chief Analytics Officer and interim Chief Marketing Officer, Manulife; Former Chief Actuary and former Chief Financial Officer (Asia), Manulife; Chairperson, Board of Governors, University of Waterloo; Board member, Prosperity Life Assurance Limited

Member, Audit & Actuarial, Human Resources & Compensation and Investment Committees

Lise Fournel, ICD.D
Appointed 2016 | Attendance 100%

Former Senior Vice-President and Chief Information Officer, Air Canada; Board member, Desjardins Financial Security; Member of the Technology Committee on the board of l'Université de Montréal; Former board member, l'Université de Montréal, Tourisme Montréal, CIREM, Musée Pointe-à-Callière, and Canadian Muscular Dystrophy Association

Chair, Operational Risk Committee; Member, Governance and Investment Committees

Gene Lewis
Appointed 2018 | Attendance 100%

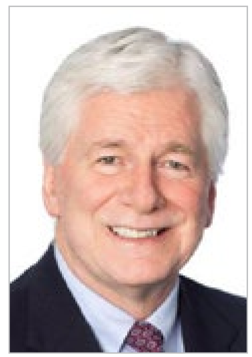
Former General Secretary, Elementary Teachers' Federation of Ontario; Former President, Ontario Public School Teachers' Federation; Former member, Ontario Teachers' Sustainability Workgroup and Partners' Consultative Committee

Chair, Benefits Adjudication Committee; Member, Audit & Actuarial, Investment and Operational Risk Committees

M. George Lewis, ICD.D
Appointed 2019 | Attendance 100%

Former Group Head, Wealth Management and Insurance, RBC; Current director, Legal & General Group plc, the AOG Group and the Canadian Film Centre; Former director, Cenovus Energy, Enbridge Income Fund Holdings, Ontario Power Generation, Operation Springboard, the Centre for Addiction and Mental Health, the Toronto Symphony Orchestra and the Holland Bloorview Foundation; Former board member of the Anglican Diocese of Toronto Foundation

Vice-Chair, Investment Committee; Member, Human Resources & Compensation and Audit & Actuarial Committees



John Murray
Appointed 2014 | Attendance 98.2%

Former Deputy Governor, Bank of Canada; Adjunct professor, Queen's University; Senior Fellow, C.D. Howe Institute; Member, Investment Committee, Canadian Medical Protective Association; Visiting scholar and advisor, International Monetary Fund

Vice-Chair, Benefits Adjudication Committee; Member, Investment, Operational Risk and Human Resources & Compensation Committees

Kathleen O'Neill, ICD.D
Appointed 2016 | Attendance 100%

Former Executive Vice-President, Personal & Commercial Development, and Head of Small Business Banking, BMO Bank of Montreal; Former partner, PriceWaterhouse Coopers; Board member, ARC Resources Inc. and Finning International Inc.; Former board member, Cadillac Fairview; Past chair, St. Joseph's Health Centre Foundation and St. Joseph's Health Centre, Toronto

Chair, Audit & Actuarial Committee; Member, Investment and Operational Risk Committees

Board and committee member effectiveness and remuneration

Board effectiveness

Ontario Teachers' is overseen by an independent, professional board which is required to make decisions in the best interest of all beneficiaries of the plan. The plan sponsors, the Ontario government and Ontario Teachers' Federation, each appoint five board members and they jointly select the chair. When appointing directors, the sponsors look for a variety of attributes, skills and experience that are important to be represented on the board in order to maximize board effectiveness. This governance structure plays a crucial role in the plan's success.

The following table summarizes some of the key attributes, experience, qualifications and expertise of each of our board members:

Board Skills Matrix	Bill Chinery	Cathy Cranston	Patti Croft	Monika Federau	Cindy Forbes	Lise Fournel	Gene Lewis	George Lewis	Steve McGirr	John Murray	Kathleen O'Neill
Governance											
Actuarial/Funding	•	•	•		•			•		•	
Education/Education Administration		•			•		•	•		•	
Senior Leadership Role	•	•	•	•	•	•	•	•	•	•	•
Risk Oversight											
Climate				•	•		•	•			
Corporate Responsibility/ESG	•	•	•	•	•	•	•	•		•	•
Finance/Audit/Accounting	•	•	•		•	•	•	•	•	•	•
Legal/Regulatory	•	•	•		•		•	•	•	•	•
Risk Management	•	•	•		•	•		•	•	•	•
Information Technology/Digital	•	•		•	•	•				•	•
Strategy Execution											
Investment Management – Public Markets	•	•	•		•	•		•	•	•	•
Investment Management – Private Markets	•	•	•					•	•	•	•
Global Business Experience	•	•		•	•	•		•	•	•	•
Talent Management/Compensation/Culture	•	•	•	•	•	•	•	•		•	•
Business Transformation	•	•		•	•	•	•	•			•
Age	67	62	63	57	65	68	74	61	66	73	68
Years on the board (as of January 1, 2022)	7	3	6	0.7	2	6	4	3	7	7	6

Diversity, equity and inclusion is a key area of focus at Ontario Teachers', recognizing that governance, industry experience, subject matter expertise, and diversity augment effective oversight of the organization's activities. From a gender diversity perspective, the board is well positioned with women holding six out of 11 board seats, and four out of six of the board committees are chaired by women.

Board remuneration

The Governance Committee of the board is responsible for making recommendations with respect to board and committee member remuneration.

Board members are reimbursed for normal expenses for travel, meals and accommodation, as required. For 2021, these expenses totaled $53,443. In addition to the regular meeting schedule, board members were engaged in an additional 12 ad hoc meetings throughout the year.

Board compensation for 2021 was as follows:

Annual Retainer – Chair of the Board	$199,400
Annual Retainer – Board Member	$94,500
Additional Committee Chair Retainer	
Audit or Investment Committee	$20,000
Other Committees	$15,000
Additional Committee Vice-Chair Retainer	
Audit or Investment Committee	$10,000
Other Committees	$7,500
Committee Member Retainer (if on more than three committees)	$5,000

Board Member	Board Meetings	Committee Meetings	2021 Total Remuneration
Steve McGirr, Chair of the Board	12	29	$199,400
Bill Chinery, Chair, Investment Committee	12	19	114,500
Cathy Cranston, Chair, Human Resources & Compensation Committee	12	21	109,500
Patti Croft, Chair, Governance Committee	12	21	109,500
Monika Federau	7	13	74,625
Cindy Forbes	12	23	94,500
Lise Fournel, Chair, Operational Risk Committee	12	17	109,500
Gene Lewis, Chair, Benefits Adjudication Committee	12	21	114,500
M. George Lewis, Vice-Chair, Investment Committee	12	23	104,500
John Murray, Vice-Chair, Benefits Adjudication Committee	12	22	107,000
Kathleen O'Neill, Chair, Audit & Actuarial Committee	12	19	114,500

Report from the Human Resources & Compensation Committee

The Human Resources & Compensation Committee (HRCC) is pleased to share with you an overview of our approach to assessing performance and how it aligns with the pay of our employees. Our compensation framework is designed to reward, over the long term, for performance within the bounds of our risk budget. It is primarily focused on:

- paying for performance;
- attracting and retaining top investment, corporate, and member services talent;
- delivering on our pension promise; and
- living Ontario Teachers' values.

Ontario Teachers' 2021 performance

Under our compensation framework, the overarching driver is the performance of the total fund. In this second year of a global pandemic, we exceeded our return and our internal portfolio benchmarks. The one-year total-fund rate of return was exceptional at 11.1%, and the four-year rate of return was very strong at 8.1%. The one-year total-fund return was $5.52 billion above our benchmark, resulting in a four-year cumulative value-add of $2.79 billion.

Fiscal 2021 pay decisions

Management and the board assess Ontario Teachers' overall performance relative to a corporate scorecard. This scorecard was established in the first quarter of calendar year 2021. Based on strong combined total-fund performance measures, continued outstanding service to our members, and delivering on other operational metrics, Ontario Teachers' scorecard resulted in a multiplier of 1.66 out of 2.0.

Throughout 2021, Mr. Taylor received no adjustments to his base salary. The board assessed Mr. Taylor against his individual objectives and determined a multiplier of 2.0 times his target for his 2021 annual incentive. The weighted average of factors resulted in an overall annual incentive multiplier for Mr. Taylor of 1.8x target. In balancing total-fund aggregate four-year performance and Mr. Taylor's role in shaping Ontario Teachers' strategy, the board awarded him with a long-term incentive allocation of $3.42 million. Overall, the HRCC believes the compensation paid for fiscal 2021 is appropriate and aligned with the objectives of Ontario Teachers'.

Compensation Discussion & Analysis

The Compensation Discussion & Analysis explains Ontario Teachers' approach to compensation, the various elements of our pay programs and the remuneration paid to our named executive officers (NEOs). In fiscal 2021, our NEOs were:

- Jo Taylor, President and Chief Executive Officer (CEO);
- Tim Deacon, Chief Financial Officer (CFO);
- Ziad Hindo, Executive Managing Director (EMD) and Chief Investment Officer (CIO);
- Karen Frank, Senior Managing Director (SMD), Equities; and
- Ben Chan, Senior Managing Director (SMD), Asia Pacific.

Our compensation framework

Our compensation philosophy and objectives

Ontario Teachers' compensation framework has been developed on a foundation of pay-for-performance to attract, reward, and retain top performing talent who embed our culture into how we work and deliver growth and long-term performance. We aim to provide equitable compensation for all employees and developing talent with a focus on creating a global organization that is diverse and inclusive. For example, we apply equal and fair employee practices to every employee, regardless of gender identity, colour, race, ethnicity, ability or sexual orientation, ensuring all employees performing the same job have the same rewards opportunities.

Our compensation framework is designed to support the vision to be a trailblazer: bold, ambitious, global. And the strategy that will get us there is to ignite a **CULTURE** of experimentation, entrepreneurship, empowerment; deliver global **GROWTH** and long-term performance; and create a lasting, positive **IMPACT** on the world.

- **Align the enterprise.** All employees are part of the same compensation framework, with a focus on culture, growth and impact.
- **Ensure market competitive pay levels and mix to attract and retain high calibre talent.** The compensation framework is aligned with the external market relevant to our business, considering the various skill sets required to achieve the organization's collective goals. The framework provides the opportunity for leaders to recognize individual employees, earning top quartile pay or better. Incentive compensation makes up a significant portion of total compensation, particularly for more senior employees, to align with Ontario Teachers' pay-for-performance culture.

- **Align rewards with employee behaviours.** In measuring employees' individual performance, there is explicit focus on not only what was accomplished, but how employees' behaviours aligned with Ontario Teachers' culture – working in the best interest of the enterprise.

- **Ensure balance (time horizon, accountabilities, discretion).** There is a balance between annual outcomes (i.e., culture initiatives, member satisfaction, climate change) and investment performance over a four-year period. There is a balanced approach to rewarding employees in areas over which they have most control (e.g., for junior employees the focus is on individual performance; for senior employees more emphasis is placed on enterprise performance). Additionally, there is a balance of discretion to ensure pay decisions are more than just formulaic outcomes and Managers have the necessary flexibility/tools to ensure a holistic assessment and differentiation of rewards for each employee.

- **Align with good governance and ensure our compensation program aligns with our risk appetite.** The compensation framework embeds a number of risk mitigating features (clawback, upper limits, balanced scorecards) and ensures employees' interests are aligned with those of the members of the Ontario Teachers' Pension Plan. Additionally, Senior officers review pay decisions to ensure equity through multiple lenses (i.e., by level, gender, etc.).

Independent benchmarking process

Given the varied employment opportunities at Ontario Teachers', executive and non-executive positions are compared against relevant job groups in like markets. Our objective is to be competitive with those organizations with which we compete directly for talent, including Canadian pension funds, banks, insurance companies, and investment managers, depending on role function and responsibilities.

For certain positions in international markets, we also compare to investment management organizations in the U.K., Hong Kong, Singapore and the United States.

We align our goals for this pension plan (i.e., plan funding, contribution levels, service excellence, strategic initiatives) with total direct compensation opportunity at top quartile pay levels.

Key risk mitigating features and governance

Governance practices used to monitor, assess, and mitigate risk in the delivery of our incentive programs include:

<table>
<tr><th colspan="2">What we do</th><th>What we don't do</th></tr>
<tr><td>Align Compensation with prudent risk taking and stakeholder interests</td><td>• A significant portion of senior management pay-at-risk delivered as long-term incentive to align compensation with the risk time horizon and motivate senior management to create long-term value and remain accountable for decisions with longer-term risk exposure
• There is an upper limit on individual annual incentive awards
• Clawback provisions in place stating that employees committing willful acts of dishonesty, fraud or theft, or otherwise terminated with cause shall be required to pay back all amounts paid to the participant under the annual and/or long-term incentive plans in the preceding 12 months</td><td rowspan="5">• Set performance targets which are not sufficiently challenging, and/or provide for excessively high potential payouts
• Adjust performance targets or goals downward without justification and Board approval
• Establish overall levels of compensation higher than median that is not reinforced by outstanding Total Fund and organizational performance, or set compensation targets that are outsized relative to peer group
• Award excessive variable pay or severance payments</td></tr>
<tr><td>Set performance targets and goals that are demonstrably linked to the interests of Ontario's teachers</td><td>• Develop comprehensive balanced scorecards that measure progress against strategic objectives at the enterprise level and division/department level, including risk management initiatives</td></tr>
<tr><td>Establish a risk budget to set value add performance goals that impact all employees' incentive pay, to varying degrees</td><td>• At the beginning of each year, board members approve the active risk allocations for the total-fund and each investment department, which in turn establish expected annual dollar value add performance goals (i.e., dollars earned versus benchmark dollars earned) for the year
• Actual investment performance at the total-fund and departmental levels (measured in dollars of value add) is compared against the expected performance goals</td></tr>
<tr><td>Compensation and performance are benchmarked against peer organizations</td><td>• Establish a peer group to allow stakeholders to make a reasonable comparison of pay and performance across the group</td></tr>
<tr><td>Align Compensation with risk management objectives</td><td>• Model and test our annual and long-term incentives under multiple performance scenarios in order to ensure that the payouts align with expected performance outcomes</td></tr>
</table>

Our compensation framework meets or exceeds the Principles for Sound Compensation Practices established by the Financial Stability Board and endorsed by the G20 nations.

Independent advisors

Ontario Teachers' management engages with various external consultants to assist with the review of design and competitiveness of compensation, benefits, and retirement programs, as needed.

In 2021, Ontario Teachers' reviewed its compensation program. The overall design of the program is competitive, continues to reinforce our pay-for-performance philosophy, and supports our evolving strategy. Some enhancements were approved that will come into effect January 2022 and January 2023.

The Human Resources & Compensation Committee of the Board engaged Hugessen Consulting Inc. as needed, to assist in reviewing compensation recommendations to the Board.

Elements of our compensation program – Overview

Our compensation program comprises base salary, annual incentives, and long-term incentives for non-bargaining unit employees.

Compensation structures for bargaining unit staff have been negotiated into the collective agreement. The four-year agreement runs through to December 31, 2021.

Base salary

Base salaries compensate employees for fulfilling their day-to-day responsibilities and are reviewed annually. Each employee at Ontario Teachers' is assigned a job level with a corresponding salary grade that is designed to provide market-competitive pay commensurate with the employee's responsibilities, demonstrated skills, knowledge, and track record of performance.

Annual Incentive Plan (AIP)

Our AIP rewards employees with cash awards based on business and individual performance results relative to goals. Weightings for each element vary by level for Investment, Corporate, and Member Services employees.

Ontario Teachers' Performance (0x–2x)	+	Division/Department Performance (0x–2x)	+	Individual Performance (0x–2.5x)
15% Culture		**60%** 4-Year Department Value-Added Return (as applicable)		**50%** *What* – Assessment of performance related to business outcomes
70% Growth (incl. 4-Year Total Fund Real Return; 4-Year Total Fund Value Add; 4-Year Total Fund Volatility)		**40%** Annual Strategic Execution		**50%** *How* – Assessment of how employees accomplished the business outcomes
15% Impact				

AIP Payout

Note: Employees may defer up to 100% of AIP to allocate into the fund for up to two years.

Value-add is after deducting management fees, transaction costs and administrative costs allocated to the Active programs (includes annual incentives but does not include long-term incentives).

Long-Term Incentive Plan (LTIP)

Our LTIP rewards employees with cash awards on the basis of total-fund performance and in consideration of their personal performance and potential. The cash awards are allocated at year end to a notional account which is drawn down at a rate of 35% per year. LTIP eligible employees include Investment employees at the Principal level and above; and Corporate and Member Services employees at the Director level and above.

LTIP Pool Funding

40% 4-Year Total-Fund Value-Add + **40%** 4-Year Total-Fund Real Return + **20%** 4-Year Total-Fund Volatility

LTIP Allocation to Employees

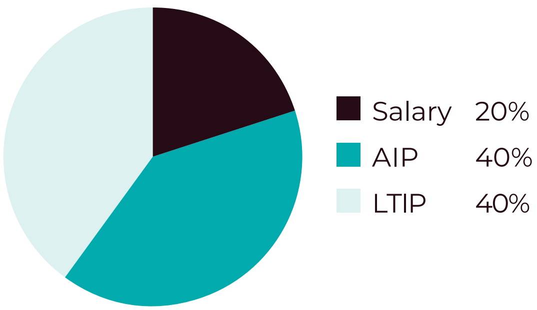
[Account Balance x 1 + Total-Fund Annual Rate of Return + Annual LTIP Allocation ($)] - 35% Current-Year Payment = Account Balance

Mix of pay

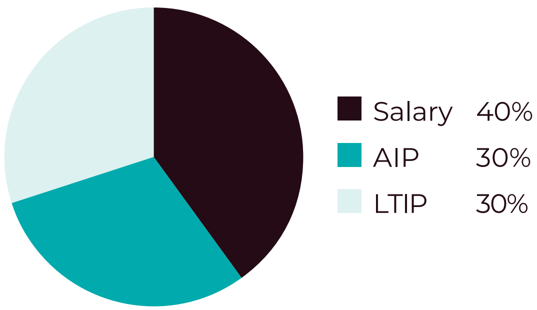
Investment, Corporate, and Member Services employees have different percentages of their compensation tied to our variable pay programs. Recognizing their direct influence on investment results and our objective of linking pay to performance, investment professionals and our CEO have a greater percentage of their total direct compensation (base salary, annual incentive, and long-term incentive) tied to our variable pay programs. Detailed below is the target total direct compensation mix for our NEOs. The actual pay mix realized may be different depending upon Ontario Teachers', divisional, and investment performance and the NEOs' individual performance.

TARGET PAY MIX

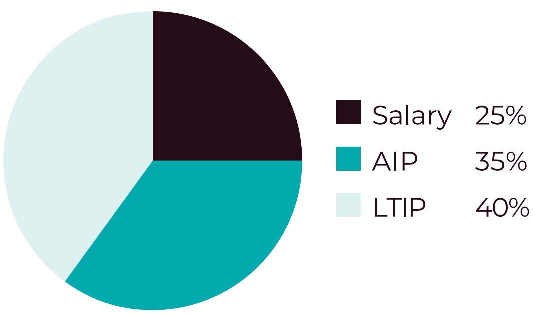
President and CEO; and
Executive Managing Director and Chief Investment Officer



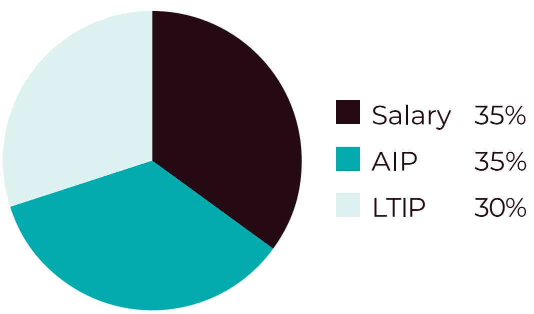
Chief Financial Officer



Senior Managing Director, Equities



Senior Managing Director, Asia Pacific



Benefits and other compensation

Ontario Teachers' provides a competitive benefits program that includes life insurance, disability, health and dental benefits, vacation and other leave policies, wellness programs and an Employee-Family Assistance Program. Ontario Teachers' retirement benefit for Canadian employees is a defined benefit pension plan described on page 82. Employees based outside of Canada are eligible to participate in local contributory pension plans based on local regulations and market practices.

Termination arrangements for the NEOs

There are no named executive officers with open-ended termination arrangements. In the event of termination without cause, Ontario Teachers' would offer a severance package commensurate with those offered to others of similar seniority who may have similarly been terminated without cause, in exchange for a full and final release.

In the event of termination with cause or resignation, the employee forfeits all incentives, unvested awards, and benefits.

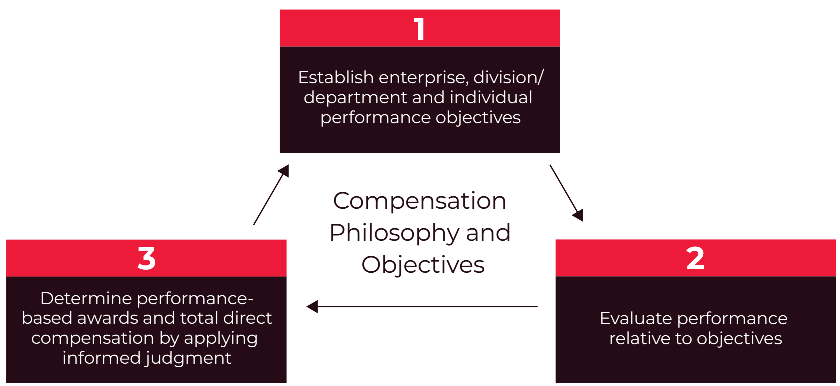
The treatment under each of the termination scenarios is governed by the Annual and Long-Term Incentive Plan documents.

	Annual Incentive Plan	Long-term Incentive Plan
Resignation	Forfeiture	Forfeiture
Retirement (as defined by the compensation plan)	Pro-rated award reflecting the period of active employment during the calendar year	Notional account balance vests progressively over three years following retirement
Termination without Cause	Pro-rated award reflecting a reasonable notice period	Continued vest during period of reasonable notice
Termination with Cause	Forfeiture	Forfeiture

Compensation decisions made in 2022 reflecting 2021

How decisions are made

At Ontario Teachers', compensation decisions are guided by our compensation philosophy and business outcomes. The following illustration provides an overview of the annual process for determining compensation for the CEO and senior officers:



Annually, the board members and the CEO agree on the key objectives for Ontario Teachers' overall performance scorecard and the CEO's individual performance goals. At the end of the year, the board members evaluate the CEO's performance relative to the annual objectives and assign an overall performance rating. The CEO's individual performance rating, Ontario Teachers' overall performance and total-fund performance are all considered when the board determines the CEO's total direct compensation.

Similar to the CEO, senior officers and the CEO agree on individual performance goals for the year and at year-end each senior officer is evaluated relative to these goals. The outcome of individual goals and other performance measures, as previously noted, informs the total direct compensation recommendations for senior officers which are presented to board members for approval.

Enterprise objectives are cascaded down from the CEO and senior officers to all employees annually. Check-ins between employees and respective managers are ongoing throughout the year. During the annual review cycle, guiding principles are communicated to leaders to maximize fair and equitable decisions across levels, gender, etc., as they relate to stated objectives and performance outcomes. Analysis of pay recommendations for employees is conducted and reviewed over multiple dimensions at various levels of senior leadership prior to overall approval.

Ontario Teachers' performance

To ensure we stay focused on our mission to provide outstanding service and retirement security to our members today and tomorrow, we prepare an enterprise scorecard comprising goals and measures for four categories (total-fund performance, service excellence, operational performance, and employee engagement). The scorecard ensures a balanced view of key areas that will drive employees to achieve our short, medium, and long-term goals.

At the end of the year, the scorecard is evaluated, and the results are presented to board members for approval. In 2021, employees delivered combined strong performance with a multiplier of 1.66 out of 2.0.

Total-fund performance

The table below summarizes at the total-fund level, the performance for 2018 through to 2021 relative to the targets as approved by the board. Over the four-year cumulative period, staff outperformed relative to real return and volatility goals however were unsuccessful in meeting our value-add performance target.

Year	Total-Fund Value Add	Total-Fund Real Return	Total-Fund Volatility
2018 to 2021	Below Target	Exceptional	Exceptional

Division/department performance

We also assess the strategic execution of each of our divisions across the organization against their respective annual objectives. Overall, employees delivered performance above target, with an average divisional/departmental multiplier of 1.67 out of 2.0.

For our Investment departments, a portion of their annual objectives include four-year value add performance relative to the return on risk allocation.

Year	Equities	Infrastructure and Natural Resources	Capital Markets
2018 to 2021	Exceptional	Above Target	Below Target

Executive compensation

The compensation table represents disclosure of base salary, annual incentive, long-term incentive and other compensation earned in 2019, 2020 and 2021 by the CEO, the CFO and the three other most highly compensated executives, excluding subsidiary companies.

Name and Principal Position	Year	Base Salary[1] A	Annual Incentive B	Long-Term Incentive Allocation C	Total Direct Compensation[2] A+B+C	Long-Term Incentive Paid D	Other[3] E	Change in Pension Value F	Total Compensation[4] A+B+D+E
Jo Taylor President and CEO[5] 2019 amounts are in GBP	2021	$550,000	$1,630,000	$3,420,000	$5,600,000	$4,729,810	$1,099	$168,800	$6,910,909
	2020	556,346	1,461,100	3,200,000	5,217,446	3,060,920	1,077		5,079,444
	2019	355,741	1,014,800	2,280,000	3,650,541	1,597,000			2,967,541
Tim Deacon CFO	2021	320,192	525,000	1,100,000	1,945,192	968,300	100,674	103,200	1,914,167
Ziad Hindo EMD and CIO	2021	475,000	1,352,800	3,000,000	4,827,800	4,151,400	949	0[6]	5,980,149
	2020	469,231	1,181,100	2,700,000	4,350,331	2,658,600	921		4,309,852
	2019	457,500	1,378,200	2,700,000 700,000[7]	5,235,700	2,435,400	861		4,271,961
Karen Frank SMD, Equities All amounts are reported in GBP	2021	350,000	919,200	1,750,000	3,019,200	1,481,300		47,937[8]	2,750,500
	2020	90,192	275,000	1,300,000	1,655,192	694,800	950,000		2,009,992
Ben Chan SMD, Asia-Pacific All amounts are reported in HKD	2021	5,500,000	9,621,200	12,500,000	27,621,200	12,632,400			27,753,600
	2020	5,468,952	8,183,200	10,600,000	24,252,152	7,078,500	1,050,000		21,780,652
	2019	5,328,763	9,869,900	13,000,000	28,198,663	5,437,100	2,100,000		22,735,763

1 Bi-weekly payroll resulted in 27 payments for 2019 versus the typical 26 bi-weekly payments. In addition, following the annual compensation review cycle in March 2020 and the onset of the global pandemic, Ontario Teachers' elected to freeze salaries on a go-forward basis for the named executive officers and other senior executives reporting to either the President and CEO or the Chief Investment Officer up to March 2022.

2 When making compensation decisions, the board and management focus on Total Direct Compensation (TDC) which reflects base salary, annual incentive and long-term incentive allocation.

3 Other compensation includes group term life insurance and accidental death & dismemberment. Ben Chan joined Ontario Teachers' in June 2018 and received a signing bonus of 5,250,000 HKD paid in five installments during his first three years. Tim Deacon joined Ontario Teachers' in April 2021 and received a signing bonus of 100,000 CAD. Karen Frank joined Ontario Teachers' in October 2020 and received a signing bonus of 950,000 GBP.

4 Change in pension value and long-term incentive allocation are not included in total compensation.

5 Effective January 1, 2020 Jo Taylor was appointed as President and CEO as Ron Mock retired from the organization December 31, 2019.

6 Given the change in the actuarial present value of the accumulated benefits is a negative number, it has been reported as zero for annual compensation purposes. The aggregate change in the actuarial present value of the accumulated benefits from January 1, 2021 to December 31, 2021 was ($657,500) for Ziad Hindo.

7 Received a discretionary Long-Term Incentive allocation in December 2019.

8 Received employer pension contributions as cash-in-lieu.

Notional account balances

The table below outlines the notional account balances for each NEO.

Name and Principal Position	Opening Balance	2021 Rate of Return	Long-Term Incentive Allocation	2022 Payment	Balance
Jo Taylor[1] President and CEO	$9,085,559	11.1%	$3,420,000	$4,729,810	$8,784,247
Tim Deacon CFO	1,500,000	11.1%	1,100,000	968,300	1,798,200
Ziad Hindo EMD and CIO	7,975,858	11.1%	3,000,000	4,151,400	7,709,778
Karen Frank SMD, Equities All amounts are reported in GBP	2,234,200	11.1%	1,750,000	1,481,300	2,750,896
Ben Chan SMD, Asia-Pacific All amounts are reported in HKD	21,235,485	11.1%	12,500,000	12,632,400	23,460,224

1 Notional account for Jo Taylor reflects prior account in GBP before transferring to Canada, all represented in Canadian dollars.

Retirement benefits

Ontario Teachers' Canadian employees participate in the Public Service Pension Plan (PSPP) and Public Service Supplementary Plan (PSSP), or the OPSEU Pension Plan, all of which are defined benefit plans. Employees with pensionable earnings in excess of Income Tax Act (ITA) regulations also participate in a non-registered, unfunded Supplemental Employee Retirement Plan (SERP).

Employees based outside of Canada are eligible to participate in local contributory pension plans based on local regulations and market practices.

The table below outlines the estimated present value of the total Canadian pension from all sources (PSPP, PSSP and SERP) and estimated annual Canadian pension benefits at age 65 for the CEO, the CFO, the CIO.

Name and Principal Position	Projected Years of Service at Age 65	Estimated Total Annual Pension Benefit at Age 65	Present Value of Total Pension January 1, 2021	2021 Compensatory Annual Change in Pension Value	2021 Non-Compensatory[1] Annual Change in Pension Value	Present Value of Total Pension December 31, 2021
Jo Taylor[2] President and CEO	6	$66,800	$201,400	$191,800	($23,000)	$370,200
Tim Deacon CFO	22	323,400	–	129,300	(26,100)	103,200
Ziad Hindo EMD and CIO	38	553,300	4,288,500	66,800	(724,300)	3,631,000

1 Includes interest on liabilities and the impact of any assumption changes.

2 Represents Jo Taylor's participation in the Canadian retirement benefits beginning January 1, 2020.

The values shown above are estimated based on assumptions and represent entitlements that may change over time.

Financial reporting

The Financial reporting section highlights sections of the financial statements that management views as key to understanding the financial position of Ontario Teachers'.

Included in the pages preceding the consolidated financial statements are three letters that describe the responsibility of management, the auditors and the actuaries:

- Management's Responsibility for Financial Reporting – identifies that management is responsible for preparation of the financial statements. The financial statements are prepared according to Canadian accounting standards for pension plans. The board, which is independent from management, has ultimate responsibility for the financial statements and is assisted in its responsibility by the Audit & Actuarial Committee.
- Independent Auditor's Report – the formal opinion issued by an external auditor on the consolidated financial statements.
- Actuaries' Opinion – identifies that valuation methods are appropriate, data is sufficient and reliable and the assumptions are in accordance with accepted actuarial practices. The actuarial valuation is based on membership data, actuarial and accounting standards, and long-term interest rates.

Financial statement valuation

The financial statement valuation measures the fair value of the plan's net assets available for benefits and pension liabilities at a point in time. The financial statement valuation provides a snapshot of the financial health of the plan as it does not assume any future contributions and does not project the cost of benefits that current members have not yet earned. The financial statement valuation is therefore not considered an indicator of the long-term sustainability of the plan and not used by the plan sponsors to set contribution rates and benefit levels.

Methods and assumptions used for the financial statement valuation

The financial statement valuation is prepared in accordance with guidance from Chartered Professional Accountants of Canada (CPA Canada). The pension liabilities, prepared by an independent actuary, take into account pension credit earned to date by all plan members and contributions already received by the plan. Valuation techniques, estimates and pension liabilities are described further in the notes to the consolidated financial statements.

The actuarial assumptions used in determining the pension liabilities reflect best estimates of future economic and non-economic factors proposed by management and approved by the board. Actual experience typically differs from these assumptions, and the differences are recognized as experience gains and losses in future years.

The discount rate for the financial statements is based on market rates, as at the valuation date, of bonds issued by the Province of Ontario, which have characteristics similar to Ontario Teachers' liabilities. The discount rate is determined by using a cash flow-based estimation methodology which applies a weighted average discount rate that reflects the estimated timing and amount of benefit payments. The discount rate used is 2.50% (2.00% in 2020). Further details on the methods and assumptions used can be found in note 4 to the consolidated financial statements.

Financial position as at December 31, 2021

Ontario Teachers' ended 2021 with a financial statement deficit of $15.9 billion, a decrease from the deficit of $36.1 billion at the end of 2020. The deficit represents the difference between net assets available for benefits of $241.6 billion and accrued pension benefits of $257.5 billion at year end.

YEAR-END FINANCIAL POSITION
As at December 31 (Canadian $ millions)

	2021	2020
Net assets available for benefits	**$241,582**	$221,241
Accrued pension benefits	**257,482**	257,330
Deficit	**$ (15,900)**	$ (36,089)

During 2021, net assets available for benefits increased by $20.3 billion. Net investment income of $24.7 billion and contributions of $3.4 billion increased net assets available for benefits, while benefits paid of $6.9 billion and administrative expenses of $0.8 billion decreased the net assets available. See Investments section of the Management's Discussion & Analysis for details of investment returns.

NET ASSETS AVAILABLE FOR BENEFITS
For the year ended December 31 (Canadian $ millions)

	2021	2020
Net assets available for benefits, beginning of year	**$221,241**	$207,412
Net investment income	**24,711**	18,011
Contributions	**3,354**	3,232
Benefits	**(6,909)**	(6,700)
Administrative expenses	**(815)**	(714)
Increase in net assets available for benefits	**20,341**	13,829
Net assets available for benefits, end of year	**$241,582**	$221,241

Accrued pension benefits increased by $0.1 billion during the year to $257.5 billion. Changes in actuarial assumptions decreased the accrued pension benefits amount by $9.3 billion. Benefits paid during 2021 of $6.9 billion include the addition of 5,225 retirement and disability pensions and 1,207 survivor pensions during 2021, as well as a 2.4% cost-of-living increase.

ACCRUED PENSION BENEFITS
For the year ended December 31 (Canadian $ millions)

	2021	2020
Accrued pension benefits, beginning of year	**$257,330**	$224,669
Interest on accrued pension benefits	**5,176**	5,629
Benefits accrued	**9,826**	7,690
Benefits paid	**(6,907)**	(6,699)
Changes in actuarial assumptions and methods	**(9,256)**	27,138
Experience losses/(gains)	**1,313**	(1,097)
Net increase in accrued pension benefits	**152**	32,661
Accrued pension benefits, end of year	**$257,482**	$257,330

Fair value hierarchy

Ontario Teachers' investments and investment-related liabilities are stated at fair value. The objective of fair value determination is to estimate an exit price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants. Valuation techniques are employed in order to measure fair value. As described in note 1c to the consolidated financial statements, these techniques utilize inputs such as prices for market transactions, discount rates, contractual or expected future cash flows and other relevant factors that impact the assessment of fair value.

As required under Canadian accounting standards, Ontario Teachers' has classified and disclosed its fair value measurements into one of three categories based upon the degree of observable inputs used in their determination. Level 1 inputs consist of quoted prices in active markets for identical assets or liabilities; Level 2 inputs are derived from observable prices but do not meet the Level 1 criteria, while Level 3 inputs are unobservable. If different levels of inputs are used to measure the fair value of an investment, the classification within the hierarchy is based upon the lowest level input that is significant to the fair value measurement.

Level 1 net investments comprise government bonds and publicly traded equities, including these securities that are sold but not yet purchased, which are valued using quoted prices. Examples of Level 2 net investments include marketable corporate bonds that are valued using quoted prices from less actively traded markets and securities purchased under agreements to resell and securities sold under agreements to repurchase, which are valued using discounted cash flows and observable market yields. Examples of Level 3 investments include real assets such as real estate and infrastructure, non-publicly traded equities, and natural resource investments, which are valued using appropriate techniques that involve the use of significant unobservable inputs such as forecasted cash flows or other information that is specific to the entity. Management's assessment of the sensitivity to changes in assumptions for investments in Level 3 is also presented.

The table below shows Ontario Teachers' net investments based on the fair value hierarchy. Further details of each category can be found in note 2a to the consolidated financial statements.

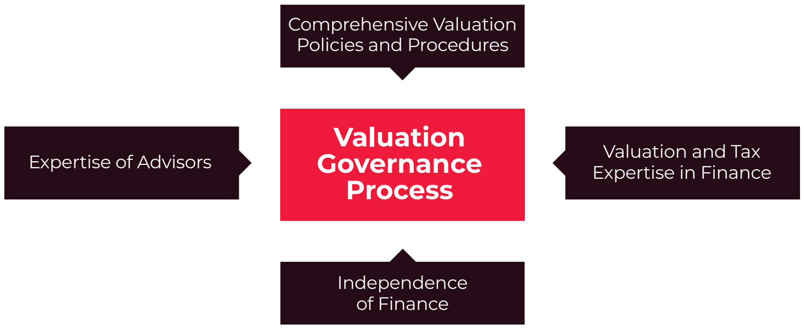
As at December 31, 2021 (Canadian $ millions)	Level 1	Level 2	Level 3	**Total**
Equity	$ 24,613	$ 2,590	$ 59,598	**$ 86,801**
Fixed income	86,863	16,383	824	**104,070**
Alternative investments	–	–	23,409	**23,409**
Inflation sensitive	1,143	–	9,432	**10,575**
Real assets	559	154	57,261	**57,974**
Investment-related receivables	2,164	36,428	52	**38,644**
Investment-related liabilities	(18,651)	(61,842)	(2,017)	**(82,510)**
Net investments	$ 96,691	$ (6,287)	$148,559	**$238,963**

Valuation of Level 3 investments

The valuation of our investments is guided by IFRS 13: Fair Value Measurement. This standard provides guidance on fair value measurements including the definition of fair value. The valuation of Ontario Teachers' Level 3 investments is subject to a strong governance process which includes:

- Comprehensive valuation policies and procedures for all asset classes
- In-house valuation and tax expertise within our Finance team
- Independence of our Finance team from the Investments team. We also maintain appropriate segregation of duties, with most Level 3 valuations requiring three levels of Finance sign off
- Use of independent external valuation experts and real estate appraisers provide expertise, knowledge and familiarity with local market conditions, market transactions and industry trends
- Semi-annual reporting to the Audit & Actuarial Committee on Level 3 investment valuations
- Year-end valuations are subject to audit by external auditor valuation specialists
- Additionally the valuation of Level 3 investments is subject to periodic internal audits.

VALUATION GOVERNANCE PROCESS



See note 1c to the consolidated financial statements for further details regarding the valuation of investments.

Effective oversight and controls

Disclosure and financial reporting controls

We take guidance from National Instrument 52-109, Certification of Disclosure in Issuers' Annual and Interim Filings, issued by the Canadian Securities Administrators, as part of our commitment to good governance practices. The President and CEO, and the Chief Financial Officer are responsible for establishing and maintaining disclosure controls and procedures, and internal control over financial reporting.

We have designed disclosure controls and procedures to provide reasonable assurance that material information related to the plan is gathered and reported to management in order to allow timely decisions regarding public disclosure. We evaluated our disclosure controls and procedures and concluded as at December 31, 2021, that they are effective.

We have also designed internal control over financial reporting, using the Integrated Framework issued in 2013 by the Treadway Commission's Committee of Sponsoring Organizations (the COSO Framework), to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with Canadian Generally Accepted Accounting Principles. We have evaluated the effectiveness of the plan's internal controls over financial reporting and concluded they are effective as at year-end.

Protecting audit quality and integrity

A key oversight activity of audit committees is annually assessing the effectiveness of the external auditor. This helps audit committees meet their responsibility to make informed recommendations to the board on whether or not to reappoint the external auditor. Ontario Teachers' has conducted assessments annually. Ontario Teachers' Audit & Actuarial Committee recommended, and the board approved, the reappointment of the external auditor for 2021.

Ontario Teachers' and other corporate governance advocates have expressed concern over the years about accounting firms that audit public companies and also earn substantial revenue from those companies for non-audit consulting services. We believe that such consulting fees can compromise, or appear to compromise, the integrity of the audit function.

We strive to minimize our own use of consulting services involving the plan's auditor and we disclose the total amount paid for such services. In 2021, fees paid to Deloitte Touche Tohmatsu Limited (Deloitte), of which the Canadian firm is Ontario Teachers' auditor, totaled $16.8 million ($16.1 million in 2020), of which $14.6 million was for audit activities and $2.2 million was for non-audit services. Of the $2,205,000 paid for non-audit services, approximately $305,000 related to the plan, $475,000 related to subsidiaries audited by Deloitte and the balance of $1,425,000 was for subsidiaries not audited by Deloitte. Of the $475,000 for non-audit services paid by subsidiaries audited by Deloitte, $120,000 was paid to Deloitte (Canada), and $355,000 was paid to Deloitte firms outside of Canada, which are considered to have lower risk of impairing the independence of Ontario Teachers' auditor.

Management's responsibility for financial reporting

The consolidated financial statements of the Ontario Teachers' Pension Plan Board (Ontario Teachers') have been prepared by management, which is responsible for the integrity and fairness of the data presented, including the many amounts which must, of necessity, be based on estimates and judgments. The accounting policies followed in the preparation of these consolidated financial statements conform to Canadian accounting standards for pension plans. Financial information presented throughout the annual report is consistent with the consolidated financial statements.

Systems of internal control and supporting procedures are maintained to provide assurance that transactions are authorized, assets safeguarded and proper records maintained. These controls include quality standards in hiring and training of employees, a code of conduct, the establishment of an organizational structure that provides a well-defined division of responsibilities and accountability for performance, and the communication of policies and guidelines through the organization.

Ultimate responsibility for the consolidated financial statements rests with the members of Ontario Teachers' board of directors (the board). The board is assisted in its responsibilities by the Audit & Actuarial Committee (the Committee), consisting of five board members who are not officers or employees of the Ontario Teachers'. In addition, the Committee reviews the recommendations of the internal and external auditors for improvements in internal control and the action of management to implement such recommendations. In carrying out its duties and responsibilities, the Committee meets regularly with management and with both the external and internal auditors to review the scope and timing of their respective audits, to review their findings and to satisfy itself that their responsibilities have been properly discharged. This Committee reviews the consolidated financial statements and recommends them for approval by the board.

Ontario Teachers' external auditor, Deloitte LLP, is directly accountable to the Audit & Actuarial Committee and has full and unrestricted access to the Committee. They discuss with the Committee their audit and related findings as to the integrity of the Ontario Teachers' financial reporting and the adequacy of internal control systems. Ontario Teachers' external auditor has conducted an independent examination of the consolidated financial statements in accordance with Canadian generally accepted auditing standards, performing such tests and other procedures as they consider necessary to express the opinion in their Independent Auditor's Report.

Jo Taylor
President and
Chief Executive Officer

Tim Deacon
Chief Financial Officer

March 3, 2022

Independent auditor's report

To the Administrator of
Ontario Teachers' Pension Plan:

Opinion

We have audited the consolidated financial statements of Ontario Teachers' Pension Plan Board ("Ontario Teachers'"), which comprise the consolidated statement of financial position as at December 31, 2021, and the consolidated statements of changes in net assets available for benefits, changes in accrued pension benefits, and changes in deficit for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of Ontario Teachers' as at December 31, 2021, and the changes in its net assets available for benefits and changes in its accrued pension benefits for the year then ended in accordance with Canadian accounting standards for pension plans.

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards ("Canadian GAAS"). 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 are independent of Ontario Teachers' in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other information

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

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon. In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

We obtained the Annual Report prior to the date of this auditor's report. If, based on the work we have performed on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact in this auditor's report. 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 Ontario Teachers' 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 Ontario Teachers' or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing Ontario Teachers' 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 GAAS 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 GAAS, 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 Ontario Teachers' 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 Ontario Teachers' 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 Ontario Teachers' 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.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within Ontario Teachers' to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

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.

Deloitte LLP
Chartered Professional Accountants
Licensed Public Accountants
Toronto, Ontario

March 3, 2022

Actuaries’ opinion

Mercer (Canada) Limited was retained by the Ontario Teachers’ Pension Plan Board (Ontario Teachers’) to perform an actuarial valuation of the going concern liabilities in respect of Ontario Teachers’ Pension Plan (the Plan) as at December 31, 2021, for inclusion in Ontario Teachers’ consolidated financial statements. As part of the valuation, we examined the Plan’s recent experience with respect to the non-economic assumptions and presented our findings to the board members of Ontario Teachers’ (the board).

The valuation of actuarial liabilities in respect of the Plan was based on:

- membership data provided by Ontario Teachers’ as at August 31, 2021;
- methods prescribed by Section 4600 of the Chartered Professional Accountants Canada Handbook for pension plan financial statements;
- real and nominal interest rates on long-term bonds at the end of 2021;
- assumptions about future events (for example, future rates of inflation and future retirement rates) which have been communicated to us as the board’s best estimate of these events; and
- information obtained from the Ontario Ministry of Labour and other published data, where applicable, on wage rate changes.

The objective of the consolidated financial statements is to fairly present Ontario Teachers’ financial position on December 31, 2021, as a going concern. This is different from the funding valuation (the actuarial valuation required by the Pension Benefits Act (Ontario)), which establishes a prudent level for future contributions.

While the actuarial assumptions used to estimate liabilities for Ontario Teachers’ consolidated financial statements represent the board’s best estimate of future events and market conditions at the end of 2021, and while in our opinion these assumptions are reasonable, the Plan’s future experience will inevitably differ, perhaps significantly, from the actuarial assumptions. Any differences between the actuarial assumptions and future experience will emerge as gains or losses in future valuations and will affect the financial position of the Plan at that time.

We have tested the data for reasonableness and consistency, and we believe it to be sufficient and reliable for the purposes of the valuation. We also believe that the methods employed in the valuation are appropriate for the purposes of the valuation, and that the assumptions used in the valuation are in accordance with accepted actuarial practice in Canada. Our opinions have been given, and our valuation has been performed, in accordance with accepted actuarial practice in Canada.

Scott Clausen, F.C.I.A., F.S.A.

Lise Houle, F.C.I.A., F.S.A.

March 3, 2022

Consolidated statement of financial position

As at December 31 (Canadian $ millions)	2021	2020
Net assets available for benefits		
ASSETS		
Cash	**$ 484**	$ 283
Receivable from the Province of Ontario (note 3)	**3,234**	3,179
Receivable from brokers	**26**	655
Investments (note 2)	**321,473**	274,706
Premises and equipment	**91**	122
	325,308	278,945
LIABILITIES		
Accounts payable and accrued liabilities	**693**	584
Due to brokers	**523**	340
Investment-related liabilities (note 2)	**82,510**	56,780
	83,726	57,704
Net assets available for benefits	**$ 241,582**	$ 221,241
Accrued pension benefits and deficit		
Accrued pension benefits (note 4)	**$ 257,482**	$ 257,330
Deficit	**(15,900)**	(36,089)
Accrued pension benefits and deficit	**$ 241,582**	$ 221,241

The accompanying notes are an integral part of these Consolidated Financial Statements.

On behalf of the Plan administrator:

Steve McGirr
Chair

Kathleen O'Neill
Board Member

Consolidated statement of changes in net assets available for benefits

For the year ended December 31 (Canadian $ millions)	2021	2020
Net assets available for benefits, beginning of year	**$ 221,241**	$ 207,412
Investment operations		
Net investment income (note 6)	**24,711**	18,011
Administrative expenses (note 11a)	**(732)**	(631)
Net investment operations	**23,979**	17,380
Member service operations		
Contributions (note 9)	**3,354**	3,232
Benefits (note 10)	**(6,909)**	(6,700)
Administrative expenses (note 11b)	**(83)**	(83)
Net member service operations	**(3,638)**	(3,551)
Increase in net assets available for benefits	**20,341**	13,829
Net assets available for benefits, end of year	**$ 241,582**	$ 221,241

The accompanying notes are an integral part of these Consolidated Financial Statements.

Consolidated statement of changes in accrued pension benefits

For the year ended December 31 (Canadian $ millions)	2021	2020
Accrued pension benefits, beginning of year	**$ 257,330**	$ 224,669
Increase in accrued pension benefits		
Interest on accrued pension benefits	**5,176**	5,629
Benefits accrued	**9,826**	7,690
Changes in actuarial assumptions and methods (note 4a)	**–**	27,138
Experience losses (note 4c)	**1,313**	–
	16,315	40,457
Decrease in accrued pension benefits		
Benefits paid (note 10)	**6,907**	6,699
Changes in actuarial assumptions and methods (note 4a)	**9,256**	–
Experience gains (note 4c)	**–**	1,097
	16,163	7,796
Net increase in accrued pension benefits	**152**	32,661
Accrued pension benefits, end of year	**$ 257,482**	$ 257,330

The accompanying notes are an integral part of these Consolidated Financial Statements.

Consolidated statement of changes in deficit

For the year ended December 31 (Canadian $ millions)	2021	2020
Deficit, beginning of year	**$ (36,089)**	$ (17,257)
Increase in net assets available for benefits	**20,341**	13,829
Net increase in accrued pension benefits	**(152)**	(32,661)
Deficit, end of year	**$ (15,900)**	$ (36,089)

The accompanying notes are an integral part of these Consolidated Financial Statements.

Notes to consolidated financial statements

For the year ended December 31, 2021

Description of Ontario Teachers' and the Plan

The following description of the Ontario Teachers' Pension Plan Board (Ontario Teachers') and Ontario Teachers' Pension Plan (the Plan) is a summary only. For more complete information, reference should be made to the *Teachers' Pension Act* (Ontario) (the TPA) as amended and other governing documents.

(a) General

The Plan is a contributory defined benefit pension plan co-sponsored by the Province of Ontario (the Province) and Ontario Teachers' Federation (OTF) (the co-sponsors). The principal terms of the Plan are set out in Schedule 1 to the TPA.

The Plan is registered with the Financial Services Regulatory Authority of Ontario (FSRA) and under the *Income Tax Act* (Canada) (the ITA) (registration number 0345785) as a Registered Pension Plan (RPP) which is exempt from income taxes in Canada. The Plan may be liable for taxes on income earned in other jurisdictions.

The Plan is administered and the investments are managed by Ontario Teachers'. Under the TPA, Ontario Teachers' is constituted as a corporation without share capital to which the *Corporations Act* (Ontario) does not apply.

Ontario Teachers' is overseen by independent, professional board members (the board). The co-sponsors each appoint five board members and they jointly select the chair.

(b) Funding

Plan benefits are funded by contributions and investment earnings. Contributions are made by active members of the Plan and are matched by either the Province or designated employers. The determination of the value of the accrued pension benefits and required contributions is made on the basis of periodic actuarial valuations.

(c) Retirement pensions

A retirement pension is available based on the number of years of credited service, the average of the best five annual salaries and the age of the member at retirement. A member is eligible for a reduced retirement pension from age 50. An unreduced retirement pension is available from age 65 or when the sum of a member's age and qualifying service equals 85 if earlier.

(d) Disability pensions

A disability pension is available at any age to a member with a minimum of 10 years of qualifying service, who becomes disabled while employed in education and who ceases to be employed in education as a result of the disability. The type of disability pension is determined by the extent of the disability.

(e) Death benefits

Death benefits are available on the death of an active member and may be available on the death of a retired member. The benefit may take the form of a survivor pension, lump-sum payment or both.

(f) Escalation of benefits

Pension benefits are adjusted each year for inflation, subject to an upper limit of 8% and a lower limit of 0% in any one year with any excess above or below those limits carried forward. In accordance with the plan terms, the annual adjustment is made each January and is determined as the ratio of the 12-month average of the Consumer Price Index (CPI) ending the most recent September over the 12-month average of CPI ending the prior September (the CPI ratio).

For pension credit earned up to December 31, 2009, inflation protection is 100% of the CPI ratio. Pension credit earned after December 31, 2009, is subject to conditional inflation protection. For pension credit earned between January 1, 2010, and December 31, 2013, the minimum inflation protection level is set at 50% of the CPI ratio. There is no minimum level of inflation protection for pension credit earned after 2013. Inflation protection levels stated in the most recent funding valuation filing remain in effect until a subsequent filing updates the amount. Inflation protection of up to 100% for pension credit earned after 2009 can be restored on a go-forward basis, depending on the Plan's funded status.

(g) Retirement Compensation Arrangement

Restrictions in the ITA and its regulations on the payment of certain benefits from the RPP for periods of service after 1991 may impact some Plan members. To address affected members, the Retirement Compensation Arrangement (the RCA) was established by agreement between the co-sponsors as a supplementary plan to provide for these benefits. Examples of these benefits include: (1) members of the Plan who retired with average earnings above $175,279 (CPP-exempt members $162,278) in 2021 and $167,310 (CPP-exempt members $154,611) in 2020; and (2) members whose pensions would require a larger reduction for early retirement to comply with the ITA limitations than the Plan would impose. Because the RCA is a separate trust, the net assets available for benefits and accrued benefits and deficit of the RCA are not included in these consolidated financial statements.

Note 1. Summary of significant accounting policies

(a) Basis of presentation

These consolidated financial statements are prepared in Canadian dollars, Ontario Teachers' functional currency, in accordance with the accounting standards for pension plans in Part IV of the Chartered Professional Accountants (CPA) Canada Handbook (Section 4600). Section 4600 provides specific accounting guidance on investments and pension obligations. For accounting policies that do not relate to either investments or pension obligations, Ontario Teachers' must consistently comply with either International Financial Reporting Standards (IFRS) in Part I or Accounting Standards for Private Enterprises in Part II of the CPA Canada Handbook. Ontario Teachers' has elected to comply with IFRS in Part I of the CPA Canada Handbook. To the extent that IFRS in Part I is inconsistent with Section 4600, Section 4600 takes precedence.

Ontario Teachers' real estate investments are either owned or managed on behalf of Ontario Teachers' by The Cadillac Fairview Corporation Limited (CFCL), a wholly owned subsidiary that is consolidated. Ontario Teachers' also consolidates Ontario Teachers' Finance Trust (OTFT) and Ontario Teachers' Cadillac Fairview Properties Trust (CFPT), two entities that support Ontario Teachers' investing and funding strategies, and wholly owned investment holding companies managed by either Ontario Teachers' or CFCL. Investment holding companies that are managed by external parties are recognized as Ontario Teachers' investment assets. Under Section 4600, investment assets, including those over which Ontario Teachers' has control or significant influence, are measured at fair value and presented on a non-consolidated basis.

The consolidated financial statements for the year ended December 31, 2021 were authorized for issue through a resolution of the board on March 3, 2022.

(b) Current and future changes in accounting policies

Interest Rate Benchmark Reform
A comprehensive review of interest rate benchmarks has been undertaken by regulators globally, with a view to either reforming or phasing out certain interbank offered rates (IBORs). As alternatives to IBORs, regulators have recommended markets begin adopting alternative risk-free rates (RFRs). Ontario Teachers' has exposures to IBORs, including USD LIBOR which will cease publication in June 2023.

In response to interest rate benchmark reform, the International Accounting Standards Board (IASB) issued "Interest Rate Benchmark Reform: Phase 2 Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4, and IFRS 16" (Phase 2 amendments) in August 2020, which were adopted by the Accounting Standards Board of Canada (AcSBC) in October 2020, and are effective for periods beginning on or after January 1, 2021. The IASB had previously issued, and the AcSBC adopted, "Interest Rate Benchmark Reform: Amendments to IFRS 9, IAS 39 and IFRS 7" (Phase 1 amendments) in September 2019. The Phase 1 amendments provided guidance related to hedge accounting requirements that had no impact on Ontario Teachers' consolidated financial statements. The Phase 2 amendments address accounting issues that affect financial reporting for financial instruments carried at amortized cost and certain hedge accounting arrangements.

The Phase 2 amendments also require additional disclosures related to interest rate benchmark reform which are provided below. Given our investments and investment-related liabilities are measured at fair value and we do not employ hedge accounting, there was no impact of adopting the Phase 2 amendments on these consolidated financial statements.

As IBORs are widely referenced by large volumes of derivative, loan and bond products, the transition presents a number of risks to Ontario Teachers', and the industry as a whole. These transition risks include market risk, liquidity risk, model risk, operational risk (as processes and systems are changed or newly introduced) and legal risk (as contracts are revised).

We have established an enterprise-wide program to support the transition including identification and mitigation of related risks. We also continue to engage with industry associations to incorporate recent developments into our project plan. Under the program, we have transitioned all non-USD IBOR based contracts and are in the process of transitioning USD LIBOR based contracts before the June 30, 2023 cessation date. We have adhered to the International Swaps and Derivatives Association (ISDA) 2020 IBOR Fallbacks Protocol to facilitate the transition of the contractual rate for derivatives with counterparties who have also adhered to the ISDA Protocol.

The following table outlines Ontario Teachers' derivative and non-derivative exposures to significant IBORs subject to reform that have yet to transition to alternative benchmark rates:

Exposures to Interest Rate Benchmarks Subject to IBOR Reform[1]

As at December 31, 2021 (Canadian $ millions)	USD LIBOR	GBP LIBOR
Non-Derivative Financial Assets	6,299	38
Derivative Notional Amounts	106,684	–

1 USD LIBOR transitioning to SOFR (Secured Overnight Financing Rate) and GBP LIBOR transitioning to SONIA (Sterling Overnight Index Average).

Future changes in accounting policies
Developments and changes in accounting standards from the International Accounting Standards Board are actively monitored. There were no issued IFRS standards, changes in existing standards or new interpretations during the year ended December 31, 2021 requiring adoption that had a material impact on the consolidated financial statements. There are no issued IFRS standards, changes in existing standards or new interpretations with effective dates on or after January 1, 2022 that are expected to have a significant impact on the consolidated financial statements.

(c) Investments

Valuation of investments
Details of investments and investment-related liabilities are presented in note 2a and are stated at fair value. Fair value is the price that would either be received to sell an asset or be paid to transfer a liability in an orderly transaction (i.e., an exit price) between market participants at the measurement date. In an active market, fair value is best evidenced by an independent quoted market price. In the absence of an active market, fair value is determined by valuation techniques that make maximum use of inputs observed from markets.

Fair values of investments are determined as follows:

a. Short-term investments and commercial paper are valued using either quoted closing mid-market prices or discounted cash flows based on current market yields, when quoted closing mid-market prices are unavailable.

b. Bonds, including both nominal and real return, are valued on the basis of quoted closing mid-market prices. If quoted closing mid-market prices are not available, estimated values are calculated using discounted cash flows based on current market yields and comparable securities, as appropriate.

c. Securities sold under agreements to repurchase and securities purchased under agreements to resell are valued using discounted cash flows based on current market yields.

d. Public equities are valued at quoted closing mid-market prices. When the market for a public equity is not active, management assesses whether the quoted prices represent fair value. If not, management adjusts the quoted prices or estimates the fair value by using appropriate techniques including valuation models.

e. Real estate, private equities, infrastructure, timberland, and natural resources are valued based on estimated fair values determined by using appropriate valuation techniques. Where external valuation advisors are engaged by management in the valuation process, management ensures the advisors are independent and assesses whether the assumptions used by the valuation advisors are reasonable and supportable based on current market conditions and industry practice to ensure the valuation captures the business and economic conditions specific to the investment.

   At least 70% of the value of the rental property portfolio covering all product types and geographic regions is independently appraised annually. Real estate properties with a value of over $250 million are independently appraised annually. Private equity funds are recorded at fair value based on net asset values obtained from each of the funds' administrators or funds' managers. These net asset values are reviewed by management.

f. Derivative financial instruments are recorded at fair value using market prices where available. Where quoted market values are not readily available, appropriate alternative valuation techniques are used to determine fair value. In determining fair value, consideration is also given to the credit risk of the counterparty through the calculation of a credit valuation adjustment.

g. Alternative investments, comprised primarily of hedge funds and public equity funds are recorded at fair value based on net asset values obtained from each of the funds' administrators or funds' managers. These net asset values are reviewed by management.

Ontario Teachers' uses a number of valuation techniques to determine the fair value of investments for which observable prices in active markets for identical investments are not available. These techniques include: valuation methodologies based on observable prices for similar investments; present-value approaches where future cash flows generated by the investment are estimated and then discounted using a risk-adjusted discount rate; and option-pricing models. The principal inputs to these valuation techniques are listed below. Values between and beyond available data points may be obtained by interpolation and extrapolation.

- Bond prices – quoted prices are generally available for government bonds, certain corporate bonds and some other debt-related products.

- Credit spreads – where available, credit spreads are derived from prices of credit default swaps or other credit-based instruments, such as debt securities. For others, credit spreads are obtained from pricing services.

- Interest rates – principally derived from benchmark interest rates such as quoted interest rates from central banks and in swap, bond and futures markets. Benchmark interest rates are considered when determining discount rates used in the present-value approaches.

- Foreign currency exchange rates – there are observable markets, both spot and forward, and in futures in all major currencies.

- Public equity and equity index prices – quoted prices are generally readily available for equity shares listed on the stock exchanges and for indices on such shares.

- Commodity prices – many commodities are actively traded in spot, forward and futures markets.

- Price volatilities and correlations – volatility is a measure of the tendency of a specific price to change over time. Correlation measures the degree to which two or more prices or other variables are observed to have moved together historically. Volatility is an input in valuing options and certain products such as derivatives with more than one underlying variable that is correlation-dependent. Volatility and correlation values are either obtained from broker quotations, from pricing services, or are derived from quoted option prices.

- Forecasts on operating cash flows of real estate, private equities, infrastructure, and natural resources – forecasts include assumptions on revenue, revenue growth, expenses, capital expenditures, and capital structure. They are generally provided by either management of the companies in which Ontario Teachers' invests or external managers. Additional assumptions from external parties, for example, external appraisers, may also be used in the forecast.

Ontario Teachers' refines and modifies its valuation techniques as markets and products develop and the pricing for individual products becomes more transparent.

While Ontario Teachers' believes its valuation techniques are appropriate and consistent with other market participants, the use of different techniques or assumptions could result in different estimates of fair value at the balance sheet date. Management's assessment of the sensitivity to changes in assumptions for investments in Level 3 is presented in note 2b. This excludes externally managed fund investments where the underlying assumptions are not available to Ontario Teachers'.

COVID-19, the novel coronavirus, has created global economic disruption and uncertainty. Despite the uncertainty as to the outcome and ultimate effects of the pandemic, Ontario Teachers' has continued to follow a comprehensive valuation process including a best estimate assessment of the impact that the COVID-19 pandemic has had on the valuations of its investments and investment liabilities as of the date of these consolidated financial statements. However, these estimates are sensitive to key assumptions and drivers that are subject to material changes. Please see note 2b for sensitivity analysis. We continue to monitor developments relating to COVID-19 and its implications on Ontario Teachers' investments.

Fair value hierarchy

Investment assets and investment-related liabilities are classified and disclosed in one of the following categories reflecting the significance of inputs used in making the fair value measurement:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 – inputs other than quoted prices included within Level 1 that are observable for the assets or liabilities, either directly or indirectly; and
- Level 3 – unobservable inputs.

If different levels of inputs are used to measure the fair value of an investment, the classification within the hierarchy is based on the lowest level input that is significant to the fair value measurement.

Trade-date reporting

Purchases and sales of investments and derivative contracts are recorded as of the trade date.

Net investment income

Dividend income is recognized based on the ex-dividend date, and interest income and real estate income are recognized on the accrual basis as earned. Net investment income also includes both realized and unrealized gains and losses. Unrealized gains and losses are recognized only when the fair value of the investment is based on a quoted market price in an active market or a valuation using appropriate valuation techniques is performed and approved by management.

Transaction costs

Transaction costs are incremental costs directly attributable to the acquisition, issue or disposal of a financial asset or financial liability. Transaction costs are expensed as incurred. Any transaction amounts received by Ontario Teachers' that are directly attributable to the acquisition of an investment are netted against transaction costs paid.

Management fees

Management and performance fees for external investment managers and administrators are either expensed as incurred when directly invoiced or information is otherwise available from capital notices or other manager communications or are offset against investment income. Management fees include incremental costs incurred with external parties that are directly attributable to existing investments and are not related to acquisition or disposal.

(d) Foreign currency translation

Assets and liabilities denominated in foreign currencies are translated into Canadian dollars at the exchange rates prevailing on the year-end date. Income and expenses are translated into Canadian dollars at the exchange rates prevailing on the dates of the transactions. The realized and unrealized gains and losses arising from these translations are included within net realized and unrealized gains on investments in investment income.

(e) Accrued pension benefits

The value of accrued pension benefits and changes therein during the year are based on an actuarial valuation prepared by Mercer (Canada) Limited (the external actuary), an independent firm of actuaries. The valuation is performed annually as at August 31 and then extrapolated to year end. It uses the projected benefit method pro-rated on service and management's best estimate, as at the valuation date, of various economic and non-economic assumptions.

As described in paragraph (f) of the Description of Plan note, the inflation protection level for pension credit earned after December 31, 2009 is conditional, depending on the Plan's funded status. For financial statement valuations, future pension payments are indexed at the levels stated in the most recent funding valuation filing.

(f) Contributions

Contributions from the members, the Province and designated employers are recorded on an accrual basis. Cash received from members for credited service and cash transfers from other pension plans are recorded when received.

(g) Benefits

Benefit payments to members and others, commuted value payments and refunds to former members, and transfer payments to other plans are recorded in the period in which they are paid. Any benefit payment accruals not paid are reflected in accrued pension benefits

(h) Premises and equipment

Premises and equipment are recorded at cost and amortized on a straight-line basis over their estimated useful lives. Premises and equipment also include the right-of-use asset recognized under IFRS 16, Leases.

(i) Use of estimates

In preparing these consolidated financial statements, management uses estimates and assumptions that primarily affect the reported values of assets and liabilities, and related income and expenses. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable and relevant under the circumstances. The effect of a change in an estimate or assumption is recognized in the period in which the estimate or assumption is revised. Significant estimates and assumptions are used primarily in the determination of accrued pension benefits and the fair value of investments and investment-related receivables and liabilities. Note 4 explains how estimates and assumptions are used in determining accrued pension benefits and note 1c explains how estimates and assumptions are used to derive the fair value of investments and investment-related receivables and liabilities.

(j) Contingencies

A contingent liability is a possible obligation that depends on the occurrence or non-occurrence of one or more future events not controlled by Ontario Teachers'. Contingent liabilities are not recognized but the nature and extent are disclosed in the notes to the consolidated financial statements. A provision for a present obligation is recognized when a reliable estimate can be determined and the settlement of the obligation is probable.

Note 2. Investments

Ontario Teachers' invests, directly or through derivatives, in equities, fixed income, alternative investments, inflation sensitive and real asset investments.

(a) Investments

The schedule below summarizes Ontario Teachers' investments and investment-related liabilities, including net accrued interest and dividends of $519 million (2020 – $487 million):

As at December 31 (Canadian $ millions)	2021 Fair Value	2021 Cost	2020 Fair Value	2020 Cost
Equity				
Publicly traded				
Canadian	**$ 1,187**	**$ 1,012**	$ 1,260	$ 1,089
Non-Canadian	**23,782**	**18,977**	24,411	17,835
Non-publicly traded				
Canadian	**8,826**	**4,318**	7,540	4,278
Non-Canadian	**53,006**	**35,735**	39,307	30,528
	86,801	**60,042**	72,518	53,730
Fixed income				
Bonds	**60,645**	**60,900**	57,262	51,859
Short-term investments	**27,534**	**27,527**	25,287	25,311
Canadian real-rate products	**11,312**	**7,076**	17,499	11,696
Non-Canadian real-rate products	**4,579**	**4,377**	6,386	6,552
	104,070	**99,880**	106,434	95,418
Alternative investments	**23,409**	**20,171**	18,818	15,975
Inflation sensitive				
Commodities	**1,143**	**853**	1,205	853
Timberland	**2,236**	**1,364**	2,256	1,300
Natural resources	**7,196**	**6,823**	5,183	6,553
	10,575	**9,040**	8,644	8,706
Real assets				
Real estate (note 5)	**31,856**	**23,417**	30,742	23,326
Infrastructure	**26,118**	**18,919**	17,903	12,200
	57,974	**42,336**	48,645	35,526
	$ 282,829	**$ 231,469**	$ 255,059	$ 209,355

As at December 31 (Canadian $ millions)	2021 Fair Value	2021 Cost	2020 Fair Value	2020 Cost
Investment-related receivables				
Securities purchased under agreements to resell	**$ 29,943**	**$ 30,017**	$ 10,862	$ 10,838
Cash collateral deposited under securities borrowing arrangements	**2,076**	**2,076**	1,081	1,081
Cash collateral paid under credit support annexes	**9**	**9**	–	–
Derivative-related, net	**6,616**	**2,700**	7,704	2,137
	38,644	**34,802**	19,647	14,056
Total investments	**$ 321,473**	**$ 266,271**	$ 274,706	$ 223,411
Investment-related liabilities				
Securities sold under agreements to repurchase	**(25,529)**	**(25,690)**	(14,185)	(14,172)
Securities sold but not yet purchased				
Equities	**(2,071)**	**(2,027)**	(1,083)	(913)
Fixed income	**(17,103)**	**(17,024)**	(7,155)	(7,177)
Real estate (note 5)[1]	**(5,489)**	**(5,186)**	(5,491)	(5,073)
Commercial paper	**(2,501)**	**(2,488)**	(3,637)	(3,761)
Term debt	**(23,409)**	**(24,185)**	(17,212)	(17,084)
Cash collateral received under credit support annexes	**(1,723)**	**(1,723)**	(3,356)	(3,356)
Derivative-related, net	**(4,685)**	**(1,780)**	(4,661)	(2,141)
	(82,510)	**(80,103)**	(56,780)	(53,677)
Net investments[2] (note 2d)	**$ 238,963**	**$ 186,168**	$ 217,926	$ 169,734

1 Real estate liabilities include the liabilities of real estate subsidiaries and trusts.

2 For additional details, refer to the Major Investments on page 137.

(b) Fair value hierarchy

The schedule below presents Ontario Teachers' investments and investment-related liabilities within the fair value hierarchy as outlined in note 1c:

(Canadian $ millions)	Level 1	Level 2	Level 3	December 31, 2021 Total
Equity	**$ 24,613**	**$ 2,590**	**$ 59,598**	**$ 86,801**
Fixed income	**86,863**	**16,383**	**824**	**104,070**
Alternative investments	**–**	**–**	**23,409**	**23,409**
Inflation sensitive	**1,143**	**–**	**9,432**	**10,575**
Real assets	**559**	**154**	**57,261**	**57,974**
Investment-related receivables	**2,164**	**36,428**	**52**	**38,644**
Investment-related liabilities	**(18,651)**	**(61,842)**	**(2,017)**	**(82,510)**
Net investments	**$ 96,691**	**$ (6,287)**	**$ 148,559**	**$ 238,963**

(Canadian $ millions)	Level 1	Level 2	Level 3	December 31, 2020 Total
Equity	$ 25,671	$ 1,760	$ 45,087	$ 72,518
Fixed income	93,416	12,441	577	106,434
Alternative investments	–	–	18,818	18,818
Inflation sensitive	1,205	–	7,439	8,644
Real assets	1,090	236	47,319	48,645
Investment-related receivables	1,127	18,401	119	19,647
Investment-related liabilities	(11,988)	(42,352)	(2,440)	(56,780)
Net investments	$ 110,521	$ (9,514)	$ 116,919	$ 217,926

There were no transfers between Level 2 and Level 1 in 2021 and 2020.

The schedule below presents a reconciliation of investments and investment-related receivables/(liabilities) measured at fair value using significant unobservable inputs (Level 3) during the year. Realized and unrealized gains/(losses) are included in investment income.

								2021
(Canadian $ millions)	Equity	Fixed Income	Alternative Investments	Inflation Sensitive	Real Assets	Investment-Related Receivables	Investment-Related Liabilities	Total
Balance, beginning of year	$ 45,087	$ 577	$ 18,818	$ 7,439	$ 47,319	$ 119	$ (2,440)	$ 116,919
Purchases	11,588	1,995	7,526	624	13,633	16	175	35,557
Sales	(7,049)	(1,701)	(4,269)	(293)	(4,808)	(9)	(50)	(18,179)
Transfers in[1]	–	–	–	–	–	(2)	3	1
Transfers out[1]	(2,201)	(2)	–	–	(94)	(80)	198	(2,179)
Gains/(losses) included in investment income								
Realized	2,040	(32)	939	–	(47)	13	17	2,930
Unrealized	10,133	(13)	395	1,662	1,258	(5)	80	13,510
Balance, end of year	$ 59,598	$ 824	$ 23,409	$ 9,432	$ 57,261	$ 52	$ (2,017)	$ 148,559

1 Transfers in and transfers out of Level 3 are due to the change in the availability of observable inputs used for fair value measurement of investment assets or related liabilities. See note 1c Fair Value Hierarchy.

								2020
(Canadian $ millions)	Equity	Fixed Income	Alternative Investments	Inflation Sensitive	Real Assets	Investment-Related Receivables	Investment-Related Liabilities	Total
Balance, beginning of year	$ 39,994	$ 575	$ 18,475	$ 8,199	$ 48,235	$ 143	$ (2,238)	$ 113,383
Purchases	7,790	1,471	5,994	590	5,389	76	697	22,007
Sales	(4,027)	(1,473)	(6,114)	(34)	(2,804)	(94)	(1,383)	(15,929)
Transfers in[2]	–	–	–	–	–	(20)	13	(7)
Transfers out[2]	(1,768)	–	–	–	–	(28)	81	(1,715)
Gains/(losses) included in investment income								
Realized	1,583	3	(6)	–	1,029	14	365	2,988
Unrealized	1,515	1	469	(1,316)	(4,530)	28	25	(3,808)
Balance, end of year	$ 45,087	$ 577	$ 18,818	$ 7,439	$ 47,319	$ 119	$ (2,440)	$ 116,919

2 Transfers in and transfers out of Level 3 are due to the change in the availability of observable inputs used for fair value measurement of investment assets or related liabilities. See note 1c Fair Value Hierarchy.

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

(Canadian $ millions)	Significant Inputs	Change in Significant Inputs	**2021 Increase/ (Decrease) to Fair Value**	2020 Increase/ (Decrease) to Fair Value
Non-publicly traded equity	Multiple[1]	+/- 10%	**$6,907/ (6,881)**	$ 5,547/ (5,547)
Infrastructure and Natural resources	Discount Rate	+/- 0.50%	**2,514/ (2,340)**	1,743/ (1,560)
Real estate	Capitalization Rate	+/- 0.25%	**1,536/ (1,378)**	1,495/ (1,338)

1 Primarily reflects enterprise value/EBITDA (earnings before interest, taxes, depreciation and amortization) multiples. However, in certain cases, other metrics were used where they were determined to be more appropriate (e.g., revenue multiples or asset based multiples).

The above analysis excludes (i) investments of $40.5 billion (December 31, 2020 – $31.5 billion) where fair values are based on information provided by the external funds' administrators or funds' managers as Ontario Teachers' does not have access to the assumptions and methodologies used to determine the fair value of these underlying investments and ii) investments of $5.4 billion (December 31, 2020 – $4.6 billion) where, in management's judgement, changing one or more of the inputs to a reasonable alternative assumption would not change the fair value significantly.

(c) Derivative contracts

Derivative contracts are financial contracts, the value of which is derived from the value of underlying assets, commodities, indices, interest rates or currency rates. Derivative contracts are transacted either in the over-the-counter (OTC) market or on regulated exchanges.

Notional amounts of derivative contracts represent the contractual amount to which a rate or price is applied for computing the cash to be paid or received. Notional amounts are the basis upon which the returns from, and the fair value of, the contracts are determined. They do not necessarily indicate the amounts of future cash flow involved or the current fair value of the derivative contracts and, therefore, do not necessarily indicate Ontario Teachers' exposure to credit or market risks. The derivative contracts become favourable (assets) or unfavourable (liabilities) as a result of fluctuations in either market rates or prices relative to their terms. The aggregate notional amounts and fair values of derivative contracts can fluctuate significantly.

Derivative contracts, transacted either in the OTC market or on regulated exchanges, include:

Swaps
Swaps are OTC contracts in which two counterparties exchange a series of cash flows based on agreed upon rates to a notional amount. The various swap agreements that Ontario Teachers' enters into are as follows:

Equity and commodity swaps are contracts in which one counterparty agrees to either pay or receive from the other cash flows based on changes in the value of either an equity or commodity index, a basket of stocks or commodities, or a single stock or commodity.

Interest rate swaps are agreements where two counterparties exchange a series of payments based on different interest rates applied to a notional amount. Certain interest rate swaps traded with U.S. counterparties in the OTC market are centrally cleared at regulated clearing houses.

Currency swaps involve the exchange of fixed payments in one currency for the receipt of fixed payments in another currency.

Credit default swaps provide protection against the decline in value of the referenced asset as a result of specified events such as payment default or insolvency. These swaps are similar in structure to an option whereby the purchaser pays a premium to the seller of the credit default swap in return for payment related to the deterioration in the value of the referenced asset. The referenced asset for credit default swaps is a debt instrument. Certain credit default swaps traded with U.S. counterparties in the OTC market are centrally cleared at regulated clearing houses.

Other credit swaps are contracts in which one counterparty agrees to pay or receive from the other cash flows based on changes in the value of the referenced asset.

Forwards and futures
Futures are standardized contracts traded on regulated future exchanges, whereas forward contracts are negotiated agreements that are transacted between counterparties in the OTC market. Examples of futures and forwards are described below:

Equity and commodity futures are contractual obligations to either buy or sell at a fixed value (the contracted price) of an equity or commodity index, a basket of stocks, a single stock or commodities at a predetermined future date.

Interest rate futures are contractual obligations to either buy or sell an interest rate sensitive financial instrument on a predetermined future date at a specified price.

Currency forwards and futures are contractual obligations to exchange one currency for another at a specified price or settlement at a predetermined future date.

Options
Options may be either acquired in standardized amounts on regulated exchanges or customized and acquired in the OTC market. They 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, exchange rate, interest rate, or other financial instrument or commodity at a predetermined price, at or by a specified future date. The seller (writer) of an option can also settle the contract by paying the cash settlement value of the purchaser's right. The seller (writer) receives a premium from the purchaser for this right. The various option agreements that Ontario Teachers' enters into include equity and commodity options, interest rate options, and foreign currency options.

Other derivative products
Ontario Teachers' also transacts in other derivative products including statistic swaps and dividend swaps in the OTC market. An investor may trade the statistic swaps with the objective of adding value or hedging for risks associated with the magnitude of movement, i.e., volatility, variance, correlation, covariance of some underlying products, such as exchange rates, or stock indexes. Dividend swaps are OTC contracts where an investor agrees to match all dividends paid out by an underlying stock or index over a specified time period. In return, the dividend payer receives a fixed amount at expiry called the dividend swap rate. These products are included in the table below based on their underlying referenced product.

The following schedule summarizes the notional amounts and fair value of Ontario Teachers' derivative contracts held as at December 31:

(Canadian $ millions)		**2021 Notional**	**2021 Fair Value Assets**	**2021 Fair Value Liabilities**	2020 Notional	2020 Fair Value Assets	2020 Fair Value Liabilities
Equity and commodity derivatives							
Swaps		**$ 44,637**	**$ 1,028**	**$ (213)**	$ 39,990	$ 1,984	$ (537)
Futures		**15,596**	**2**	**(73)**	8,126	67	–
Options: Listed	– purchased	**–**	**–**	**–**	97	–	–
	– written	**–**	**–**	**–**	65	–	(138)
OTC	– purchased	**25,866**	**644**	**–**	23,605	600	–
	– written	**21,294**	**17**	**(287)**	25,409	23	(447)
		107,393	**1,691**	**(573)**	97,292	2,674	(1,122)
Interest rate derivatives							
Swaps		**114,945**	**2,248**	**(1,327)**	189,831	1,892	(1,376)
Futures		**230,787**	**–**	**(178)**	54,283	–	(36)
Options: Listed	– purchased	**12,395**	**12**	**–**	–	–	–
	– written	**12,363**	**–**	**(5)**	–	–	–
OTC	– purchased	**12,864**	**84**	**(5)**	20,163	40	(1)
	– written	**33,391**	**17**	**(91)**	47,981	2	(36)
		416,745	**2,361**	**(1,606)**	312,258	1,934	(1,449)
Currency derivatives							
Swaps		**792**	**16**	**(1)**	630	13	–
Forwards[1]		**73,912**	**391**	**(1,060)**	63,492	1,428	(724)
Options: OTC	– purchased	**34,987**	**181**	**–**	3,498	53	–
	– written	**10,366**	**–**	**(37)**	1,643	–	(35)
		120,057	**588**	**(1,098)**	69,263	1,494	(759)
Credit derivatives							
Credit default swaps	– purchased	**40,435**	**41**	**(1,460)**	30,971	41	(1,218)
	– written	**45,058**	**1,900**	**(164)**	40,865	1,582	(134)
Swaps		**82**	**3**	**–**	–	–	–
		85,575	**1,944**	**(1,624)**	71,836	1,623	(1,352)
		729,770	**6,584**	**(4,901)**	550,649	7,725	(4,682)
Net cash collateral paid/(received) under derivative contracts			**32**	**216**		(21)	21
Notional and fair value of derivative contracts		**$ 729,770**	**$ 6,616**	**$ (4,685)**	$ 550,649	$ 7,704	$ (4,661)

1 Excludes currency forwards related to Real Estate assets as disclosed in note 5.

(d) Investment asset mix

Direct investments, derivative contracts, and investment-related receivables and liabilities are classified by asset mix category based on the intent of the investment strategies of the underlying portfolios of Ontario Teachers'. Net investments reflecting these classifications are summarized in Canadian dollars below as at December 31:

	2021		2020	
	Effective Net Investments at Fair Value ($ millions)	**Asset Mix %**	Effective Net Investments at Fair Value ($ millions)	Asset Mix %
Equity				
Public equity	**$ 27,218**	**11%**	$ 42,471	19%
Private equity	**55,056**	**23**	41,773	19
	82,274	**34**	84,244	38
Fixed income				
Bonds	**33,324**	**14**	17,148	8
Real-rate products	**11,867**	**5**	17,399	8
	45,191	**19**	34,547	16
Inflation sensitive				
Commodities	**26,455**	**11**	17,649	8
Natural resources	**9,405**	**4**	7,439	4
Inflation hedge	**12,099**	**5**	11,536	5
	47,959	**20**	36,624	17
Real assets				
Real estate	**26,262**	**11**	25,200	12
Infrastructure	**26,075**	**11**	17,786	8
Real-rate products	**–**	**–**	1,919	1
	52,337	**22**	44,905	21
Innovation	**7,103**	**3**	3,474	2
Credit	**24,294**	**10**	17,977	8
Absolute return strategies	**14,938**	**6**	13,596	6
Overlay	**(452)**	**–**	828	–
Funding for investments	**(34,681)**	**(14)**	(18,269)	(8)
Net investments	**$ 238,963**	**100%**	$ 217,926	100%

(e) Risk management

Objectives

Ontario Teachers' primary long-term risk is that Ontario Teachers' assets will fall short of its liabilities (i.e., benefits owed to members). Therefore, Ontario Teachers' follows an approach of asset diversification. The objective is to achieve a diversification of risks and returns in a fashion that minimizes the likelihood of an overall reduction in total fund value and maximizes the opportunity for gains over the entire portfolio.

Ontario Teachers' also manages its liquidity risk so that there is sufficient liquidity to enable Ontario Teachers' to meet all of its future obligations as they become payable, which includes pension payments, meeting short-term mark-to-market payments resulting from Ontario Teachers' derivative exposure and to give Ontario Teachers' the ability to adjust the asset mix in response to the changes in market conditions.

Policies

To apply risk management to investments in a consistent manner, Ontario Teachers' has a number of policies, for example:

- Statement of Investment Policies and Procedures – The statement addresses the manner in which the fund shall be invested. The statement is subject to the board's review at least annually. Ontario Teachers' investments are selected and held in accordance with the criteria and limitations set forth in the statement and in accordance with all relevant legislation. The statement effective for the year ended December 31, 2021 was last amended on November 11, 2021 and includes the following asset class exposure limits:

	Asset Mix % Minimum	Asset Mix % Maximum
Equities	30%	40%
Fixed income	0%	67%
Inflation sensitive	15%	25%
Real assets	20%	30%
Innovation	0%	7%
Credit	5%	15%
Absolute return strategies	4%	14%
Funding for Investments[1]	(98)%	10%

1 Includes term debt, bond repurchase agreements, implied funding from derivatives, unsecured funding, and liquidity reserves.

- Board Investment Policy – This policy applies to the total-fund and aggregate asset classes. The policy addresses the risks that are relevant and material at the total-fund level. The policy sets ranges for allocations to the asset classes and foreign currency. Management determines exposure within these approved ranges. The policy also specifies the risk budget allocation and lists investment constraints such as maximum exposures permitted for different types of investments and liquidity requirements. The board approves this policy and reviews it regularly.

- CEO Investment Risk Policy – This policy supports the operationalization of the board's risk appetite into the day-to-day management of some key investment risks and articulates the associated roles and responsibilities of the Investment Division, Risk and other functional partners.

- Investment Division Policy – This policy addresses the manner in which the Investment Division is organized under the CIO's oversight for the purpose of undertaking the investment and risk management of the fund and for day-to-day operations management.

- Portfolio policies for each investment department – These policies are developed to apply to the individual portfolios within each asset class managed by the Investment Division. Portfolio policies include the departments' investment strategies, operating procedures, investment constraints, key risks and a description of how the risks will be managed and reporting requirements for each investment department.

- Trading Operations Policy – This policy specifies operational requirements to be followed within the Investment Division to trade on regulated exchanges and in OTC markets.

- Investment Division Counterparty Credit Policy – This policy applies to investments with credit risk exposure that arises from entering into certain counterparty agreements. The policy provides constraints on counterparty credit exposure and procedures for obtaining authorization to trade with a new counterparty.

- Pre-Investment Approval Policy – This policy formalizes the procedures to ensure the data needed for trade capture, pricing, risk management, and accounting is accurate, complete, and can be entered into Ontario Teachers' systems of record on a timely basis prior to commencement of trading.

Processes

Ontario Teachers' uses risk budgeting to allocate active risk across the investment asset classes. The active risk budget is presented to the board annually for review and approval. Each investment department is responsible for managing the investment risks associated with the investments they manage within the active risk budget allocated to them. Each department is subject to compliance with the Statement of Investment Policies and Procedures, the Board Investment Policy (which includes the active risk budget allocated to them), Investment Division Policy, Trading Operations Policy, Pre-Investment Approval Policy and the applicable portfolio policies. In addition, the Total Fund Management department is responsible for maintaining the liquidity positions in accordance with Ontario Teachers' policies on liquidity, and the Total Fund Management and Capital Markets departments are responsible for compliance with the Investment Division Counterparty Credit Policy. The Finance Division independently measures the investment risk exposure and the liquidity position of Ontario Teachers' and provides the information to the Investment Division and the Investment Committee of the board.

Each investment department has an investment committee, or an equivalent, which meets regularly to assess the investment risks associated with the portfolios it manages and determines action plans, if required. Individual managers in each investment department receive limited authority to invest from the board by sub-delegation from senior management. Investment constraints and approval requirements are set out in the portfolio policies for the department, the Investment Division Policy, the CEO Investment Risk Policy and/or the Board Investment Policy. For investments not traded on exchanges, such as alternative investments and private equity investments, the investment departments conduct due diligence before acquisition and use it as a tool to monitor the investments after acquisition. The objective is to obtain as much transparency as possible for the departments to assess the risk exposure arising from these private and alternative investments.

Senior representatives from each investment department are members of one or both of the Investment Committee – Total Fund (IC – TF) and Investment Committee – Global Privates & Illiquids (IC – GPI). The IC-TF is responsible for considerations around the overall investment program with a focus on managing investment risks at a total-fund level. This committee brings together the experience, investment and operational business judgment required for assessing and managing market, credit and liquidity risks on a regular basis. It monitors the currency positions, interest rate risk and liquidity risk at the total-fund level. Chaired by the Chief Investment Officer, the IC-GPI is responsible for the oversight of private market or illiquid transactions and the overall private portfolio composition. The Chief Risk Officer is a member of both Committees. The Chief Legal & Corporate Affairs Officer or a delegate attends the IC-GPI meetings in an advisory capacity. The committees meet at least every other week.

The CEO chairs the Enterprise Risk Management Committee, the CEO-Led Risk Committee (Investments) and the CEO-Led Risk Committee (Member Services). The Enterprise Risk Management Committee oversees the enterprise risk management program of Ontario Teachers' and includes senior representatives from all divisions. The Enterprise Risk Management Committee typically reports to the board semi-annually. The CEO-Led Risk Committee (Investments) oversees the alignment of the investment program with the risk appetite and purpose, mission, vision and values of Ontario Teachers' including policies, committee mandates, significant operational risks and external developments that could have a material impact on the investment program. This committee includes senior representatives from Investments, Risk, Finance, Enterprise Operations and the General Counsel's Office. The CEO-Led Risk Committee (Member Services) oversees the alignment of the Member Services division with the board's Enterprise Risk Appetite Statement and Ontario Teachers' purpose, mission, vision and values. This Committee includes senior members from Risk, Member Services, and Legal and Compliance.

(f) Credit risk

Ontario Teachers' is exposed to the risk that a counterparty defaults or becomes insolvent. Credit risk is the risk of loss associated with a counterparty's inability to fulfill its payment obligations. Credit risk may arise directly from an obligor, an issuer of securities, or indirectly from a guarantor of a credit obligation.

Credit risk management

Ontario Teachers' actively manages its credit exposures. When over exposures are detected – either in individual exposures or in groups of exposures – Ontario Teachers' takes action to mitigate the risks. Such actions may include reducing the exposures and using credit derivatives.

Ontario Teachers' enters into agreements with counterparties to limit its exposure to credit losses. An International Swaps and Derivatives Association (ISDA) Master Agreement is executed with most OTC derivative counterparties, which allows both parties to settle obligations on a net basis when termination or other predetermined events occur. Ontario Teachers' also negotiates collateral agreements known as credit support annexes (CSAs) with key counterparties to further mitigate counterparty credit risk. A CSA gives Ontario Teachers' the power to realize collateral posted by counterparties in the event of a default by such counterparties. Ontario Teachers' and its OTC derivative counterparties maintain initial margin collateral in third-party custodial accounts to support OTC derivative trading. Repurchase agreements are also collateralized from trade inception forward. Note 2i provides further details on collateral pledged and received.

Ontario Teachers' has a credit risk assessment process to approve prospective new counterparties and to monitor authorized counterparties for derivative contracts, repurchase and reverse repurchase agreements, securities borrowing agreements, prime broker relationships and futures, options, and fixed income clearing. Ontario Teachers' deals primarily with counterparties that have an investment grade credit rating. Policies are in place to limit the maximum exposures to any individual counterparty for derivative contracts or repurchase and reverse repurchase agreements, prime broker relationships and futures and options clearing.

Maximum exposure to credit risk before collateral held

Ontario Teachers' assumes credit risk exposure through debt investments and amounts receivable from the Province of Ontario and brokers. The maximum exposure to credit risk related to these financial instruments is their value as presented in the consolidated statements of financial position and note 2a. Ontario Teachers' is also exposed to credit risk of counterparties to its OTC derivative transactions. Counterparty credit risk exposure for OTC derivatives is measured as the net positive fair value of the contractual obligations with the counterparties.

Counterparties are assigned a credit rating as determined by Ontario Teachers' internal credit risk management function. Counterparty default risk and credit exposures are monitored on a daily basis. Ratings are also compared to their external ratings as provided by recognized credit rating agencies on a daily basis.

The credit risk exposure of debt investments and OTC derivatives, by credit rating category, without taking account of any collateral held or other credit enhancements as at December 31 is as follows:

					2021
Credit rating (Canadian $ millions)	**Bonds and Short-term investments**	**Real-rate products**	**Securities purchased under agreements to resell**	**Loans and Private debt**	**OTC Derivatives**
AAA/R-1 (high)	**$ 67,002**	**$ 12,691**	**$ –**	**$ –**	**$ –**
AA/R-1 (mid)	**1,883**	**1,317**	**4,424**	**–**	**75**
A/R-1 (low)	**8,065**	**1,860**	**10,167**	**–**	**902**
BBB/R-2	**902**	**–**	**–**	**–**	**–**
Below BBB/R-2	**8,394**	**–**	**–**	**–**	**–**
Unrated[1]	**1,933**	**23**	**15,352**	**13,127**	**–**
	$ 88,179	**$ 15,891**	**$ 29,943**	**$ 13,127**	**$ 977**

					2020
Credit rating (Canadian $ millions)	Bonds and Short-term investments	Real-rate products	Securities purchased under agreements to resell	Loans and Private debt	OTC Derivatives
AAA/R-1 (high)	$ 56,709	$ 21,039	$ –	$ –	$ –
AA/R-1 (mid)	6,362	981	1,811	–	659
A/R-1 (low)	11,112	1,830	2,286	–	1,947
BBB/R-2	3,130	–	204	–	3
Below BBB/R-2	3,182	–	–	–	–
Unrated[1]	2,054	35	6,561	13,302	–
	$ 82,549	$ 23,885	$ 10,862	$ 13,302	$ 2,609

1 Unrated comprises securities that are either privately held, managed externally, or not rated by the rating agencies.

Ontario Teachers' is also exposed to credit risk through off-balance sheet arrangements as shown in the table below. For off-balance sheet guarantees, the maximum exposure to credit risk is the maximum amount that Ontario Teachers' would have to pay if the guarantees were to be called upon. For loan commitments, the maximum exposure is the committed amount under the agreements. For credit derivatives, the maximum exposure is the notional amount of written credit derivatives (as presented in note 2c).

As at December 31 (Canadian $ millions)		2021		2020
Guarantees	**$**	**505**	$	332
Loan commitments		**262**		9
Notional amount of written credit derivatives		**45,058**		40,865
Total off balance sheet credit risk exposure	**$**	**45,825**	$	41,206

While Ontario Teachers' maximum exposure to credit risk is the carrying value of the assets, or, in the case of off-balance sheet items, the amount guaranteed or committed, in most cases the likely exposure is far less due to collateral, credit enhancements (e.g., guarantees in favour of Ontario Teachers') and other actions taken to mitigate Ontario Teachers' exposure, as described previously.

Credit risk concentrations

As at December 31, 2021, Ontario Teachers' has a significant concentration of credit risk with the Government of Canada, the Province of Ontario and the U.S Treasury. This concentration relates primarily to holding Government of Canada issued securities of $59.3 billion (2020 – $62.3 billion), U.S. Treasury issued securities of $8.2 billion (2020 – $6.6 billion), Province of Ontario bonds of $3.8 billion (2020 – $8.2 billion), and receivable from the Province of Ontario (see note 3) of $3.2 billion (2020 – $3.2 billion).

(g) Market risk

Market risk is the risk of loss that results from fluctuations in various market factors such as equity and commodity prices, interest and foreign exchange rates, and credit spreads. Ontario Teachers' is exposed to market risk through its investing activities. The level of market risk to which Ontario Teachers' is exposed varies depending on considerations such as market conditions, expectations of future price movements, the occurrence of certain catastrophic events (e.g., hurricanes and earthquakes) affecting the prices of insurance linked securities, expectations of future yield movements and the composition of the asset mix.

The COVID-19 pandemic contributed to exceptional volatility in financial markets in the first half of 2020 and continues to have widespread global impact. Throughout 2021 and 2020, Ontario Teachers' exposures across all risk parameters including market, credit, liquidity and leverage, remained within all risk limits set by the board.

Market risk management

Ontario Teachers' manages market risk primarily through diversifying the investments across industry sectors, investment strategies and on a global basis. A variety of derivative contracts are also utilized to manage Ontario Teachers' market risk exposures.

Market and credit risk measurement

Ontario Teachers' uses a statistical Value-at-Risk (VaR)-type approach that measures an expected tail loss (ETL) from investment risk comprising of market and credit risk over a one-year horizon at a 99% confidence level. The ETL methodology captures more of the effect of extreme loss events than VaR for the same confidence level as it is an average of all estimated losses in the tail.

Total Asset Risk is prepared using the ETL methodology which captures the investment risk exposure by asset class and reflects the risk of potential losses in net assets due to both market and credit risk factors. Statistically, Ontario Teachers' would expect to see losses approximate to the risk exposure only 1% of the time over a one year period, subject to certain assumptions and limitations discussed below.

The ETL methodology is a statistical approach that accounts for market volatility and credit risk as well as risk diversification achieved by investing in various products and markets. Risks are measured consistently across all markets and products and can be aggregated to arrive at a single risk number. The one-year 99% ETL number used by Ontario Teachers' is generated using a historical simulation and bootstrap sampling approach that reflects the expected annual return on the portfolio in the worst 1% of the cases. When sufficient historical data is not available, proxies and statistical methods are used to complete the data series.

There are limitations to the ETL methodology in use. For example, historical data may not provide the best estimate of future changes. It may fail to capture the correlation in asset returns in extreme adverse market movements which have not occurred in the historical period measured. However, the sampling approach and long historical period used, seek to partially mitigate this limitation by enabling the generation of a set of scenarios that include extreme adverse events. Another limitation is that Ontario Teachers' computes the risk relative to asset positions at the close of the business day. Positions may change substantially during the course of a trading day. These limitations and the nature of the ETL measure mean that Ontario Teachers' losses may exceed the risk exposure amounts indicated in any risk reports.

Ontario Teachers' continuously monitors and enhances the ETL methodology, striving for better estimation of risk exposure.

The table below shows Total Asset Risk ETL of Ontario Teachers'.

(Canadian $ billions)[1]	2021	2020
Equity		
Public equity	**$ 7.5**	$ 10.5
Private equity	**22.5**	17.5
Fixed income		
Bonds	**1.0**	11.0
Real-rate products	**3.5**	4.0
Inflation sensitive		
Commodities	**6.0**	4.0
Natural resources	**2.0**	1.5
Inflation hedge	**2.5**	2.0
Real assets		
Real estate	**4.0**	4.0
Infrastructure	**5.0**	3.5
Real-rate products	**–**	0.5
Innovation	**3.0**	1.5
Credit	**3.5**	2.5
Absolute return strategies	**2.0**	1.5
Overlay	**10.0**	10.0
Funding for Investments	**17.5**	9.5
Total Asset Risk ETL Exposure[2]	**$ 58.0**	$ 53.0

1 Rounded to the nearest $0.5 billion.

2 Total Asset Risk ETL Exposure does not equal the sum of ETL exposure for each asset class because diversification reduces total risk exposure.

Interest rate risk

Interest rate risk refers to the effect on the market value of Ontario Teachers' assets and liabilities due to fluctuations in interest rates. The value of Ontario Teachers' assets is affected by short-term changes in nominal and real interest rates. Pension liabilities are exposed to fluctuations in long-term interest rates as well as expectations for salary escalation.

Ontario Teachers' measures interest rate and inflation risk of relevant asset classes in its asset mix (note 2d):

- The sensitivity to changes in nominal interest rates of bonds and derivative contracts included in its Fixed Income, Credit, Real Asset and Funding for Investments asset classes – a 1% increase in nominal interest rates would result in a decline in the value of these investments of $0.8 billion (2020[1]– $4.5 billion).
- The sensitivity to changes in real interest rates of real-rate products and derivative contracts included in its Fixed Income and Real Assets asset classes – a 1% increase in real interest rates would result in a decline in the value of these investments of $0.2 billion (2020 – $2.6 billion).
- The sensitivity of nominal and real-rate securities and derivative contracts that are intended to protect against inflation included in the Fixed Income asset class and the Inflation hedge category of Ontario Teachers' Inflation sensitive asset class to changes in market-implied inflation a 1% decrease in the market-implied rate of inflation would result in a decline in the value of these securities and contracts of $2.1 billion (2020 – $0.7 billion).

Foreign currency risk

Foreign currency exposure arises from Ontario Teachers' holdings of foreign currency-denominated investments and related derivative contracts.

As at December 31, Ontario Teachers' has investments exposed to foreign currency. In Canadian dollars this exposure is as follows:

(Canadian $ millions) Currency	**2021** **Net Exposure**	2020 Net Exposure
United States Dollar	**$ 44,983**	$ 35,442
Euro	**10,276**	8,807
Chinese Renminbi	**6,372**	6,999
British Pound Sterling	**4,389**	4,549
Chilean Peso	**3,242**	3,644
Mexican Peso	**2,787**	2,247
Japanese Yen	**2,393**	4,001
Australian Dollar	**2,046**	1,853
Brazilian Real	**1,992**	1,707
Danish Krone	**1,840**	1,836
Other	**6,069**	7,720
	$ 86,389	$ 78,805

1 Prior period comparative has been updated to conform to current year's presentation.

As at December 31, with all other variables and underlying values held constant, a 5% increase/decrease in the value of the Canadian dollar against major foreign currencies would result in an approximate decrease/increase in the value of net investments as follows:

(Canadian $ millions) Currency	2021 Change in Net Investment Value	2020 Change in Net Investment Value
United States Dollar	**$ 2,249**	$ 1,772
Euro	**514**	440
Chinese Renminbi	**319**	350
British Pound Sterling	**219**	228
Other	**1,018**	1,150
	$ 4,319	$ 3,940

(h) Liquidity risk

Liquidity risk is the risk of being unable to obtain sufficient cash or cash equivalents at a reasonable cost to meet Ontario Teachers' financial obligations in a timely manner, or to support new investment opportunities, under a range of stressed conditions. By maintaining a structurally sound liquidity profile, Ontario Teachers' seeks to ensure sufficient liquidity is available to cover potential cash and collateral outflows under stressed conditions without adversely impacting Ontario Teachers' asset mix while allowing for opportunistic investments.

Liquidity risk management

Ontario Teachers' monitors its liquidity position daily to ensure sufficient liquid assets are available to meet potential cash and collateral requirements and other contingent payments over different time horizons. Available liquid assets primarily consist of sovereign, provincial or territorial government debt, other liquid investment grade debt, publicly traded equity securities, and physical gold after considering the impact of collateral pledged and received, repurchase agreements and securities lending and borrowing arrangements. In assessing Ontario Teachers' liquidity position, factors such as fair value under a market stress event and the portion of available liquid assets earmarked to meet contractual cash flows and other projected cash flows (such as pension payments) are considered. Potential collateral requirements from Ontario Teachers' positions in securities sold short, repurchase agreements, derivatives contracts, and securities lending and borrowing agreements are estimated under stress by a historical simulation of market movements. In addition, stress tests on the overall liquidity position are performed regularly using various historical and hypothetical scenarios.

Liquid assets

As of December 31, 2021, Ontario Teachers' maintains $79.0 billion of available liquid assets (December 31, 2020 – $90.4 billion).

Contractual maturity

Ontario Teachers' liabilities include accrued pension benefits, investment-related liabilities, due to brokers, accounts payable and accrued liabilities. Due to brokers, accounts payable and accrued liabilities are all due within one year. As Ontario Teachers' may settle securities sold but not yet purchased, cash collateral received under credit support annexes and derivatives at fair value before contractual maturity, they are considered to mature within one year.

Ontario Teachers' investment-related liabilities by maturity as at December 31 are as follows:

(Canadian $ millions)	Within One Year	One to Five Years	Over Five Years	2021 Total
Securities sold under agreements to repurchase	**$ (21,527)**	**$ (4,002)**	**$ –**	**$ (25,529)**
Securities sold but not yet purchased				
Equities	**(2,071)**	**–**	**–**	**(2,071)**
Fixed income	**(17,103)**	**–**	**–**	**(17,103)**
Real estate	**(1,307)**	**(509)**	**(3,673)**	**(5,489)**
Commercial Paper	**(2,501)**	**–**	**–**	**(2,501)**
Term debt	**(2,251)**	**(10,932)**	**(10,226)**	**(23,409)**
Cash collateral received under credit support annexes	**(1,723)**	**–**	**–**	**(1,723)**
Derivative-related, net	**(4,685)**	**–**	**–**	**(4,685)**
	$ (53,168)	**$ (15,443)**	**$ (13,899)**	**$ (82,510)**

(Canadian $ millions)	Within One Year	One to Five Years	Over Five Years	2020 Total
Securities sold under agreements to repurchase	$ (10,184)	$ (4,001)	$ –	$ (14,185)
Securities sold but not yet purchased				
Equities	(1,083)	–	–	(1,083)
Fixed income	(7,155)	–	–	(7,155)
Real estate	(1,579)	(1,170)	(2,742)	(5,491)
Commercial Paper	(3,637)	–	–	(3,637)
Term debt	(2,581)	(10,302)	(4,329)	(17,212)
Cash collateral received under credit support annexes	(3,356)	–	–	(3,356)
Derivative-related, net	(4,661)	–	–	(4,661)
	$ (34,236)	$ (15,473)	$ (7,071)	$ (56,780)

(i) Collateral pledged and received

Ontario Teachers' pledges and receives cash and security collateral in the ordinary course of managing net investments. Security collateral consists primarily of Canadian and U.S. government securities. Generally, additional collateral is provided if the value of the securities falls below a predetermined level. The securities transferred are recognized as assets when Ontario Teachers' retains substantially all risks and rewards, including credit risk, settlement risk and market risk. Ontario Teachers' is not allowed to either pledge the same securities with other financial institutions or to sell them to another entity unless Ontario Teachers' substitutes such securities with other eligible securities. Ontario Teachers' holds the collateral received as long as Ontario Teachers' is not a defaulting party or an affected party in connection with a specified condition listed in the contractual agreement and there is no early termination of the contractual agreement. With the exception of initial margin collateral held in third party custodial accounts, Ontario Teachers' is permitted to either sell or repledge the collateral in the absence of default by the owner of the collateral. The fair value of collateral sold or repledged as at December 31, 2021 is $nil (2020 – $nil).

Ontario Teachers' engages in securities borrowing and lending transactions and pledges and receives associated collateral. Ontario Teachers' does not recognize any securities borrowed as its investment assets or derecognize securities lent because the risks and rewards of the borrowed securities remain with the lenders.

The fair value of collateral pledged and received, as well as the securities purchased under agreements to resell and sold under agreements to repurchase and securities borrowed and lent as at December 31 are as follows:

(Canadian $ millions)	2021	2020
Securities purchased under agreements to resell and sold under agreements to repurchase		
Gross amounts of securities purchased under agreements to resell[1]	**$ 37,618**	$ 14,944
Collateral held	**37,908**	15,446
Gross amounts of securities sold under agreements to repurchase[1]	**33,204**	18,267
Collateral pledged	**33,973**	18,921
Securities borrowing and lending		
Securities borrowed	**2,259**	1,347
Collateral pledged[2]	**2,562**	1,496
Derivative-related		
Collateral received[3]	**3,079**	3,744
Collateral pledged[4]	**4,469**	2,584

1 See note 2j for reconciliation of total gross amount to net amounts presented in note 2a.

2 Includes cash collateral of $2,076 (2020 – $1,081).

3 Includes cash collateral of $1,723 (2020 – $3,356) and initial margin collateral of $944 (2020 – nil).

4 Includes cash collateral of $9 (2020 – nil) and initial margin collateral of $1,015 (2020 – nil).

(j) Offsetting financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is reported in the Consolidated Statement of Financial Position when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis, or realize the asset and settle the liability simultaneously. Certain repurchase agreement transactions settled through a central clearing counterparty satisfy the offsetting criteria. Ontario Teachers' enters into agreements with counterparties such as ISDA Master Agreements and Global Master Repurchase Agreements (GMRA's) in order to mitigate its exposure to credit losses (see note 2f). These agreements provide rights to allow the parties to settle obligations on a net basis when certain predetermined events occur. When these rights of offset are conditional, the related amounts are not netted in the Consolidated Statement of Financial Position.

The impact of these arrangements as at December 31 is presented in the following table:

(Canadian $ millions)	Gross amounts	Less: Amounts offset	Net amount presented in note 2a	Amounts subject to netting agreements	Securities and cash collateral[1]	Net Exposure 2021
Financial assets						
Securities purchased under agreements to resell	$ 37,618	$ (7,675)	$ 29,943	$ (19,775)	$ (9,674)	$ 494
Derivative-related receivables	6,616	–	6,616	(1,812)	(2,036)	2,768
	$ 44,234	$ (7,675)	$ 36,559	$ (21,587)	$ (11,710)	$ 3,262
Financial liabilities						
Securities sold under agreements to repurchase	$ (33,204)	$ 7,675	$ (25,529)	$ 19,775	$ 5,739	$ (15)
Derivative-related liabilities	(4,685)	–	(4,685)	1,812	2,871	(2)
	$ (37,889)	$ 7,675	$ (30,214)	$ 21,587	$ 8,610	$ (17)

1 Securities and cash collateral exclude over-collateralization and collateral in transit. See note 2i for the total amount of collateral.

(Canadian $ millions)	Gross amounts	Less: Amounts offset	Net amount presented in note 2a	Amounts subject to netting agreements	Securities and cash collateral[1]	Net Exposure 2020
Financial assets						
Securities purchased under agreements to resell	$ 14,944	$ (4,082)	$ 10,862	$ (5,103)	$ (5,621)	$ 138
Derivative-related receivables	7,704	–	7,704	(1,894)	(3,320)	2,490
	$ 22,648	$ (4,082)	$ 18,566	$ (6,997)	$ (8,941)	$ 2,628
Financial liabilities						
Securities sold under agreements to repurchase	$ (18,267)	$ 4,082	$ (14,185)	$ 5,103	$ 9,082	$ –
Derivative-related liabilities	(4,661)	–	(4,661)	1,894	2,567	(200)
	$ (22,928)	$ 4,082	$ (18,846)	$ 6,997	$ 11,649	$ (200)

1 Securities and cash collateral exclude over-collateralization and collateral in transit. See note 2i for the total amount of collateral.

Note 3.
Receivable from the Province of Ontario

The receivable from the Province consists of required matching contributions and interest thereon.

As at December 31 (Canadian $ millions)	2021	2020
Contributions receivable	**$ 3,191**	$ 3,141
Accrued interest receivable	**43**	38
	$ 3,234	$ 3,179

The receivable as at December 31, 2021, from the Province of Ontario consists of $1,604 million, which was received in January 2022, and an estimated $1,630 million to be received with interest in January 2023. The receivable as at December 31, 2020, from the Province consisted of $1,602 million, which was received in January 2021, and an initial estimate of $1,577 million which was received in January 2022. The difference between the initial estimates and the actual amount received was due to interest.

Note 4. Accrued pension benefits

(a) Actuarial assumptions

The actuarial assumptions used in determining the value of accrued pension benefits of $257,482 million (2020 – $257,330 million) reflect management's best estimate of future economic events and involve both economic and non-economic assumptions. The non-economic assumptions include considerations such as mortality as well as withdrawal and retirement rates. The primary economic assumptions include the discount rate, the salary escalation rate and the inflation rate. The discount rate is based on market rates, as at the valuation date, of bonds issued by the Province of Ontario, which have characteristics similar to obligations under the Plan. The discount rate was determined by applying a weighted average discount rate that reflects the estimated timing and amount of benefit payments. The inflation rate is the geometric difference between the yield on Government of Canada long-term nominal bonds and Government of Canada real-return bonds. The salary escalation rate incorporates the inflation rate assumption and long-term expectation of growth in real wages.

A summary of the primary economic assumptions is as follows:

As at December 31	2021	2020
Discount rate[1]	**2.50%**	2.00%
Salary escalation rate[2]	**2.85%**	2.50%
Inflation rate[3]	**1.85%**	1.50%
YMPE / ITA limit growth[4]	**2.60%/2.85%**	2.25%/2.50%
Real rate[5]	**0.65%**	0.50%

1 As at December 31, 2021, holding all other assumptions constant, a 1% decrease in the discount rate would result in an increase in pension liabilities of approximately $60.3 billion (2020 – $61.9 billion).

2 1% per year for the period from September 1, 2020 through to August 31, 2022 per the 2020 collective agreements and 2.85% per year commencing September 1, 2022 (2020 – 2.50% commencing September 1, 2022).

3 As at December 31, 2021, holding all other assumptions constant, an additional 1% increase in the assumed annual pension benefit increase for 2023 would result in an increase in pension liabilities of approximately $1.2 billion (2020 – $1.2 billion).

4 YMPE / ITA limit growth is the sum of the inflation rate and the Average Industrial Wage (AIW) real wage growth rate of 0.75% until 2024 and 1.0% thereafter.

5 Real rate shown as the geometric difference between the discount rate and the inflation rate.

The primary economic assumptions were updated due to rising bond yields and an increased break-even inflation rate during 2021. These changes in economic assumptions resulted in a net decrease in the value of accrued pension benefits of $9,256 million (2020 – $26,410 million increase).

There were no changes to the non-economic assumptions as at December 31, 2021. The non-economic assumptions were updated in 2020 to reflect recent experience of Plan members related to the experience-related salary scale increases. Higher increases are assumed in the first 13 years and slightly lower increases are assumed from year 17 onwards. In addition, a separate scale for Vice-Principals, Principals and Administrators has been introduced. The changes in non-economic assumptions increased the accrued pension benefits by $728 million as at December 31, 2020.

The changes in economic and non-economic assumptions resulted in a net decrease in the value of accrued pension benefits of $9,256 million (2020 – $27,138 million net increase).

(b) Inflation protection levels

As described in paragraph (f) of the Description of Plan note, pension benefits are adjusted annually by the CPI ratio with pension credit earned after December 31, 2009 subject to conditional inflation protection. Inflation protection levels vary between 50% and 100% of the CPI ratio for pension credit earned between January 1, 2010, and December 31, 2013, and vary between 0% and 100% of the CPI ratio for pension credit earned after 2013. Conditional inflation protection can only be invoked and changes to inflation protection levels can only be made when a funding valuation is filed. The Ontario government and designated employers participating in the Plan will make extra contributions to match the inflation protection benefits members forego up to a maximum foregone inflation of 50% of CPI.

For financial statement valuations, future pension payments are indexed at the inflation protection levels stated in the most recent funding valuation filing. As a result, the December 31, 2021 accrued pension benefits reflect the inflation protection levels as stated in the January 1, 2021 funding valuation report.

As noted in the filed January 1, 2021 funding valuation, inflation protection levels are 100% of the CPI ratio for pension credit earned after 2009. This level will remain in effect until the next actuarial valuation is filed with the regulatory authorities at which time the level may be reduced depending on the funded status of the Plan.

The inflation protection levels reflected in accrued pension benefits as at December 31 2021 and 2020 are as follows:

Pension credit	Inflation protection level[1]
Earned before 2010	100% of the CPI ratio
Earned during 2010 – 2013	100% of the CPI ratio
Earned after 2013	100% of the CPI ratio

1 Inflation protection levels per the January 1, 2021 and 2020 funding valuations.

(c) Experience gains and losses

Experience losses on the accrued pension benefits of $1,313 million (2020 – $1,097 million gains) arose from differences between the actuarial assumptions and actual results.

Note 5.
Investment in real estate

Ontario Teachers' real estate portfolio is comprised of real estate-related investments that are either owned or managed on behalf of Ontario Teachers' by CFCL, a wholly owned subsidiary. Ontario Teachers' consolidates the fair value of the assets and liabilities of CFCL and the investment holding companies managed by CFCL. Investment holding companies and investment entities, including the joint ventures, managed by external parties, are recognized as Ontario Teachers' investments measured at fair value and presented on a non-consolidated basis.

The tables below provide information on the real estate portfolio. Intercompany transactions and balances are eliminated upon consolidation. The first table presents major components of the net investment in real estate. The second table presents major components of net real-estate income:

As at December 31 (Canadian $ millions)	2021 Fair Value	2021 Cost	2020 Fair Value	2020 Cost
Assets[1, 2]				
Real estate properties	**$ 27,560**	**$ 18,943**	$ 27,368	$ 18,450
Investments	**3,405**	**3,583**	2,577	4,107
Other assets	**891**	**891**	797	769
Total assets	**31,856**	**23,417**	30,742	23,326
Liabilities[1, 2]				
Long-term debt	**3,592**	**3,540**	3,571	3,442
Other liabilities	**1,897**	**1,646**	1,920	1,631
Total liabilities	**5,489**	**5,186**	5,491	5,073
Net investment in real estate	**$ 26,367**	**$ 18,231**	$ 25,251	$ 18,253

1 U.S. Dollar, Mexican Pesos and Colombian Pesos net assets have been hedged by way of foreign currency forward contracts for a notional amount of $nil million (2020 – $1,507 million) with a combined fair value of $nil million (2020 – $25 million).

2 Joint ventures managed by external parties hold real estate properties and have liabilities. The net asset value of these joint ventures is included in investments, representing assets of $2,821 million (2020 – $1,581 million) and liabilities of
$901 million (2020 – $507 million).

(Canadian $ millions)	2021	2020
Revenue		
Rental	**$ 1,798**	$ 1,750
Investment and other	**16**	72
	1,814	1,822
Expenses		
Property operating	**835**	917
General and administrative	**93**	58
Other	**23**	19
	951	994
Operating income	**863**	828
Interest expense	**(98)**	(136)
Income	**765**	692
Net investment (loss)/gain	**(142)**	(4,757)
Net real estate income (note 6)	**$ 623**	$ (4,065)

Note 6.
Net investment income

Net investment income is reported net of management fees, transaction costs, and is grouped by asset class. Net investment income, after giving effect to derivative contracts, for the year ended December 31, is as follows:

Net Investment Income (Canadian $ millions)	**Income[1]**	**Realized**	**Unrealized**	**Investment Income[2]**	**Management Fees**	**Transaction Costs**	**2021 Net Investment Income**
Equity							
Publicly traded							
Canadian	$ 40	$ (343)	$ (38)	$ (341)	$ (1)	$ (1)	$ (343)
Non-Canadian	332	7,256	(2,257)	5,331	(61)	(67)	5,203
Non-publicly traded							
Canadian	218	94	1,246	1,558	(12)	(46)	1,500
Non-Canadian	1,447	2,163	8,492	12,102	(535)	(245)	11,322
	2,037	9,170	7,443	18,650	(609)	(359)	17,682
Fixed income							
Bonds	781	3,147	(4,496)	(568)	–	(45)	(613)
Short-term investments	–	141	(106)	35	(2)	–	33
Canadian real-rate products	279	1,322	(1,567)	34	–	–	34
Non-Canadian real-rate products	5	(210)	356	151	–	–	151
	1,065	4,400	(5,813)	(348)	(2)	(45)	(395)
Alternative investments	108	994	409	1,511	(28)	(3)	1,480
Inflation sensitive							
Commodities	(11)	2,300	(226)	2,063	–	(2)	2,061
Timberland	190	–	(84)	106	(1)	(9)	96
Natural resources	288	–	1,743	2,031	(21)	(13)	1,997
	467	2,300	1,433	4,200	(22)	(24)	4,154
Real assets							
Real estate (note 5)	788	(1,279)	1,137	646	(2)	(21)	623
Infrastructure	703	(17)	1,496	2,182	(28)	(155)	1,999
	1,491	(1,296)	2,633	2,828	(30)	(176)	2,622
Overlay	(5)	675	(1,502)	(832)	–	–	(832)
Total	$ 5,163	$ 16,243	$ 4,603	$ 26,009	$ (691)	$ (607)	$ 24,711

1 Income includes interest, dividends, real estate operating income (net of interest expense), and other investment-related income and expenses.

2 Net of certain management and performance fees.

Net Investment Income (Canadian $ millions)	Income[1]	Realized	Unrealized	Investment Income[2]	Management Fees	Transaction Costs	2020 Net Investment Income
Equity							
Publicly traded							
Canadian	$ (12)	$ (87)	$ 1	$ (98)	$ –	$ (4)	$ (102)
Non-Canadian	390	4,557	3,254	8,201	(76)	(47)	8,078
Non-publicly traded							
Canadian	160	(3)	1,263	1,420	(7)	(34)	1,379
Non-Canadian	838	1,568	258	2,664	(351)	(105)	2,208
	1,376	6,035	4,776	12,187	(434)	(190)	11,563
Fixed income							
Bonds	1,230	(395)	4,978	5,813	(2)	(47)	5,764
Short-term investments	(7)	(399)	8	(398)	(2)	–	(400)
Canadian real-rate products	420	1,426	487	2,333	–	–	2,333
Non-Canadian real-rate products	90	4,951	(2,487)	2,554	–	–	2,554
	1,733	5,583	2,986	10,302	(4)	(47)	10,251
Alternative investments	103	(56)	442	489	(27)	(2)	460
Inflation sensitive							
Commodities	(52)	(309)	644	283	–	(6)	277
Timberland	70	–	(84)	(14)	(2)	–	(16)
Natural resources	286	–	(1,244)	(958)	–	(13)	(971)
	304	(309)	(684)	(689)	(2)	(19)	(710)
Real assets							
Real estate (note 5)	711	66	(4,823)	(4,046)	(2)	(17)	(4,065)
Infrastructure	507	953	(922)	538	(12)	(65)	461
	1,218	1,019	(5,745)	(3,508)	(14)	(82)	(3,604)
Overlay	(13)	(495)	(559)	51	–	–	51
Total	$ 4,721	$ 11,777	$ 2,334	$ 18,832	$ (481)	$ (340)	$ 18,011

1 Income includes interest, dividends, real estate operating income (net of interest expense), and other investment-related income and expenses.

2 Net of certain management and performance fees.

Note 7.
Investment returns and related benchmark returns

Investment returns and related benchmark returns by investment asset class for the year ended December 31 are as follows:

	2021		2020	
	Investment Returns	**Investment Benchmark Returns**	Investment Returns	Investment Benchmark Returns
Equity[1]	**21.3%**	**15.5%**	13.2%	12.1%
Fixed Income[1]	**(6.3)**	**(6.3)**	20.7	20.6
Inflation sensitive[1]	**11.4**	**10.9**	(2.4)	(1.6)
Real assets[1]	**5.4**	**5.3**	(7.6)	(0.1)
Innovation[1]	**39.0**	**39.0**	16.3	16.3
Credit[1]	**3.5**	**1.2**	2.6	1.5
Total fund net return[2, 3]	**11.1%**	**8.8%**	8.6%	10.7%

1 Net of transaction costs and management fees but before Ontario Teachers' investment administration expenses.

2 Absolute return strategies, Overlay and Funding for investments are included in the total fund net return and not shown separately.

3 The total fund net return includes Ontario Teachers' investment administrative expenses.

Investment returns have been calculated using a time-weighted rate of return methodology.

Ontario Teachers' identifies benchmarks to evaluate the investment management performance. The performance of each asset class is measured against benchmarks that simulate the results based on the asset class.

The total fund net return is measured against a Canadian dollar-denominated composite benchmark produced by aggregating returns from each of the policy asset-class benchmarks.

Note 8.
Funding valuations

Funding valuations are prepared annually and must be filed at least once every three years with the regulatory authorities. Once filed, these valuations are used to determine the funding requirements of the Plan. The Funding Management Policy established by the co-sponsors provides guidance for the co-sponsors in determining contributions and benefit levels.

The actuarial methods used to prepare funding valuations are different than those used to prepare a financial statement actuarial valuation and the amounts included in these consolidated financial statements. The funding valuations use an actuarial valuation method which takes into account future benefits to be earned by Plan members and future contributions to be made by Plan members, the Province and designated employers as at the valuation date, whereas the accrued pension benefits recognized in the financial statements represent the actuarial present value of pension obligations in respect of service accrued to date for all members.

The most recent funding valuation that has been filed with regulatory authorities was prepared as at January 1, 2021, by the external actuary and disclosed a funding surplus of $8.5 billion. The co-sponsors classified the surplus as a contingency reserve.

Note 9.
Contributions

(Canadian $ millions)	**2021**	2020
Members		
Current service[1]	**$ 1,597**	$ 1,544
Optional credit	**45**	41
	1,642	1,585
Province of Ontario		
Current service	**1,584**	1,534
Interest	**33**	28
Optional credit	**40**	37
	1,657	1,599
Designated employers	**37**	37
Transfers from other pension plans	**18**	11
	55	48
	$ 3,354	$ 3,232

1 Contributions past due are less than $2 million in 2021 and less than $1 million in 2020.

Note 10. Benefits

(Canadian $ millions)	2021	2020
Retirement pensions	**$ 6,259**	$ 6,087
Death benefits	**483**	464
Disability pensions	**24**	24
Commuted value transfers	**109**	89
Family law transfers	**23**	30
Transfers to other plans	**9**	5
Benefits paid	**$ 6,907**	$ 6,699
Other payments[1]	**2**	1
	$ 6,909	$ 6,700

1 Settlement or other claim-related payments to certain current and former beneficiaries determined on a case-by-case basis. Such payments do not reduce the accrued pension benefits.

Note 11. Administrative expenses

(a) Investment expenses

(Canadian $ millions)	2021	2020
Salaries, incentives and benefits	**$ 540.2**	$ 426.6
Premises and equipment	**70.2**	65.5
Professional and consulting services	**64.3**	80.0
Information services	**33.0**	33.8
Communication and travel	**4.9**	5.3
Custodial fees	**8.6**	8.5
Statutory audit fees	**3.7**	3.8
Board and committee remuneration	**1.3**	1.2
Other	**5.5**	6.6
	$ 731.7	$ 631.3

(b) Member services expenses

(Canadian $ millions)	2021	2020
Salaries, incentives and benefits	**$ 47.4**	$ 46.9
Premises and equipment	**24.9**	25.4
Professional and consulting services	**9.0**	9.1
Communication and travel	**0.8**	0.6
Statutory audit fees	**–**	–
Board and committee remuneration	**0.1**	0.1
Other	**0.9**	1.2
	$ 83.1	$ 83.3

(c) Compensation of key management personnel

Key management personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of Ontario Teachers', being its board members, the executive team and the senior managing directors of the Investment Division.

The compensation of the key management personnel is included in the administrative expenses of Ontario Teachers'. There are no other related party transactions between the key management personnel and Ontario Teachers'.

The compensation of the key management personnel[1] as at December 31 is summarized below:

(Canadian $ millions)		**2021**		2020
Short-term employee benefits	**$**	**23.2**	$	17.1
Post-employment benefits		**(1.5)**		2.5
Termination benefits		**–**		1.4
Other long-term benefits		**33.8**		19.6
	$	**55.5**	$	40.6

1 The table does not include compensation of either officers or directors of The Cadillac Fairview Corporation Limited.

(d) Employees' post-employment benefits

The employees of Ontario Teachers' are members of the defined benefit plans, of either the Ontario Public Service Employees Union (OPSEU) Pension Plan or Public Service Pension Plan (PSPP). The expected contributions from Ontario Teachers' in 2022 are approximately $16.9 million. Some employees are also members of the Public Service Supplementary Plan (PSSP). These three pension plans are sponsored by the Province of Ontario and information is available on www.optrust.com and www.opb.ca. As the employer, Ontario Teachers' matches the employees' contributions to these pension plans. Some senior management employees also participate in a non-registered, unfunded Supplemental Employee Retirement Plan (SERP) managed by Ontario Teachers' to provide the employees non-indexed retirement benefits equal to 2% of the employee's pensionable earnings times the number of years of service, less the initial annual pension to which the employee is entitled under the PSPP and PSSP, combined. The amount expensed by Ontario Teachers' during the year in relation to these plans was $5.8 million (2020 – $21.8 million). Employees employed by our international offices participate in a contributory retirement arrangement relevant for their region. Employer contributions are included in the salaries, incentives and benefits expenses.

Note 12. Capital

Funding valuation surpluses or deficits as determined by an independent actuary are considered Ontario Teachers' capital for the purposes of the consolidated financial statements. See note 8 for an explanation of the difference between the funding valuation and the financial statement valuation.

The funding valuation is used to measure the long-term health of the Plan assessing the Plan's ability to meet its obligations to all current members and their survivors. The objective of managing Ontario Teachers' capital is to ensure the Plan is sufficiently funded to pay benefits over the long term.

One of the most important assumptions in the funding valuation is the discount rate (set by the board) which is used to calculate the present value of future pension benefits the Plan expects to pay to members as well as the present value of contributions it anticipates receiving. The discount rate is derived from the expected rate of return on investments and takes into consideration the cost of running Ontario Teachers' and provisions for plan maturity as well as major adverse events, such as the 2008 financial crisis.

Preliminary funding valuation surpluses or deficits are determined annually. At least once every three years, a formal funding valuation report is required to be filed with the regulatory authorities. As stated in the Partners' Agreement[2], the Plan cannot be in a deficit position when such reports are filed[3]. As a result, the formal report must include adjustments to benefit and/or contribution levels as necessary to eliminate any preliminary valuation deficit. Any required adjustments are determined by the co-sponsors with guidance from the Funding Management Policy (Appendix A to the Partners' Agreement).

2 The Partners' Agreement is the document which establishes the partnership between the co-sponsors and outlines the roles of Ontario Teachers', its board and co-sponsors.

3 The formal funding valuation report must be actuarially balanced such that the sum of the funding liabilities (present value of future pension benefits), the present value of the reduction in cost due to providing inflation protection levels below 100% and any contingency reserve is equal to the sum of the Plan's market value of assets, asset smoothing adjustment, present value of future contributions and present value of future matching of foregone inflation adjustments.

Note 13. Retirement Compensation Arrangement (RCA)

Restrictions in the ITA on the payment of certain benefits from an RPP for periods of service after 1991 may impact some Plan members. To address affected members, the RCA was established by agreement between the co-sponsors as a supplementary plan to provide these benefits.

The RCA is administered under a trust separate from the assets of the RPP. Ontario Teachers' has been appointed by the co-sponsors to act as the trustee of the RCA Trust.

Under the terms of the RCA, its net assets available for benefits and the value of accrued benefits and deficit (referred to below) must constitute a distinct fund held separate from the RPP, and are not included in the consolidated financial statements of Ontario Teachers'.

The RCA is funded primarily on a pay-as-you-go basis from a portion of the contributions directed to Ontario Teachers' by members, the Province and designated employers. The portion is based on a limit on contributions to the RPP with contributions in excess of the limit being remitted to the RCA. The limit is determined annually by the board, after consulting the Plan's independent actuary. Since 2016, the limit has remained at $14,500 per member. Ontario Teachers' objective is to ensure sufficient funds exist within the RCA to pay for several years (but not more than 10 years) of projected benefits following each valuation date. Due to the funding policy adopted by the co-sponsors, the net assets available for benefits will continue to be substantially less than the accrued benefits.

The RCA financial statements are in compliance with Section 4600 and IFRS. A summary of the financial statements for the RCA, is as follows:

As at December 31 (Canadian $ thousands)	2021	2020
Statements of financial position		
NET ASSETS AVAILABLE FOR BENEFITS		
Assets	**$ 61,035**	$ 57,787
Liabilities	**(3,363)**	(3,148)
	$ 57,672	$ 54,639
ACCRUED PENSION BENEFITS AND DEFICIT		
Accrued pension benefits	**$ 484,490**	$ 485,015
Deficit	**(426,818)**	(430,376)
	$ 57,672	$ 54,639

For the year ended December 31 (Canadian $ thousands)	2021	2020
Statements of changes in net assets available for benefits		
Contributions	**$ 15,376**	$ 14,786
Investment income	**129**	309
	15,505	15,095
Benefits paid	**12,320**	11,116
Expenses	**152**	137
	12,472	11,253
Increase in net assets available for benefits	**$ 3,033**	$ 3,842

The actuarial assumptions used in determining the value of accrued benefits are consistent with the Plan except that the assumed discount rate has been adjusted to reflect the impact of the 50% refundable tax applicable to the RCA.

The estimate of the value of accrued benefits is highly sensitive to salary increases, both actual and assumed. Any changes to the salary assumptions can have a material impact on the liabilities for future benefits. In addition, significant uncertainty exists in projecting the liabilities of the RCA due to changes in the number of future participants as well as changes to the income tax regulations relating to pensions.

Note 14. Commitments

Ontario Teachers' has committed to enter into investment and other transactions, which may be funded over the next several years in accordance with the terms and conditions agreed to. As at December 31, 2021, these commitments totaled $33,185 million (2020 – $24,539 million).

Note 15. Guarantees and indemnifications

Guarantees

Ontario Teachers' provides guarantees to third parties related to certain investments and could be called upon to satisfy these guarantees if the investee companies fail to meet their obligations. Ontario Teachers' expects most guarantees to expire unused. No payments have been made by Ontario Teachers' in either 2021 or 2020 under these guarantees.

Ontario Teachers' guarantees certain investee loan and credit agreements which will expire by 2026. Ontario Teachers' maximum exposure is $315 million as at December 31, 2021 (2020 – $157 million). The companies have drawn $144 million under the agreements (2020 – $41 million).

Ontario Teachers' guarantees a lease agreement for an investment company which will expire by 2059. Ontario Teachers' maximum exposure is $74 million as at December 31, 2021 (2020 – $74 million). There were no default lease payments in either 2021 or 2020.

Ontario Teachers' also guarantees the ability of certain investee companies to settle certain financial obligations. Ontario Teachers' maximum exposure is $87 million as at December 31, 2021 (2020 – $81 million).

The Cadillac Fairview Corporation Limited manages the real estate investments and has provided construction completion and cost overrun guarantees, for which the maximum exposure cannot be determined because the projects are not yet complete. The guarantees on the related construction loans amounted to $29 million as at December 31, 2021 (2020 – $20 million) and have not been recognized in the real estate liabilities. These guarantees will expire by 2026.

Ontario Teachers' also guarantees commercial paper and term debt issued by Ontario Teachers' Finance Trust (OTFT) which Ontario Teachers' consolidates. The fair values of these guarantees are included in Ontario Teachers' investment-related liabilities.

The term debt issued by OTFT, as shown in the table below, is not redeemable prior to maturity at the option of the trust or Ontario Teachers' except as described in their respective Offering Memoranda. OTFT and its affiliates may at any time and from time to time purchase the senior notes in the open market or otherwise.

Issuance	Currency	Principal Amount	Maturity	Coupon
September 2017	USD	$1.75 billion	September 2022	2.125%
September 2019	USD	$1.75 billion	September 2024	1.625%
April 2020	USD	$1.00 billion	April 2025	1.375%
May 2020	EUR	€1.50 billion	May 2025	0.500%
September 2020	USD	$1.50 billion	September 2023	0.375%
September 2020	USD	$1.50 billion	September 2030	1.250%
October 2020	CAD	$1.25 billion	October 2027	1.100%
November 2020[1]	EUR	€0.75 billion	November 2030	0.050%
April 2021	USD	$1.50 billion	April 2031	2.000%
May 2021	EUR	€1.25 billion	May 2028	0.100%
May 2021	EUR	€1.25 billion	May 2041	0.900%
September 2021	USD	$2.00 billion	September 2026	0.875%
October 2021	GBP	£500 million	May 2026	1.125%
November 2021[1]	EUR	€500 million	November 2051	0.950%

1 Green bond issuances.

The commercial paper issued by OTFT is not redeemable prior to maturity or subject to voluntary prepayment, except as described in the U.S. Commercial Paper Private Placement Memorandum dated June 2017. The maturity terms for the commercial paper outstanding as at December 31, 2021 are up to 397 days from the date of issue in the U.S. and up to 364 days in Canada. The maximum aggregate principal amounts of the commercial paper outstanding at any one time do not exceed $10 billion. As at December 31, 2021, commercial paper issued amounted to $2,501 million (December 31, 2020 – $3,638 million).

Indemnifications

Ontario Teachers' board members, employees and certain others are indemnified in relation to certain proceedings that may be commenced against them. In addition, in the normal course of operations, Ontario Teachers' may, in certain circumstances, agree to indemnify a counterparty. Under these agreements, Ontario Teachers', its subsidiaries and joint ventures may be required to compensate counterparties for costs incurred as a result of various contingencies such as legal claims or changes in laws and regulations. The number of such agreements, the variety of indemnifications and their contingent character prevents Ontario Teachers' from making a reasonable estimate of the maximum amount that would be required to pay all such counterparties.

Independent limited assurance report

To: The Administrators of Ontario Teachers' Pension Plan

What we looked at: Scope of our work

We have reviewed the portfolio carbon footprint indicators for the year ended December 31, 2021 and the operational carbon footprint indicators for the years ended December 31, 2019, December 31, 2020 and December 31, 2021 as disclosed in the 2021 Annual Report (the Report) of Ontario Teachers' Pension Plan Board (Ontario Teachers'). Management is responsible for the determination and presentation of the portfolio carbon footprint and operational carbon footprint, and information set out in the Report. Based on our review, we are providing our opinion on the portfolio carbon footprint and operational carbon footprint listed below. This review does not constitute an audit.

Portfolio carbon footprint and operational carbon footprint

We reviewed Ontario Teachers' portfolio carbon footprint indicators, presented on pages 135 and 136 of the Report, which are determined using the enterprise value ownership method for the year ended December 31, 2021.

We reviewed Ontario Teachers' operational carbon footprint[1] total, presented on page 134 of the Report, for the years ended December 31, 2019, December 31, 2020 and December 31, 2021.

We reviewed the portfolio carbon footprint and operational carbon footprint indicators, using the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) Greenhouse Gas (GHG) Protocol, Task Force on Climate-related Financial Disclosures (TCFD), Partnership for Carbon Accounting Financials (PCAF)[2], and the definitions by Ontario Teachers' as stated in the Report. The GHG Protocol, TCFD, and PCAF definitions can be found at http://ghgprotocol.org/, https://www.fsb-tcfd.org/, and https://carbonaccountingfinancials.com/, respectively.

Responsibilities

Management is responsible for determining the portfolio carbon footprint and operational carbon footprint, including the scope, operational boundaries, and their presentation in the Report. We reviewed only the narrative sections and footnotes in the Report where the portfolio carbon footprint and operational carbon footprint are incorporated or referenced. Our responsibility is to express an independent conclusion on whether anything has come to our attention that causes us to believe that the portfolio carbon footprint and operational carbon footprint are not presented fairly, in all material respects, in accordance with the GHG Protocol, TCFD, PCAF[2], and Ontario Teachers' definitions described in the Report.

Our independence and quality control

We have complied with the relevant rules of professional conduct/code of ethics applicable to the practice of public accounting as related to assurance engagements, issued by various professional accounting bodies, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality, and professional behaviour.

We apply the International Standard on Quality Control 1, *Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements*, and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

1 Selected Scope 3 GHG emissions include air travel, ground travel, and paper. Emissions related to paper include both the production and waste management of the material.

2 PCAF is only applicable to the portfolio carbon footprint indicators.

What we did: Assurance standards and key assurance procedures

We conducted our work in accordance with the *International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements other than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board. As such, we planned and performed our work in order to provide limited assurance with respect to the portfolio carbon footprint and operational carbon footprint. Environmental and energy use data are subject to inherent limitations of accuracy given the nature and methods used for determining such data. The selection of different acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Considering these inherent limitations, to perform a limited assurance engagement, we obtained and evaluated evidence using a variety of procedures including:

- Performing risk assessment procedures to identify the public equities, private assets, and corporate fixed income that present the greatest risk of material misstatement to the portfolio carbon footprint indicators disclosed in the Report;
- Performing risk assessment procedures to identify the emission sources and properties that present the greatest risk of material misstatement to the operational carbon footprint indicators disclosed in the Report;
- Interviewing relevant management and staff responsible for data collection and reporting to understand the process used to calculate the portfolio carbon footprint and operational carbon footprint;
- Obtaining an understanding of the management systems, processes and relevant controls used to generate, aggregate, and report the data;
- Reviewing relevant documents and records to reconcile the portfolio carbon footprints and market values of sampled public equities, private assets, and corporate fixed income;
- Re-calculating and reconciling market exposure and carbon intensity data to confirm portfolio carbon footprint calculations;
- Reviewing relevant documents and records on a sample basis to confirm activity data used in the operational carbon footprint calculations;
- Reviewing the appropriateness of the GHG emission factors applied by Ontario Teachers' to confirm operational carbon footprint calculations;
- Re-performing a sample of GHG emission calculations to confirm operational carbon footprint calculations; and
- Assessing the overall portfolio carbon footprint and operational carbon footprint data for consistency with our knowledge of Ontario Teachers' operations.

Our assurance criteria is comprised of the GHG Protocol, TCFD, PCAF[2], and Ontario Teachers' definitions as described in the Report. Our engagement team included individuals with environmental and assurance experience.

What we found: Limited assurance conclusion

Based on our work as described in this report, nothing has come to our attention that causes us to believe that the portfolio carbon footprint and operational carbon footprint indicators are not, in all material respects, presented fairly using the WRI and WBCSD GHG Protocol, TCFD, PCAF[2], and Ontario Teachers' definitions.

Restricted use

This report is intended solely for the information and use of Ontario Teachers' management. Deloitte's engagement was not planned or conducted in contemplation of, or for the purpose of reliance by any third party (other than the Administrators of Ontario Teachers' Pension Plan to whom Deloitte's limited assurance report is addressed).

Deloitte LLP
Chartered Professional Accountants
Toronto, Ontario, Canada
March 23, 2022

Operational carbon footprint

Our net-zero efforts are focused on reducing emissions at our portfolio companies. This is where we can have the most impact in managing the pension plan and its investments. We incur a very small amount of emissions from running our operations compared to our portfolio carbon footprint. Our operational carbon footprint is significantly less than one percent of our portfolio carbon footprint.

Methodology

Our operational carbon footprint is calculated in accordance with the Greenhouse Gas Protocol (the GHG Protocol) and aligned with ISO 14064-1:2018. These are the leading industry standards to guide the calculation of an operational carbon footprint.

Scope

Our operational carbon footprint includes fiscal years 2019, 2020 and 2021 to align with our portfolio carbon footprint baseline. We used an operational control approach to set boundaries for the calculation.

The operational carbon footprint covers combustion of natural gas for building heat, purchased energy in the form of electricity and district heating/cooling, air travel, ground transportation, and paper use and disposal.

Emissions (tCO_2e)	**2021**	2020	2019
Scope 1: Direct emissions			
Building heating (natural gas)	**443**	451	521
Scope 1 total	**443**	451	521
Scope 2: Indirect (purchased) emissions			
Building energy use (electricity)	**200**	187	217
Building heat (steam consumption)	**7**	7	8
Building cooling (chilled water consumption)	**53**	16	1
Scope 2 total	**260**	210	226
Scope 3: Indirect (value chain) emissions			
Business travel (flights)	**358**	1,003	8,525
Business travel (ground transportation)	**16**	37	139
Printing (paper use and disposal)	**10**	18	50
Investment portfolio	Reported separately[1]		
Scope 3 total	**384**	1,058	8,714
Total	**1,087**	1,719	9,461

1 Given their significance to our climate change impact, we report the emissions related to our investment portfolio separately as our portfolio carbon footprint (see next page).

Net zero by 2050: Measuring our portfolio carbon footprint

As part of our plan to reach net-zero greenhouse gas emissions by 2050, we continue to publicly report our portfolio carbon footprint, which measures our share of the emissions produced by our portfolio companies. Reporting our portfolio carbon footprint enables us to measure and report on our progress toward our 2050 target. Below is an overview of our highlights and methodology for 2021.

2021 highlights

- We committed to achieve net-zero greenhouse gas emissions by 2050.
- We set ambitious interim targets and committed to reduce our portfolio carbon emissions intensity by 45% compared to 2019 by 2025 and 67% by 2030.
- Emissions intensity was reduced by 32% since 2019, our baseline year. Absolute emissions were reduced 13% over the same time period.
- We significantly increased the number of portfolio companies calculating their carbon footprints, which increases the accuracy of our portfolio carbon footprint and is the first step in helping portfolio companies more effectively manage and reduce their emissions.
- We saw a significant drop in emissions from public equities and a smaller decline from corporate fixed income. Both were driven by an ongoing shift from passive to active exposure. Passive exposure tends to be higher carbon intensity because it picks up all sectors of the economy.
- Private assets increased significantly in overall assets under management and contribution to total emissions, but intensity remained constant.

Methodology

- Our approach is informed by the Partnership for Carbon Accounting Financials, which is one of the only standards available for portfolio carbon footprint accounting.
- We use 2019 as our baseline year for measuring progress against our 2025 and 2030 emissions intensity reduction targets.
- To include as much of the portfolio as possible, we use an enterprise value[1] approach for calculating our portfolio carbon footprint. This method allows for the inclusion of both equity and corporate fixed income holdings.

Enterprise value-based methodology

Ontario Teachers' share of emissions:

$$\sum_{i=0}^{n} \frac{\text{OTPP's Equity + Debt in issuer}_i}{\text{Enterprise Value}_i} * \text{Scope 1 and 2 emissions}_i$$

For additional methodology details, see Appendix A of our 2020 Annual Responsible Investing and Climate Change Report.

1 Enterprise value equals market cap of equity plus book value of debt. Cash is not deducted.

Scope

Our portfolio carbon footprint covers the following:

- shares held in public companies and derivative positions in our internally and externally managed public equity strategies;
- private assets, including internally and externally managed private equity, infrastructure assets, real estate and natural resources; and
- corporate fixed income, including corporate bonds, external credit funds, credit derivatives and credit inflation-linked securities.

Combined, the portfolios (as defined above) represent over 70% of our net assets as of December 31, 2021. Most of the remainder of our portfolio is composed of sovereign debt, primarily Government of Canada bonds. Globally accepted standards and methodologies for considering emissions associated with sovereign debt are still being developed.

Value of holdings (C$ millions)	**2021**	2020	2019	2021 vs. 2019
Public equities	**25,952**	39,742	28,703	(10)%
Private assets	**123,695**	97,389	94,030	32%
Corporate fixed income	**21,810**	17,907	12,073	81%
Total	**171,457**	155,038	134,806	27%

Total carbon emissions (ktCO_2e)	**2021**	2020	2019	2021 vs. 2019
Public equities	**1,070**	2,454	2,970	(64)%
Private assets	**2,511**	1,974	2,300	9%
Corporate fixed income	**1,909**	2,091	1,057	81%
Total	**5,490**	6,519	6,327	(13)%

Carbon footprint (tCO_2e/C$ millions)	**2021**	2020	2019	2021 vs. 2019
Public equities	**41**	62	103	(60)%
Private assets	**20**	20	24	(17)%
Corporate fixed income	**88**	117	88	0%
Total	**32**	42	47	(32)%

Major investments

Fixed income and short-term investments over $200 million

Type (Canadian $ millions)	Maturity	Coupon (%)	Fair Value	Cost
Government of Canada bonds	2022–2051	0.25–8.00	$27,975	$28,561
Government of Canada treasury bills	2022–2022	0.00–0.00	22,765	22,758
Securities purchased under agreements to resell	2022–2022	(2.25)–0.25	22,268	22,343
International corporate bonds	2022–2060	0.00–17.27	9,187	9,287
Bank notes	2022–2059	0.00–0.00	4,649	4,649
U.S. treasury bonds	2023–2051	0.25–3.13	4,236	4,232
Canadian provincial bonds	2022–2052	0.00–5.85	2,984	2,756
Canadian corporate bonds	2022–2052	0.00–10.75	283	278
International agency bonds	2031–2032	1.50–1.75	215	226
International sovereign debt	2022–2050	0.00–4.50	(520)	(672)
Commercial paper issued	2022–2022	0.00–0.00	(2,500)	(2,488)
Securities sold under agreements to repurchase	2022–2022	(1.20)–0.45	(17,854)	(18,016)
Term debt issued	2022–2051	0.05–2.13	(23,409)	(24,185)

Real-return investments over $200 million

Type (Canadian $ millions)	Maturity	Coupon (%)	Fair Value	Cost
Real-return Government of Canada bonds	2026–2044	1.50–4.25	$8,594	$5,657
U.S. treasury inflation protection	2022–2031	0.13–0.13	3,864	3,695
Real-return Canadian provincial bonds	2026–2036	2.00–4.50	1,978	1,090
Real-return Canadian corporate bonds	2026–2039	0.00–5.33	718	309

Corporate shares/units over $200 million

As at December 31, 2021 (millions)

Security	Shares	Fair Value
Microsoft Corporation	3.1	$1,324.8
The AZEK Company Inc.	19.1	1,115.4
Novartis AG	9.7	1,082.4
Taiwan Semiconductor Manufacturing Company Limited	36.2	1,020.4
Amazon.com, Inc.	0.2	960.0
UnitedHealth Group Incorporated	1.3	853.3
Multiplan Empreendimentos Imobiliarios S.A.	164.4	698.0
SK hynix Inc.	4.7	658.4
ServiceNow, Inc.	0.8	655.1
Mastercard Inc.	1.4	651.5
EssilorLuxottica SA	2.4	640.2
Synlab AG	18.7	632.4
CSX Corporation	12.9	614.7
Adyen N.V.	0.2	584.5
Safran SA	3.8	580.3
Intact Financial Corp	3.4	561.8
Berry Global Group, Inc.	5.3	498.3
HDFC Bank Limited	19.8	497.5
Traeger Inc.	24.7	379.3
Cushman & Wakefield PLC	11.1	313.1
Cellnex Telecom, S.A.	4.1	303.5
Alphabet Inc.	0.1	259.7
Intercos SpA	12.3	249.1

Real estate properties over $200 million

As at December 31, 2021

Property	Total Square Footage (in thousands)	Effective % Ownership
Canadian Regional Shopping Centres		
Champlain Place, Dieppe, NB	850	100%
Chinook Centre, Calgary, AB	1,431	100%
Fairview Mall, Toronto, ON	785	50%
Fairview Park Mall, Kitchener, ON	697	100%
Fairview Pointe Claire, Montreal, QC	1,025	100%
Le Carrefour Laval, Montreal, QC	1,276	67%
Les Promenades St. Bruno, Montreal, QC	1,062	100%
Lime Ridge Mall, Hamilton, ON	813	100%
Market Mall, Calgary, AB	1,006	50%
Markville Shopping Centre, Markham, ON	992	100%
Masonville Place, London, ON	663	100%
Pacific Centre, Vancouver, BC	1,072	50%
Polo Park Mall, Winnipeg, MB	1,456	100%
Richmond Centre, Richmond, BC	585	50%
Rideau Centre, Ottawa, ON	1,607	100%
Sherway Gardens, Toronto, ON	1,290	100%
Toronto Eaton Centre, Toronto, ON	2,540	100%
Canadian Office Properties		
City Centre Office, Calgary, AB	858	100%
Deloitte Tower, Montreal, QC	513	100%
Pacific Centre Office Complex, Vancouver, BC	1,819	50%
RBC Centre, Toronto, ON	1,222	50%

Property	Total Square Footage (in thousands)	Effective % Ownership
Toronto-Dominion Centre Office Complex, Toronto, ON	4,418	70%
Toronto Eaton Centre Office Complex, Toronto, ON	2,248	100%
Waterfront Centre, Vancouver, BC	402	50%
Yonge Corporate Centre, Toronto, ON	660	100%
160 Front Street West, Toronto, ON	1,254	50%
16 York Street, Toronto, ON	905	70%
Canadian Hotel Property		
Ritz Carlton, Toronto, ON	335	100%
International Office Property		
White City Place, London, U.K.	927	100%
Land		
Buttonville Airport Lands, Toronto, ON	7,375	100%
East Harbour Lands, Toronto, ON	1,631	100%

Private investments over $200 million

As at December 31, 2021

24-7 Intouch Inc.

Acorn Health, LLC

Actera Partners II L.P.

ADNOC Gas Pipelines Assets LLC

AEA Investors Fund VI LP

Aethon Energy Management LLC

Aethon III LLC

Allworth Financial Holdings, LLC

Amica Senior Lifestyle Limited Partnership

Anthem Entertainment Group Inc.

Apollo Hybrid Value Overseas Partners (Delaware 892), L.P.

Ares Corporate Opportunities Fund V, L.P.

Aroona Farms SA Pty Ltd.

Arterra Wines Canada, Inc.

Aspenleaf Energy Limited

Automobile Protection Corporation

Autopista Arco Norte, S.A. de CV

Baldr Fund Inc.

BaseCore Metals LP

BC European Capital X - 7 LP

BDCM Offshore Strategic Capital Fund I, L.P.

Bear Holdings LP (New Afton Royalty)

Birmingham Airport Holdings Limited

Boyu Capital Fund III, L.P.

Bristol Airport Limited

Broad Street Loan Partners III Offshore, L.P.

Broad Street Loan Partners IV Offshore, L.P.

BroadStreet Capital Partners, Inc.

Busy Bees Benefits Holdings Limited

Canada Guaranty Mortgage Insurance Company

Canva, Inc.

Caruna Oy

Centurium Capital Partners 2018, L.P.

CeramTec GmbH

Cerberus OT Partners II, L.P.

Compass Holdings LLC

Copenhagen Airport A/S

CSC ServiceWorks Holdings, Inc.

Cubico Sustainable Investments Limited

DaVinciRe Holdings Ltd.

Diot-Siaci

DUO Financial Corporation

Empresa de Servicios Sanitarios del Bio-Bío S.A.

Enwave

Epic Games, Inc.

Esval S.A.

Evoltz Participações S.A.

EWP PA Fund, LTD.

Fibra SOMA

FireBird Energy LLC

FirstFruits HoldCo, LLC

Fleet Complete

Flexera Holdings, L.P.

Flynn Restaurant Group LLC

FMAP ACL Limited

FMAP AMC Limited

FMAP EAM Limited

FMAP PCM Limited

FMAP PGN LP

FMAP SOC Limited

Fondo de Capital Privado Terranum

GCT Global Container Terminals Inc.

Global Gourmet Services Co., Ltd.

Goldcrest Farm Trust REIT LLC

Greenstone

Hancock Timber Resources Group

Heartland Dental Care, LLC

Heritage Royalty Limited Partnership

Hg Saturn 2 A L.P.

Hg Saturn A L.P.

HRG Royalty II LLC

HRG Royalty LLC

HS Santanoni Fund Ltd.

IDEAL Group

Impactive Champlain Fund LP

Inmarsat Group Holdings Limited

IQHQ, Inc.

Irish National Lottery

KDC HoldCo LLC

Kedaara Capital I Limited

Kry International

Lalamove

Lendmark Financial Services

LMAP 903 Limited

LMAP 909

LMAP 910

LMAP Chi Limited

LMAP Epsilon Limited

Logoplaste Group S.a.r.l.

London Bridge Risk PCC Limited

London City Airport Limited

Lowell Group Limited

LPC Multifamily Holdco LLC

MBK Partners Fund IV, L.P.

MBK Partners III, L.P.

Memora Servicios Funerarios, S.L.U.

Mitratech

MQMF Fund LP

MR Cobalt Offshore Fund AB LP

MSB Capital Limited

National Highways Infra Trust

NextEra Energy Renewable Assets

Nordic Capital IX Alpha, L.P.

Nvision Eye Centers

Oaktree European Principal Fund IV L.P.

Oaktree Opportunities Fund XI (Parallel), L.P.

OGF SA

Orbis Institutional Global Equity L.P.

Orgain, Inc.

OTPP Environmental Services Trust – GFL Environmental Inc.

Outdoor Holdings, LLC

Pacifico Sur

PAG Asia II LP

PAG Asia III LP

Phynet Dermatology LLC

Polar Multi-Strategy Fund (Legacy)

Pony AI Inc.

Premier Lotteries Investment UK Limited (Camelot Group)

Princeton Digital Group Limited

RedBird Capital Partners Platform LP

RedBird Series 2019, LP

Resource Management Service Inc.

RSA Security LLC

SCI PH Inc.

Scotia Gas Networks Limited

SeaCube Container Leasing Ltd.

SH Old Quarry LP

Shearer's Foods, Inc.

Sidewalk Infrastructure Partners, LLC

Silver Lake Partners IV, L.P.

SITKA Fund I

Sixth Cinven Fund (No.4) Limited Partnership

Skyway Concession Company LLC

Sociedad Austral de Electricidad S.A.

Società Gasdotti Italia

Solus Offshore Opportunities Fund 5 LP

Sovos Compliance Holdings, LLC

Space Exploration Technologies Corp.

Spark Infrastructure Group

Stone Canyon Industries Holdings Inc.

Storapod Holding Company, Inc.

Sydney Desalination Plant Pty Limited

TACF Institutional Credit Fund

Techem GmbH

The Brussels Airport Company

Thoma Bravo Fund XII-A, L.P.

Thoma Bravo Fund XIII-A, L.P.

TierPoint, LLC

TPG Asia VII (B), L.P.

TricorBraun

Trivium Packaging B.V.

Vantage Elevator Solutions

Verily Life Sciences LLC

VIN White Fund Limited

Voloridge Fund, Ltd.

Warburg Pincus Global Growth-B, L.P.

Warburg Pincus Private Equity XII-B, L.P.

Westerleigh Group Holdings Limited

Xingsheng Preference Electronic Business Limited

Eleven-year financial review

(Canadian $ billions)	**2021**	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
CHANGE IN NET ASSETS											
Income											
Net investment income	**$24.71**	$18.01	$20.19	$5.23	$16.98	$7.00	$19.67	$16.26	$13.72	$14.75	$11.74
Contributions											
Members/transfers	**1.69**	1.63	1.62	1.60	1.71	1.70	1.67	1.63	1.55	1.48	1.41
Province of Ontario	**1.66**	1.60	1.60	1.57	1.68	1.66	1.64	1.59	1.53	1.46	1.41
Total income	**28.06**	21.24	23.41	8.40	20.37	10.36	22.98	19.48	16.80	17.69	14.56
Expenditures											
Benefits	**6.91**	6.70	6.42	6.14	5.93	5.72	5.54	5.31	5.15	4.92	4.66
Investment expenses	**0.73**	0.63	0.61	0.56	0.47	0.45	0.43	0.41	0.36	0.30	0.29
Member services expenses	**0.08**	0.08	0.08	0.07	0.06	0.06	0.05	0.05	0.05	0.04	0.05
Distribution of gain											
Total expenditures	**7.72**	7.41	7.11	6.77	6.46	6.23	6.02	5.77	5.56	5.26	5.00
Increase/(decrease) in net assets	**20.34**	13.83	16.30	1.63	13.91	4.13	16.96	13.71	11.24	12.43	9.56
NET ASSETS											
Investments											
Equity											
Public equity	**$27.22**	$42.47	$35.84	$31.60	$35.13	$38.97	$49.85	$48.27	$47.62	$48.43	$40.35
Private equity	**55.06**	41.77	39.34	33.35	31.94	26.98	27.69	20.58	14.27	11.08	11.32
Fixed income											
Bonds	**33.32**	17.15	72.67	58.25	41.41	43.53	37.98	35.19	30.53	28.87	26.50
Real-rate products	**11.87**	17.40	20.44	19.47	19.96	31.72	31.13	30.36	26.37	31.14	29.29
Inflation sensitive											
Commodities	**26.46**	17.65	17.59	10.61	11.08	4.18	4.00	9.03	8.21	6.97	5.64
Natural resources	**9.40**	7.44	8.20	8.12	6.55	6.28	6.25	2.87	2.62	2.17	2.17
Inflation hedge	**12.10**	11.53	10.28	8.71	8.92	–	–	–	–	–	–
Real assets											
Real estate	**26.26**	25.20	28.69	27.45	25.51	26.47	24.86	22.09	19.24	16.86	14.96
Infrastructure	**26.08**	17.79	16.98	17.80	18.74	17.83	15.66	12.66	11.68	9.65	8.71
Real-rate products	**–**	1.92	–	4.33	1.45	–	–	–	–	–	–
Innovation	**7.09**	3.47	–	–	–	–	–	–	–	–	–
Credit	**24.30**	17.98	16.31	15.23	13.58	–	–	–	–	–	–
Absolute return strategies	**14.94**	13.60	16.56	12.55	10.73	13.28	17.76	15.84	12.20	12.27	12.33
Overlay	**(0.46)**	0.83	0.27	(0.38)	(0.27)	0.51	–	–	–	–	–
Funding for investments	**(34.68)**	(18.27)	(79.12)	(59.51)	(39.38)	(37.67)	(46.93)	(44.50)	(33.84)	(40.18)	(35.01)
Net investments	**238.96**	217.93	204.05	187.58	185.35	172.08	168.25	152.39	138.90	127.26	116.26

(Canadian $ billions)	**2021**	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Receivable from Province of Ontario	**3.23**	3.18	3.14	3.22	3.31	3.27	3.21	3.10	2.97	2.83	2.72
Other assets	**0.61**	1.06	0.98	0.79	1.59	1.21	0.44	0.22	0.14	0.50	0.51
Other liabilities	**(1.22)**	(0.93)	(0.76)	(0.48)	(0.77)	(0.99)	(0.46)	(1.23)	(1.25)	(1.07)	(2.39)
Net assets	**241.58**	221.24	207.41	191.11	189.48	175.57	171.44	154.48	140.76	129.52	117.10
Accrued pension benefits	**257.48**	257.33	224.67	192.28	204.32	189.40	173.27	172.73	148.57	166.01	162.59
Deficit	**$(15.90)**	$(36.09)	$(17.26)	$(1.17)	$(14.84)	$(13.83)	$(1.83)	$(18.25)	$(7.81)	$(36.49)	$(45.49)
PERFORMANCE (%)											
Total fund net return	**11.1**	8.6	10.4	2.5	9.7	4.0	12.7	11.5	10.6	12.7	10.9
Benchmark	**8.8**	10.7	12.2	0.7	8.2	3.5	10.1	10.1	9.3	11.0	9.8
ASSUMPTIONS USED FOR FINANCIAL STATEMENT VALUATION As at December 31 (%)											
Discount rate	**2.50**	2.00	2.50	3.20	2.95	3.25	3.25	3.35	4.20	3.40	3.40
Salary escalation rate	**2.85**	2.50	2.35	2.40	2.70	2.80	2.50	2.70	3.00	3.00	3.05
Inflation rate	**1.85**	1.50	1.35	1.40	1.70	1.80	1.50	1.70	2.00	2.00	2.05
Real rate[1]	**0.65**	0.50	1.15	1.80	1.25	1.40	1.70	1.65	2.20	1.40	1.35

1 Effective December 31, 2015, real rate shown as the geometric difference between the discount rate and the inflation rate. Previously, the real rate shown was based on the arithmetic difference between the discount rate and the inflation rate.

Filed funding valuation history

Funding valuations must be filed with pension regulatory authorities at least every three years. Valuation dates and voluntary filings are determined by OTF and the Ontario government. Filings must show the plan has sufficient assets to pay all future benefits to current plan members. The 10 most recent filed funding valuations and the assumptions used for each are summarized in the table below. Details on plan changes from funding decisions are available on otpp.com.

Filed funding valuations[1]

As at January 1 (Canadian $ billions)	**2021**	2020	2018	2017	2016	2015	2014	2012	2011	2009
Net assets available for benefits	**$221.2**	$207.4	$189.5	$175.6	$171.4	$154.5	$140.8	$117.1	$107.5	$87.4
Smoothing adjustment	**(8.6)**	(5.5)	(4.9)	(2.9)	(10.8)	(8.2)	(7.2)	(3.0)	3.3	19.5
Value of assets	**212.6**	201.9	184.6	172.7	160.6	146.3	133.6	114.1	110.8	106.9
Future basic contributions	**46.1**	43.9	42.9	41.1	41.5	38.8	37.5	35.4	33.8	25.9
Future special contributions	**–**	–	–	0.3	3.1	3.5	3.5	3.3	3.8	5.5
Future matching of CIP benefit reduction	**–**	–	–	–	2.3	5.9	7.4	7.3	5.1	–
Total assets	**258.7**	245.8	227.5	214.1	207.5	194.5	182.0	160.1	153.5	138.3
Cost of future pensions[2]	**(250.2)**	(234.1)	(217.2)	(208.7)	(205.3)	(197.3)	(188.2)	(167.6)	(158.4)	(137.5)
Reduction in cost due to less than 100% indexing	**–**	–	–	–	2.3	5.9	7.4	7.7	5.1	–
Surplus[3]	**$8.5**	$11.7	$10.3	$5.4	$4.5	$3.1	$1.2	$0.2	$0.2	$0.8

Assumptions used for filed valuations

As at January 1 (percent)	**2021**	2020	2018	2017	2016	2015	2014	2012	2011	2009
Inflation rate	**2.00**	2.00	2.00	2.00	2.00	2.00	2.10	2.20	2.15	1.35
Real discount rate[4]	**2.45**	2.60	2.75	2.75	2.75	2.85	2.85	3.10	3.25	3.65
Discount rate	**4.50**	4.65	4.80	4.80	4.80	4.85	4.95	5.30	5.40	5.00

Contribution[5] and indexation levels[6]

	2021	2020	2018	2017	2016	2015	2014	2012	2011	2009
Indexation level (Post-2009–Pre-2014 benefits)	**100.0**	100.0	100.0	100.0	90.0	70.0	60.0	50.0	60.0	100.0
Indexation level (Post-2013 benefits)	**100.0**	100.0	100.0	100.0	90.0	70.0	60.0	45.0	60.0	100.0
Contribution level above the YMPE	**12.0**	12.0	12.0	13.1	13.1	13.1	13.1	12.4	12.0	12.0
Contribution level below the YMPE	**10.4**	10.4	10.4	11.5	11.5	11.5	11.5	10.8	10.4	10.4

1 Valuation filing dates determined by the plan sponsors.

2 Includes value of 100% inflation protection.

3 The sponsors chose to classify the January 1, 2018, January 1, 2020 and January 1, 2021 surpluses as contingency reserves.

4 Effective January 1, 2016, real rate shown as the geometric difference between the discount rate and the inflation rate. Previously, the real rate shown was based on the arithmetic difference between the discount rate and the inflation rate.

5 Contribution levels are those that were in effect in the calendar year of the valuation.

6 Indexation levels are effective the January 1 following the valuation date.

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