2022 Annual Report

Investing to make a mark

ONTARIO TEACHERS' PENSION PLAN

We are Ontario Teachers'

We deliver retirement security to

336,000

working members and pensioners.

We have

$247.2 billion[1]

in net assets.

We invest in

50+ countries

through six offices 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;
- member benefits, including inflation protection levels; 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.

1 All figures as at December 31, 2022 and expressed in Canadian dollars unless otherwise noted.

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Aligning our reporting on investment performance and sustainability is a natural next step on our journey to integrate sustainability into our investing activities. Moving forward, we will be providing progress on performance and sustainability together by adding our responsible investing and climate change reporting into our annual report.

To view responsible investing and climate change reports from previous years, please visit our website.

Investing to make a mark

Investing today, for a better tomorrow

At Ontario Teachers', we invest to contribute far more than capital. We contribute expertise and influence along with our capital, across and beyond our portfolio, to shape a better future for the teachers we serve, the businesses we back, and the world we live in.

We invest to deliver performance with purpose.

Investing in and improving high-quality businesses, including those effecting positive change; acting as responsible stewards of assets; and using our voice for change.

We embed a focus on sustainability in how we operate.

Putting our people first through investing in well-being, skill development and compelling total rewards; providing excellence in member service; and managing our operating footprint with a focus on sustainability.

We contribute to our communities through employee-led giving and employee volunteerism.

Engaging with and supporting our employees in contributing funds to worthy causes around the world and contributing our time to active community volunteerism.

Our bold and ambitious plan

Target

$300B

in net assets by 2030

Target

$50B

in green assets

Target

50%

of private investing activity outside of North America

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 an opportunity to create a lasting, positive impact on the world.

OUR SHARED VALUES

Performance-driven

Inclusive

Curious

Agile

Courageous

2022: Executing our strategy

Drive long-term growth and performance to remain fully funded

$247.2B

in net assets leading to our $300B target

4.0%

one-year total-fund net return

8.5%

10-year total-fund net return

$4.4B

value added[1] in 2022

1 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).

Deliver retirement security for members

In 2022, we remained

fully funded

for the 10th year in a row

Served

336,000

working members and pensioners

93%

of members were satisfied with our service

Grow our global presence

Executed

>50%

of private investing activity outside of North America[1]

Established

new offices

in Mumbai and San Francisco

Make a real-world climate impact

Added

$3B

in new green assets

Decreased our portfolio carbon emissions intensity by

32%

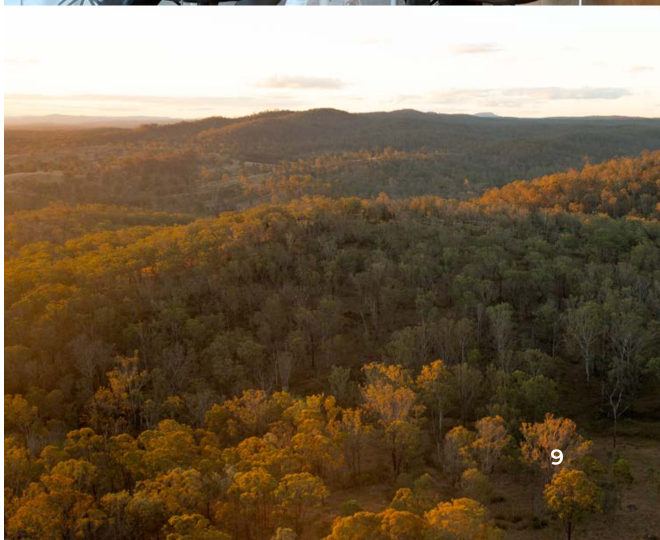
since 2019, and it remained unchanged from 2021

Set the intention to invest approximately

$5B

in High Carbon Transition assets

1 Based on the number of private investment deals that have appeared at an underwriting committee during the year.



> “While our portfolio was not immune to the headwinds, we were able to deliver a positive return.”

Message from our Chair

It’s an honour to serve the working and retired teachers of Ontario. As stewards of the plan, we remain sharply focused on ensuring that we deliver on the pension promise to our members. Our commitment remains unwavering in this period of uncertainty and change.

Challenges for global investors increased dramatically in 2022. The year was punctuated by geopolitical conflicts, trade tensions, supply chain disruptions, rising inflation and energy supply issues. These major shifts significantly altered the investment landscape. While our portfolio was not immune to the headwinds, we were able to deliver a positive return.

Resilient performance in difficult times

The plan was resilient against this backdrop, delivering a solid 4.0% total-fund net return in 2022. Our active management approach and agile positioning were underscored by a growth in plan assets to $247.2 billion. We are pleased to report that the plan is fully funded for the 10th consecutive year and remains in a strong position. The pensions of Ontario’s teachers are safe and secure.

In 2022, we saw equity indices decline and interest rates rise. The world economic order is evolving, and the plan’s board members devoted considerable attention to long-term trends. With this knowledge, we navigated the risks and opportunities in this new environment and will continue to take a long-term view and maintain focus on generating returns.

Our strategy proved successful

As rising inflation dominated the landscape in 2022, the topic became an increasingly dominant theme in our boardroom and our investment strategy. Inflation poses a real risk for the plan, impacting both our assets and our liabilities. In a high inflationary environment, securing real returns becomes more difficult and our pension obligations rise. The plan’s early strategic investment decisions to reduce our exposures to fixed income assets in favour of ones that offer some inflation protection positioned us well to weather the inflation shock. Our inflation-linked assets were a key driver to our positive returns in 2022.

Diversification of our portfolio, through effective portfolio construction, is both a key part of our strategy and a critical ingredient to our success. Diversification spreads risk across asset classes, geographies and economic outcomes, and means we can perform well in a variety of investment environments. To help further diversify our portfolio, we grew our global footprint with the opening of offices in Mumbai and San Francisco, both key areas for future investment opportunities and growth.

The importance of mitigating climate change and the impact our investments and operations have on the environment remained an area of focus on every board meeting agenda. The board's oversight of the plan's progress toward reaching our net-zero targets remains a critical component of our engagement with management.

Our members are increasingly using digital channels to communicate with us to get information and make timely, informed decisions. The plan invested in digital self-service tools to enhance member convenience. In a special board session, we had the opportunity to experience the improved user perspective first-hand and believe members will greatly benefit from advancements in this area.

Strong risk culture

As the plan grows in size and complexity, the board's responsibility for risk culture remains a key priority. Proactive risk management underpins our investment strategies. We are continually advancing our risk culture with sophisticated tools and processes to support risk measurement and management throughout the organization. In addition to progressing our investment risk culture, we are also evolving our non-investment risk culture, bringing that same discipline to emerging risks. For 2023, the board's Enterprise Risk Committee, which replaces and expands on the Operational Risk Committee's mandate, is taking a higher-level, forward-looking and generative approach to risk. This includes remaining knowledgeable about enterprise-level risks identified by or assigned to other committees at Ontario Teachers' and maintaining an integrated approach to overseeing all enterprise-level risks that recognizes and accounts for their interconnectedness.

An active, engaged board

We are guided by leading governance practices that take us beyond the four walls of the boardroom. As we entered a post-pandemic world, there was more opportunity for the board to be engaged in the plan's growing global footprint. Outside of our boardroom, our board members were once again able to meet companies and investment partners to better understand the risks and opportunities facing the plan.

A strong, independent board is the foundation of good governance. John Murray and Bill Chinery retired after serving their maximum terms as board members. I want to thank them for their hard work, wise counsel, and many contributions to our boardroom and to the plan.

We were pleased to welcome Debbie Stein and Tim Hodgson to the board. Debbie and Tim are experienced corporate directors who bring a wealth of knowledge that will serve the plan well in an increasingly complex operating environment. I want to express my gratitude to my fellow board members for their hard work, insight and invaluable contributions to the success of the plan.

Jo Taylor and the entire executive team demonstrated steady commitment and agility in the face of complex changes in 2022. We are confident in the leadership team's ability to continue executing on the plan's bold and ambitious strategy, while adapting and learning in this environment. Furthermore, our engaged teams have been instrumental in the success of the plan. Their dedication and skill continue to serve the best interest of our members, and the board is thankful for their service in a difficult operating environment.

As the stewards entrusted with working to ensure the plan's sustainability, the board remains committed to upholding the highest standards of good governance to help protect the retirement security of the more than 336,000 working and retired teachers of Ontario.

Steve McGirr
Chair

> “We ended 2022 fully funded for the 10th straight year – a notable achievement for a defined benefit pension plan in the face of very challenging market conditions.”

Message from our CEO

We were able to deliver positive results for members in 2022 despite significant macro headwinds. These included a significant decline in both public equity and fixed income markets, rising interest rates, the highest inflation seen in almost 40 years, challenging geopolitics, and stalling global economic growth.

In 2022, we achieved a total-fund return of 4.0% for the year, net of costs. While this falls short of the annual real rate of return we target to keep the plan sustainable over the long term, it was an impressive outcome in a year when public markets were significantly down and many global investors experienced negative returns. In the year, we exceeded our benchmark by 1.8% and delivered an additional $4.4 billion of value-add for members. We continue to secure consistent, stable returns over the longer term, generating annualized returns of 8.5% over 10 years and 9.5% since the plan's inception in 1990, with our investment activities adding value well above our benchmark over those periods.

We ended 2022 fully funded for the 10th straight year – a notable achievement for a defined benefit pension plan in the face of very challenging market conditions. Maintaining a fully funded status is a key measure of the plan's long-term financial health and sustainability. Our preliminary funding surplus as at January 1, 2023 totaled $17.5 billion and our funding ratio equaled 106%.

As well as generating positive investment returns, our Member Services team delivered a high level of support for our members, 93% of whom were satisfied with the service that they received.

Executing our strategy

Our strategy is anchored across three key pillars: growth, culture and impact. We made real progress in each of these areas in 2022. The core financial goal of our plan is to reach $300 billion in net assets by 2030. We are well on our way to achieving it with $247.2 billion of net assets secured at the end of 2022, an increase of $5.6 billion from the year prior.

We have also made significant strides toward establishing and maintaining a better balance in our operations between North America, where we have traditionally been more active, and the rest of the world. Last year, we opened two international offices: Mumbai, to unlock the many investment and partnership opportunities in India, and San Francisco, to be closer to the world's pre-eminent hub for technology and innovation.

In 2022, we were once again able to secure high-quality global assets across our investment departments in a competitive marketplace. Examples include SSEN Transmission, an electricity transmission network in the north of Scotland; GPA Global, an international manufacturer of custom-made and innovative packaging; and Spark New Zealand's passive mobile tower infrastructure assets.

We also invested in our digital channels to improve our members' experience when they communicate with us and launched new digital self-service tools to help them get the information they need on a timely basis.

We are also focusing our efforts on building a supportive learning culture within the plan, which we expect will allow us to deliver on our ambitious plans and to attract and retain high-quality global talent. Significant efforts went into furthering our unique employee value proposition, both to reward and engage our team and to position us as an employer of choice in our key markets. These efforts included refinements to compensation and benefits, protecting our people's well-being and investing in their professional development. In addition to several new senior leaders who chose to join our organization in 2022, I was pleased that we were able to promote our own talent into senior leadership roles. This included Charley Butler, who was appointed as Chief Pension Officer, and Romeo Leemrijse, who was appointed as Executive Managing Director, Equities.

Investing to make a mark

Our mission to deliver retirement security for our members necessitates thinking, investing and acting in accordance with a long-term timeframe, as our obligations to our members extend decades into the future. We seek to invest to make a mark, driving performance with purpose across our activities. This extends to our investment and portfolio stewardship approach, and beyond.

We believe the leaders of the future will be the ones who actively advance solutions to the most pressing challenges of today and tomorrow. We believe pursuing this vision contributes to delivering the investment returns needed to keep pensions sustainable. As an active and engaged investor, we have an opportunity to play a role in addressing some of the biggest environmental and social challenges of today to deliver value over the long term. In that regard, we are making significant efforts to help tackle climate change and aid the transition to a low-carbon economy. We have a multi-faceted strategy that involves investing in green and transition assets, helping our portfolio companies decarbonize, issuing green bonds to support their funding and more. We continued to allocate capital to attractive green assets in 2022, including a commitment of up to US$1 billion in Corio Generation to develop up to nine gigawatts of offshore wind worldwide. We also introduced a strategy to invest up to $5 billion in select emissions-intensive assets with the specific goal of using our capital and expertise to help companies decarbonize faster.

We also advanced our efforts on diversity, equity and inclusion, which we see as central to unlocking the full potential of our plan and that of our investee companies. We were proud to be recognized as an EDGE Lead organization, the highest certification level offered by EDGE, the leading global assessment and business certification for gender and intersectional equity.

Beyond these important issues, we spent time this year further defining and formalizing our approach to pursuing and measuring the positive impact we can make through how we invest, how we operate and how we give back.

Looking ahead

As we look forward, there will be other headwinds that await us. This may make it more challenging to replicate the solid investment returns we have become accustomed to in the past decade. That said, I remain confident that we have the right strategy and talent to continue delivering on our pension promise to members, and keep the plan fully funded.

I would like to thank the entire Ontario Teachers' team for the many accomplishments secured over the past year, and our board members for their support in those endeavours.

Jo Taylor
President and CEO

Creating value for our members

ONTARIO TEACHERS' PENSION PLAN

Our plan funding approach

A look at the financial 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 and decisions. 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

$17.5 billion
Preliminary surplus

106%
Funding ratio

Pension funding sources since 1990

79.7% Net investment income
10.6%[1] Government/designated employer contributions
9.7% Member contributions

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

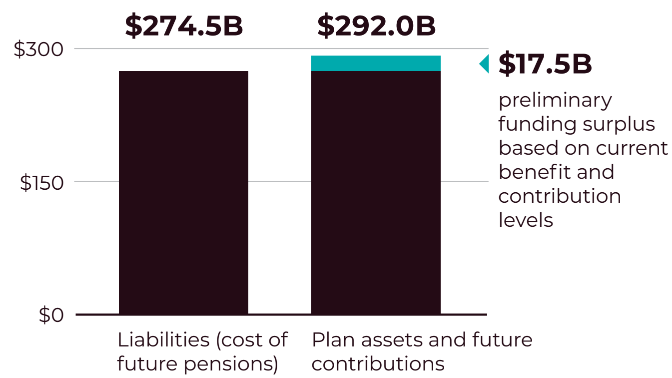
Funding status as at January 1, 2023

As at January 1, 2023, the plan had a preliminary surplus of $17.5 billion. A preliminary funding valuation is one that is not finalized or filed with the regulators. The January 1, 2023 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 2023.

The next required funding valuation filing is as at January 1, 2025.

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

FUNDING VALUATION
As at January 1, 2023



January 1, 2022 filed valuation

In 2022, Ontario Teachers' Federation and the Ontario government decided to file the January 1, 2022 funding valuation with the regulators. The $17.2 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 ($ billions)

	2023 (prelim.)	2022 (filed)
Net assets available for benefits	$247.2	$241.6
Smoothing adjustment[1]	(3.8)	(12.0)
Value of assets	**$243.4**	**$229.6**
Future basic contributions	48.6	47.4
Total assets	**$292.0**	**$277.0**
Liabilities (cost of future pensions)	(274.5)	(259.8)
Surplus/contingency reserve[2]	**$17.5**	**$17.2**
Assumptions (percent)		
Long-term inflation rate	2.00	2.00
Real discount rate[3]	2.45	2.45
Nominal 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, 2023, they will decide how to allocate the surplus, including whether or not to classify the surplus as a contingency reserve. The January 1, 2022 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 sufficient 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, and a higher rate resulting in decreased 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 the highest inflation levels since the late 1970s and early 1980s. Given the current challenges and an uncertain long-term outlook, the board decided to hold the real discount rate and long-term inflation rate steady at 2.45% and 2.00%, respectively, consistent with the rates used for the January 1, 2021 and January 1, 2022 valuations. Given high levels of short-term inflation, the board chose to reflect an estimated 4.3% adjustment to pensions in pay effective January 1, 2024 that is higher than the 2% long-term inflation assumption, which increased the liabilities by approximately $2.5 billion.

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 determine when it is 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 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

Surpluses may be spent

Usable Surplus Zone
Surplus can be used to improve benefits and/or lower contributions.

Temporary Plan Improvement Zone
Temporary plan improvements may occur provided they do not increase the long-term cost of the plan.

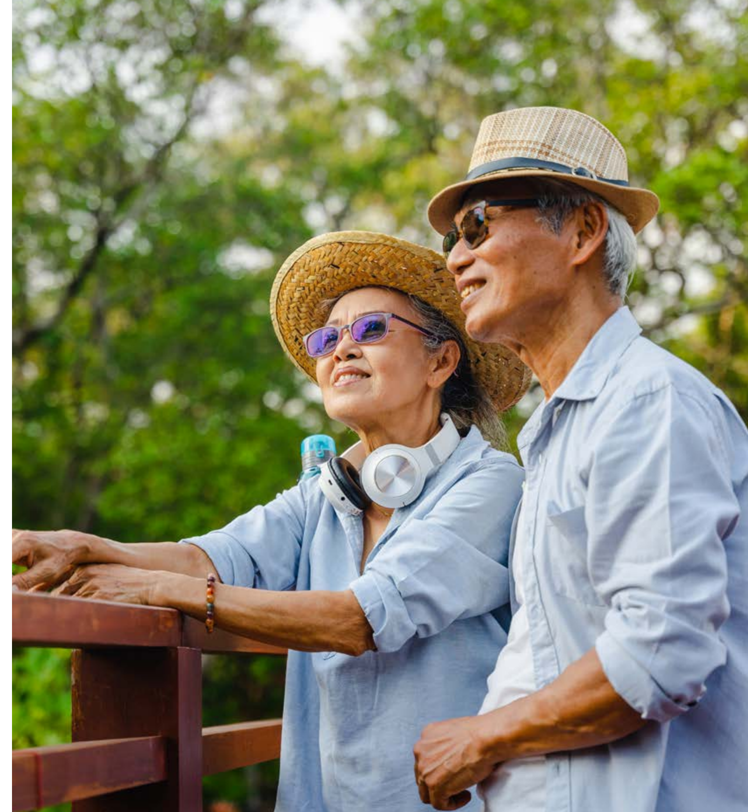
Conserve assets for an uncertain time

Funded Zone with Base Provisions
The average contribution rate is 11% and full inflation protection is provided. No improvements are possible.

Deficits need to be eliminated

Funded Zone without Base Provisions
Contribution rates and inflation protection levels are used as levers to keep plan assets and liabilities in balance.

Shortfall Zone
Additional changes to contributions and/or benefits need to be negotiated.



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.

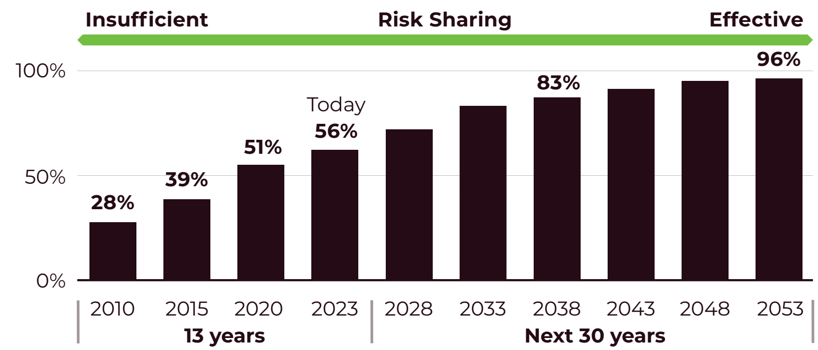
The plan sponsors prudently and proactively introduced CIP in 2008, recognizing that if significant investment losses or a funding shortfall occurred, an increase in contribution rates alone was unlikely to be sufficient and increases would be borne solely by active plan members.

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 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 56% to 83%.

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	2022	2032
Hypothetical plan deficit	$2B	$22B	$32B
Increase in contributions required to eliminate the hypothetical plan deficit	1.9%	5.6%	5.8%
Decrease in level of CIP required to eliminate the hypothetical plan deficit	n/a	28%	19%
Asset loss capable of being absorbed by fully invoked CIP	n/a	$54B	$111B

As an example, a deficit of $32 billion in 2032 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 sufficient to absorb a 2032 asset loss of $111 billion.

Effective risk management

Operating strategically with enterprise risk management

Ontario Teachers' exists to provide lifetime pension benefits to its members. To deliver on that mission, we must successfully manage risks and be adequately rewarded 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 risk appetite commensurate to achieving 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.

Our ERM program provides management the appropriate 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 and interconnected risks; and
- Create a competitive advantage through a strong and agile risk-conscious culture and ensure value is created over a longer time horizon.

The board's Enterprise Risk Committee, which replaces and expands on the Operational Risk Committee's mandate as of 2023, will take a higher-level, forward-looking and generative approach to risk. This includes remaining knowledgeable about enterprise-level risks identified by or assigned to other committees at Ontario Teachers' and maintaining an integrated approach to overseeing all enterprise-level risks that recognizes and accounts for their interconnectedness.

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 failures in 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 address key enterprise risks

Our continued focus on key enterprise risk areas during 2022 supports our long-term success.

External environment shifts

As a global investor, we operate in a world that is becoming more volatile and increasingly prone to shocks. To enhance our global competitive advantage and navigate a complex environment, we carefully monitor and seek to mitigate potential impacts of economic, political and social shifts on our activities globally. We have teams in place to identify emerging global themes that traverse asset classes and regions and develop our strategic responses to these changes.

Talent management

Recruiting, retaining and developing our talent is critical to delivering our strategy. We put our people first through investments in well-being, development and compelling total rewards and 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 also enhances our ability to deliver on our objectives. As such, building a culture that helps employees feel healthy and supported continues to be a top priority.

Normalizing 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 mental health training and certification for leaders, regular webcasts with medical practitioners, 24/7 virtual healthcare and virtual wellness sessions on topics such as mental health, fitness and nutrition. In 2022, Ontario Teachers' enhanced wellness benefits through additional offerings that support mental, emotional and physical health.

Cybersecurity risk

Our dedicated team of cybersecurity professionals manage a comprehensive program designed to protect our organization against cybersecurity threats with around-the-clock monitoring, alerting and investigation of potentially suspicious security events. In 2022, this team continued to enhance our cybersecurity controls and program to respond to the evolving threat landscape and ensure all our data assets remain protected.

Creative modeling and robust data provide valuable risk insights

We use analytical models to estimate potential gains and losses in our portfolio. This information is considered when making key business decisions such as tactical shifts in our asset allocation and our longer-term investment strategy. As such, our risk models are well governed and are periodically reviewed for enhancement opportunities. In 2022, improvements were made to our private equity risk models to better reflect our experience as a seasoned global private equity investor.

Our approach to investing

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.

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** who keep a sharp focus on targeted impact areas. We seek long-term sustainable growth through investments that drive positive outcomes.

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, with interim targets to reduce our portfolio carbon emissions intensity
- Help accelerate the decarbonization of the global economy by investing in green and transition assets
- Invest in businesses that are positioned to create a more equitable future
- Manage our investments and leverage our influence to contribute environmental and social value alongside attractive returns

Proactive risk management

Proactive risk management underpins our investment strategies, including our asset-mix selection and 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 long-term 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 Enterprise Risk & Governance Committee (ER&GC) is management's senior governance committee interpreting the board's risk appetite and providing governance on factors that may have a significant impact on Ontario Teachers' strategy, performance and/or reputation. The CEO's executive team and other senior individuals are members of this committee. In 2022, certain management committees chaired by the CEO, including the CEO-led Risk Committee (Investments), the CEO-led Risk Committee (Member Services), and the Enterprise Risk Management Committee were replaced by the ER&GC.

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, and within each portfolio.

Due diligence and the investment process

As part of our investment process and risk management activities, Ontario Teachers' investment departments conduct robust due diligence and research before making any significant investment. Due diligence is designed to use company-provided materials and other research to assess the commercial prospects of and the risk related to a specific investment. When conducting due diligence, investment teams evaluate a number of important business, financial, tax, accounting, environmental, social, governance, legal and regulatory issues in order to determine whether an investment is suitable. This work is supported by experienced external consultants with financial, commercial, legal and other relevant expertise, and is often conducted in consultation with like-minded and reputable investment partners.

Asset-mix selection

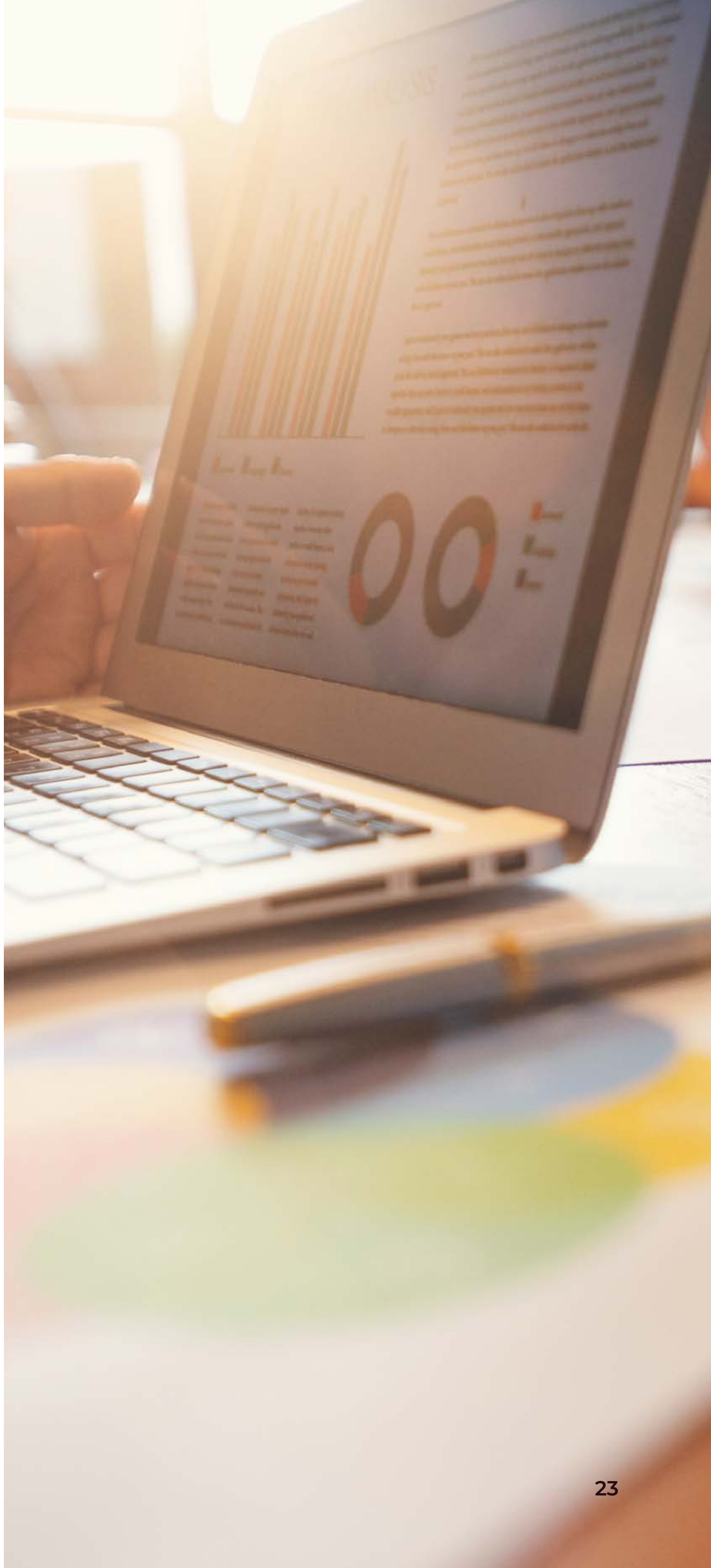
Recognizing that asset-mix selection is an important driver of long-term performance, we devote considerable attention to choosing our asset mix and the emphasis we place on each asset class and geography.

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.

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

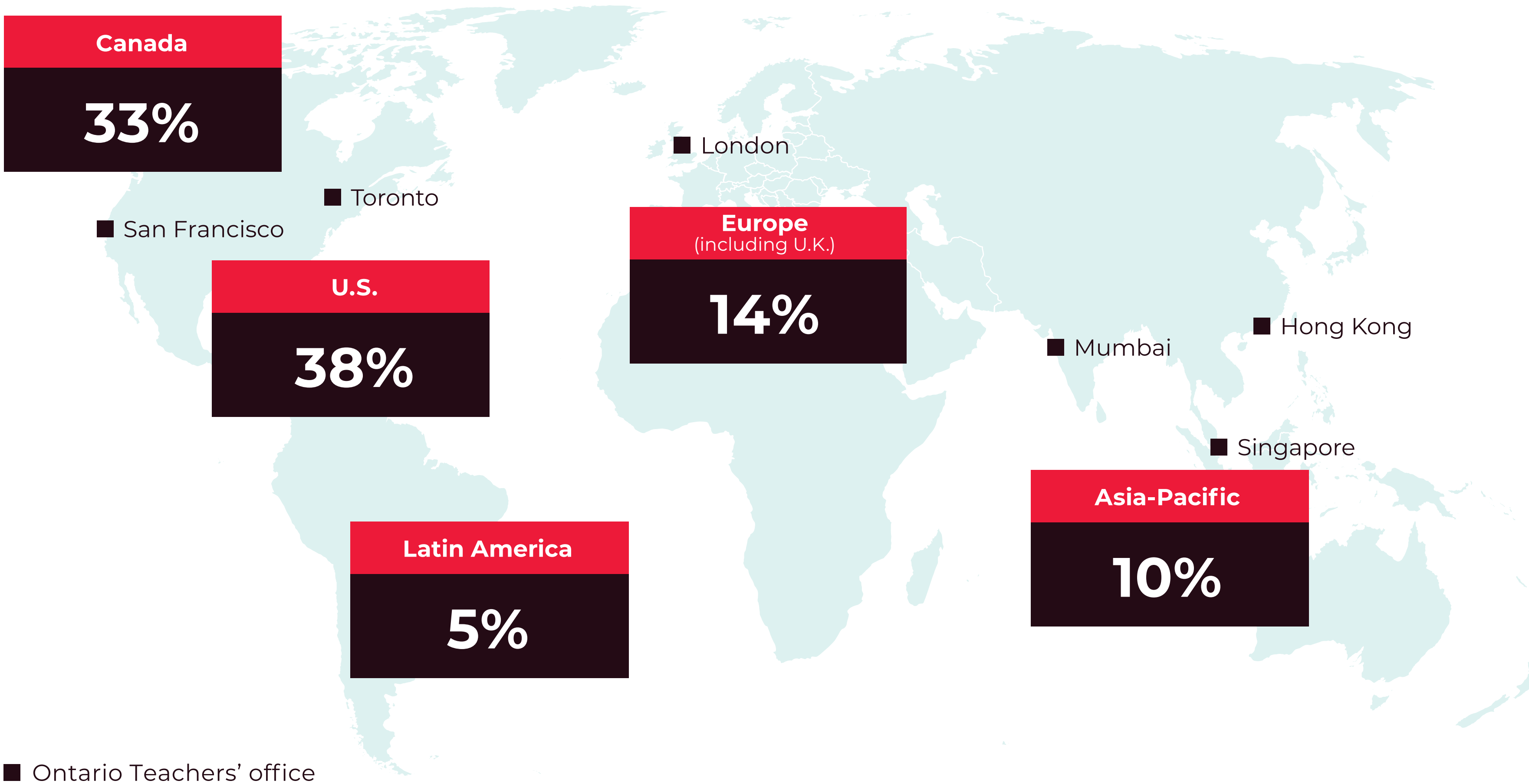
INVESTMENT DEPARTMENTS Asset classes	Equities	Capital Markets	Infrastructure & Natural Resources	Real Estate	Teachers' Venture Growth
Equity	•	•	•		
Fixed income		•			
Inflation sensitive		•	•		
Real assets		•	•	•	
Innovation					•
Credit	•	•	•		
Absolute return strategies		•			



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 horizons, asset classes, geographies and economic outcomes. This supports our objective of achieving stable total-fund returns and helps us to perform well in a variety of investment environments while mitigating the adverse impact of any one investment loss on the fund overall.

GEOGRAPHIC EXPOSURE[1]
As at December 31, 2022



1 Percent of total net assets based on country of primary listing, location of head office or location of property.

Our global presence

A significant strategic imperative for Ontario Teachers' is to enhance our international capabilities, enabling us to conduct at least 50% of our private investment activity outside of North America. We have established offices in select global financial centres and hired top talent in those markets to position us to secure the best possible investment opportunities in our priority markets. Below are brief updates on our activities in Asia-Pacific and Europe, the Middle East and Africa.

Asia-Pacific

Expanding our global presence and raising our profile in key markets is critical to our future growth, and 2022 saw Ontario Teachers' increase its presence in the Asia-Pacific (APAC) region through establishing an office in India. We now have three offices and close to 70 employees across Hong Kong, Singapore and Mumbai. This allows us to invest across the APAC region and access the multiple investment opportunities we see in these markets. Over the course of the year, we made nine additional hires in the region and are pleased to have appointed Deepak Dara as Senior Managing Director and Head of India. Read our case study on our activities in India on page 26.

With a portfolio of over 40 companies and funds managed by our APAC team, we have more than $16 billion in investments across Greater China, India, Japan, South Korea, Southeast Asia, Australia and New Zealand. Major investments this year include:

- The acquisition of a 70% interest in Spark New Zealand's mobile towers business, which was rebranded as Connexa, and the subsequent acquisition with Connexa of 2degrees Mobile's passive mobile telecommunications tower assets in New Zealand;
- The acquisition of a stake in premium packaging solutions company GPA Global, which marks our first co-control private equity investment in the region;
- Providing additional funding to pan-Asian data centre developer and operator Princeton Digital Group; and
- TVG leading the US$150 million financing round in Chinese e-commerce platform Ruigu.

$16B+
in investments

40+ investments
in the region

Portfolio breakdown

39%	Private Equity	**5%**	Credit
22%	Infrastructure	**4%**	Absolute Return Strategies
12%	Public Equity	**1%**	Real Estate
11%	Innovation	**1%**	Timberlands
5%	Natural Resources		

Looking ahead, we will continue to focus on expanding in Asia to access the dynamic investment opportunities we see across asset classes in our core regions.

Case study

Opportunities across India

India is one of the world's most dynamic economies and a country that offers a rich diversity of opportunities for a long-term investor like Ontario Teachers'. We have more than $3 billion invested in India, and it's one of the key strategic countries we are focused on as part of our strategy to reach $300 billion in net assets by 2030.

In September, we showed our continued commitment to the country by opening a new office in Mumbai. The office, our third in the Asia-Pacific region, allows us to build our presence across all asset classes in India with a base to source investments, nurture long-term partnerships and attract strong local talent. The founding team of 10 employees in Mumbai is expected to scale further as Ontario Teachers' investment portfolio grows in the coming years.

In 2022, Ontario Teachers' significantly grew its interests in India – with investments that cover everything from expanding hospitals and healthcare, to supporting solar energy.

"India is a large and growing economy, with an openness to foreign capital and growth trends that are aligned with our strengths."

Deepak Dara, Senior Managing Director and Head of India

Ontario Teachers' holds a portfolio of public and private assets totaling more than

$3B

in India

A selection of our 2022 India investments

National Highways Infra Trust

Ontario Teachers' furthered our investment into the National Highways Infra Trust, an infrastructure investment trust sponsored by the National Highways Authority of India that supports creating greater connectivity and increased opportunities for India via an improved roads network.

Mahindra Susten

Ontario Teachers' formed a strategic partnership with Mahindra Susten, a leading player in the Indian solar energy sector and Mahindra Group's renewable energy platform, to capitalize on the growing renewables opportunity in India and contribute toward the country's decarbonization ambitions.

Sahyadri Hospitals Group

The largest private hospital chain in the state of Maharashtra, comprising eight hospitals with approximately 900 operating beds and 300 critical-care beds, Sahyadri was Ontario Teachers' first control private equity buyout in India.

Europe, the Middle East and Africa

We continue to evaluate investment opportunities across asset classes in Europe, the Middle East and Africa (EMEA) from our office in London. In keeping with our bold diversification strategy, we grew our investment, value creation and functional support teams by 25 new hires last year, bringing our EMEA team to nearly 100 people.

In line with our ambition to pursue diverse investments across asset classes, we have more than $38 billion in investments and more than 30 portfolio companies and fund investments across the region. Preserving and generating value through our investments for our members remains our priority, with major transactions made in 2022 including:

- The acquisition of a 25% stake in SSEN Transmission to help deliver renewable energy to millions of homes across the U.K. – read our case study on page 42 for more details;
- Investing in the combination of group.ONE and dogado group to create a pan-European online presence solution provider;
- Providing funding through Teachers' Venture Growth (TVG) to digital healthcare company Alan, AI-powered consumer finance business Lendable, mobile tax app Taxfix and talent platform Beamery; and
- The agreements to sell Camelot U.K. Lotteries to Allwyn and to sell Iberian funeral services company Mémora to Grupo Catalana Occidente.

With fully built-out investment capabilities in EMEA, we will continue to pursue opportunities to grow our investment portfolio as a lead or co-control owner and deploy capital across the public and private markets to drive growth, generate returns and be a leading sustainable investor.

$38B+

in investments

30+ investments

in the region

Portfolio breakdown

48%	Infrastructure	**5%**	Real Estate
27%	Private Equity	**4%**	Innovation
8%	Public Equity	**1%**	Natural Resources
7%	Credit		

Currency

Changes in foreign exchange rates used to measure our non-Canadian dollar investments can have a substantial impact on short-term investment performance expressed in Canadian dollars. We manage currency from a total-fund perspective and consider currency risk as part of our overall portfolio construction. In certain circumstances and when cost-effective to do so, we will hedge a portion of our currency exposure to reduce the foreign exchange risk that comes from investing globally. Currency hedging allows us to lessen the impact of major fluctuations in foreign exchange markets on our performance from year to year.

In 2022, a weaker Canadian dollar drove a foreign currency gain of $3.8 billion as assets denominated in foreign currencies appreciated in value when converted back into Canadian dollars. This corresponds with a return impact from currency of 1.5%. This gain, partially offset by our currency hedging activities, was primarily driven by the depreciation of the Canadian dollar against the U.S. dollar, influenced by the U.S. Federal Reserve's proactive approach to raising interest rates to combat inflation.

CURRENCY NET EXPOSURE[1]

As at December 31, 2022 ($ billions)

	2022	2021
United States Dollar	**67.6**	45.0
Euro	**9.9**	10.3
British Pound Sterling	**6.6**	4.4
Chinese Renminbi	**4.8**	6.4
Mexican Peso	**4.7**	2.8
Brazilian Real	**3.0**	2.0
Australian Dollar	**3.0**	2.0
Chilean Peso	**2.8**	3.2
Japanese Yen	**2.2**	2.4
Indian Rupee	**2.1**	1.3
Other	**7.8**	6.7

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.

Funding for investments

The 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.

Ontario Teachers' 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.

Ontario Teachers' Finance Trust (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, GBP and CAD. 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 and desire to have a lasting and positive impact through our activities.

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'.

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.

More information on our liquidity risk management is available in note 2h to the consolidated financial statements and 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 international offices, which are an integral factor in our ability to source investment opportunities globally, effectively manage our portfolio and access talent in priority markets. We believe incurring these costs allows us to achieve greater risk-adjusted returns over the long term than if the plan's assets were invested passively.

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.

	2022		2021	
	$ millions	Cents per $100 of average net assets	$ millions	Cents per $100 of average net assets
Administrative expenses	**$ 785**	**33**	$ 732	33
Transaction costs	**471**	**19**	607	27
Management fees	**630**	**26**	691	31
Total investment costs	**$ 1,886**	**78**	$ 2,030	91

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 $785 million or 33 cents per $100, up from $732 million in 2021 (cost per $100 was the same at 33 cents). This increase in absolute administrative expenses was due to a larger workforce and the start-up costs to establish two new international offices.

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 $471 million in 2022, compared to $607 million in 2021. The decrease in transaction costs was driven by lower direct and fund acquisition volumes in 2022.

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 is not cost-efficient or practical to do it in-house with internal talent. 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 our 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 2022, management fees, including performance fees, were $630 million, down from $691 million in 2021. The decrease was primarily due to weaker markets in 2022 and lower performance-based fees.

Expanding our positive impact

We believe that focusing on and increasing the positive environmental and social benefits of our activities plays a critical role in protecting long-term value and delivering on our pension promise.

Ontario Teachers' has established a long history as a purpose-driven, long-term-oriented investor and employer.

Building on this strong foundation, we spent time in 2022 establishing a more formalized approach to pursuing and measuring the positive impact we can have through our activities.

Playing a role in addressing some of the more pressing environmental and social challenges facing the world supports our ability to create long-term value and delivering attractive returns.

Key themes grounding our efforts to deliver a positive impact

In particular, we're looking at how we can take advantage of opportunities to:

1. **Advance environmental action:** by supporting the reduction of GHG emissions through our own net-zero commitment as well as our intention to invest in High Carbon Transition assets, mitigating the impacts of climate change and the loss of natural capital

2. **Level the playing field:** by helping reduce barriers to improved, more equitable social outcomes

Positive impact is a business driver

We believe focusing on the positive impact we can have is an important business driver, supporting:

01

Talent attraction and retention

Doing our part to address global challenges supports talent attraction and retention with purpose, an increasingly sought-after attribute in an employer.

02

Competitive advantage

Supporting our position as a partner of choice. We have observed that founders, management teams and partners increasingly want to be supported by purpose-driven capital, supporting deal flow.

03

Long-term value protection

Contributing to solutions that address major global challenges relevant to our business supports us in meeting our long-term obligations.

An enterprise-wide approach to making a positive impact

OUR IMPACT AMBITION

Be a leader in driving positive social and environmental outcomes

AREAS OF FOCUS

Advance environmental action	Level the playing field

STRATEGIC PILLARS

HOW WE INVEST	HOW WE OPERATE	HOW WE GIVE BACK
Impact through our investments	Impact through our operations	Impact through our community engagement

How we invest

Harnessing our investment capital and stewardship to deliver compelling returns while making a real-world, positive and measurable impact.

Existing areas of long-standing focus include investing in businesses effecting positive change, acting as responsible stewards of assets, implementing our multi-faceted climate strategy (page 38) and using our voice for change (page 43). Going forward, we're seeking to expand the positive impact of our investments through establishing a framework to pursue impact investments. Impact investments are those made with the intention of generating measurable and beneficial social or environmental impact alongside an attractive financial return.

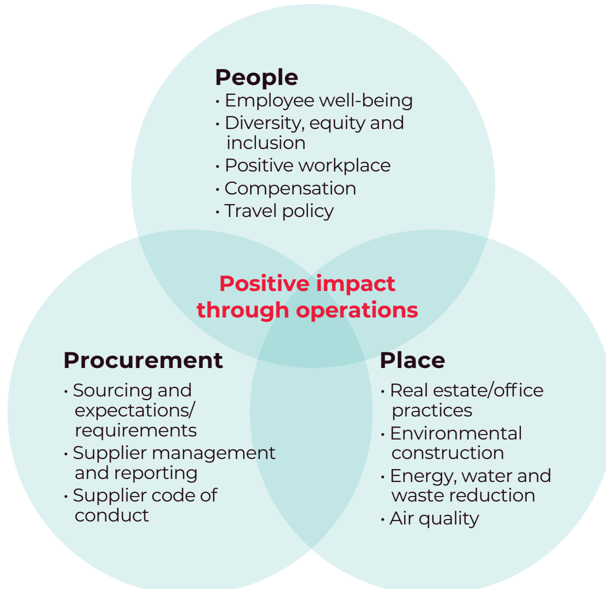
This year, we will be piloting different approaches to impact assessment and measurement on a select group of our existing portfolio companies, and relevant new opportunities as they arise, in order to formalize an impact investing framework and measurement methodology.

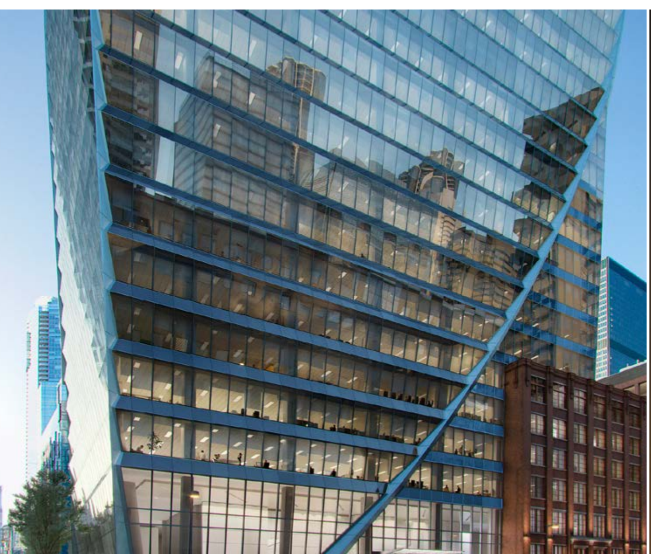
How we operate

We are continuing to embed environmental and equity considerations across our operations.

We are focused on opportunities to define and expand the positive benefits of our people, places (real estate), and procurement practices.

Our approach to our **People** is to prioritize the whole person and create an environment where people can bring their full selves to work. Key areas of continued focus are diversity, equity and inclusion (see page 78) and overall employee well-being, where we have made significant investments, including robust physical and mental health benefits.





Growing sustainably with 160 Front Street West

For the future location of our Toronto headquarters, we are targeting:

LEED® Platinum certification for the building, the highest ranking in the Leadership in Energy and Environmental Design certification

LEED® Gold certification for the interiors of the floors Ontario Teachers' will occupy

WELL® Gold certification, which recognizes initiatives that prioritize human health and well-being through the operations of the Ontario Teachers' workplace

We introduced opportunities for employees to “work from anywhere” for one month per year, tailored leadership development opportunities, and supporting an active and engaged community of Employee Resource Groups.

With regard to **Place**, we focus on sustainable office practices across our global footprint, including through our work on the development of our future workspaces globally (see “Growing sustainably with 160 Front Street West” on page 34).

In the area of **Procurement**, we are exploring potential strategic sourcing practices that incorporate environmental and equity considerations, and are increasingly engaging our suppliers on these themes.

How we give back

Leveraging our people to make an impact in our communities.

Ontario Teachers’ is proud to have a long history of employee giving and volunteerism. Our colleagues have been contributing to causes around the world via an annual giving campaign for over 30 years.

In addition, we generously give time to volunteering in our surrounding communities, both on an individual basis and as part of distinct teams. In 2022, we introduced “Make a Mark Day,” providing an opportunity for team members in London and Toronto to volunteer for specific areas of need, and plan to expand this globally in the future.

Making a mark with volunteerism

Our inaugural **Make a Mark Day** event saw employees make a mark through packing school essentials for refugee students, planting trees and doing agricultural work at a volunteer-run urban farm.

Sustainable investing

Q&A: Advancing our efforts in investing sustainably

Anna Murray joined Ontario Teachers' in 2022 as Senior Managing Director and Global Head of Sustainable Investing, Total Fund Management. Anna shares how our deeply rooted ESG practices shape where we've come from and where we're headed.

Q: Why did you decide to join Ontario Teachers'?

I was keen to join an organization where the commitment to making a real-world impact is embedded into the cultural fabric. Ontario Teachers' has a strong commitment to embedding ESG practices that spans two decades, and it continues to demonstrate leadership and influence in the industry today. As an active and engaged investor, there's a firm belief at Ontario Teachers' that the organization can play a role in addressing some of today's biggest environmental and social challenges and opportunities as we look to ESG considerations to help us deliver on our pension promise to members.

Q: Ontario Teachers' has been an ESG leader in the industry for more than 20 years. Why do you think that is?

By taking a lead-by-example approach, Ontario Teachers' has been a trailblazer in the industry for advancing corporate governance and responsible investing practices. Our early work focused on progressing practices in corporate governance, such as adding transparency to how we vote our shares and being an influential thought leader in the space.

As our approach to investing responsibly evolved, we developed guidelines for managing climate change and became a signatory to the internationally recognized Principles for Responsible Investment. We later launched our Low-Carbon Economy Transition Framework to build a common language around the energy transition.

"Ontario Teachers' has been a trailblazer in the industry for advancing corporate governance and responsible investing practices."

We've made public commitments to be net zero by 2050 and strengthened our proxy voting guidelines for climate oversight, and have set interim portfolio carbon footprint reduction targets and targets for our portfolio companies to establish decarbonization plans. We continue to take an active stance on embedding ESG considerations across the investment lifecycle. In the last three years, the Sustainable Investing team was involved in and reviewed an average of over 80 potential and realized transactions valued at more than $35 billion annually across asset classes.

Most recently, through our annual review of our proxy voting guidelines, we reinforced existing focus areas for publicly traded companies such as diversity, equity and inclusion and set higher expectations for increased participation of women in board roles.

Along our journey, we have developed substantial climate-related expertise and have worked to make our portfolio companies greener and more resilient. We remain committed to being on top of trends and research in the space and seek opportunities to use our capital and influence to make a long-lasting positive impact as we deliver value.

Q: What were our biggest wins in 2022?

Some of our key achievements last year include:

1. Announced an ambitious plan to invest in decarbonizing high emitters to accelerate the net-zero transition. We plan to have an initial allocation of around $5 billion for these assets and will be providing separate reporting and measurement to reflect our progress.
2. Added $3 billion in new green assets to our portfolio, including Mahindra Susten (a renewable energy business in India), Corio Generation (a global offshore wind development platform), SSEN Transmission (an electricity transmission company in Scotland) and a second investment with NextEra Energy (a portfolio of high-quality renewable energy assets).
3. Established proxy voting guidelines that advocate for large public companies to seek to increase their board gender diversity to a minimum 40% representation of directors identifying as women, up from prior expectations of 30%. Read more about our proxy voting guidelines on page 45.
4. Voted on nearly 280 shareholder proposals about ESG topics that drive accountability.
5. Through our wholly owned subsidiary, Ontario Teachers' Finance Trust (OTFT), issued a $1 billion green bond, OTFT's third green bond issuance, and the first in Canadian dollars.

Q: How does our purpose support a culture of sustainability?

Our purpose is to invest to shape a better future. Our mission is to deliver retirement security for our members. This is what guides us as a global investor: as we work to generate returns and help ensure plan sustainability, we take an active role in creating real-world impact. Our purpose informs the way we think, act and do business, and is embedded into all facets and levels of our organization and its culture. Supported by our core strategies of Culture, Growth and Impact, our teams look to create a lasting, positive impact on the world. We believe this goes hand in hand with delivering the investment returns needed to keep pensions sustainable over the long term.

Q: What's next for sustainable investing at Ontario Teachers'?

Building from our position of strength, we will continue to stay ahead of emerging ESG topics, trends, risks and opportunities. We will advance our multi-faceted approach to climate change through actively working with our portfolio companies on decarbonization strategies, investing in green and transition assets, issuing green bonds and evolving our proxy voting guidelines. We believe that expanding our positive impact through playing a role in addressing some of the world's most pressing environmental and social challenges supports our ability to create long-term value and deliver on our pension promise. As such, we are formalizing our approach to pursuing the positive impact we can have through our business activities.

Our climate strategy

Our multi-faceted climate strategy is rooted in driving significant real-world impact.

Climate change is one of the biggest challenges of our time. Our strategy reflects our commitment to reduce the environmental impact of our portfolio and capitalize on opportunities supporting the broader transition to a net-zero future in order to make strong investment returns and pay pensions over the long term.

Decarbonizing our portfolio

Work with public and private companies where we have significant ownership stakes and influence to support them on a decarbonization pathway in line with our net-zero ambition.

Decarbonizing high emitters

Play a key role in the energy transition by helping to accelerate the decarbonization of high-emitting businesses to maximize our impact.

Significantly increasing green investments

Increase our capacity to deploy capital into companies that enable the net-zero transition, reduce net GHG emissions and help build a sustainable economy while also helping us generate value.

Leveraging advocacy and partnerships

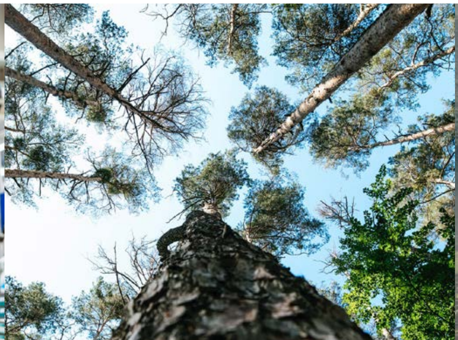
Engage on issues that help the broader economy shift toward net zero and partner with like-minded investors.

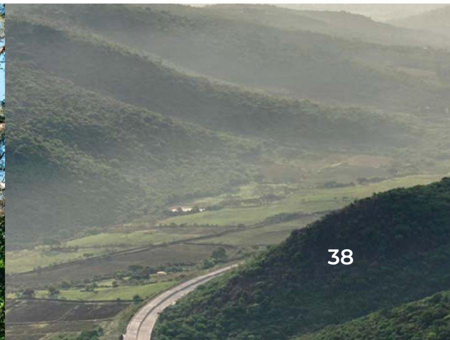
Issuing green bonds

Issue green bonds to fund investments in eligible green assets with measurable impacts that support the transition to a sustainable future.

Mitigating exposure to climate-related risks

Understand and mitigate physical and transition risk exposure while also considering climate change as part of our investment planning process.





Decarbonizing our portfolio

We are working closely with our portfolio companies and contributing our expertise to help them plan and execute their transitions to a net-zero future. In 2021, we set a target to align the portfolio companies in which we have significant stakes (minority or control) with a credible plan to achieve net zero by 2050, or what we're calling a "Paris Aligned Reduction Target" (PART).

Through collaborating with and providing resources to our portfolio companies, we have made progress since PART's inception in 2021, including creating a decarbonization playbook, with detailed guidance on:

- The case for decarbonization, including board and management education;
- Carbon footprint baseline development;
- Decarbonization levers identification and assessment;
- Target setting, validation and communication; and
- Guidance on what a credible net-zero plan entails based on internationally recognized standards and initiatives.

As one of the first steps in the net-zero journey is to measure emissions, we focus on increasing carbon reporting from our portfolio companies. This helps reduce estimated emissions and increases the accuracy of our portfolio carbon footprint.

We bolstered carbon emissions reporting to cover over 88% of emissions in our direct private portfolio, up from 37% in 2019. We're now engaging a first wave of select portfolio companies to evaluate and execute on their decarbonization pathways. We have prioritized these companies based on our share of emissions and ownership stake. This helps us focus efforts on the highest-emitting companies to maximize impact where we have actionable influence over emissions.

Our commitment to reach net zero by 2050

Interim targets to reduce our portfolio carbon emissions[1] intensity against a 2019 baseline:

↓45%

by 2025

↓67%

by 2030

1 Since we convert all greenhouse gases to tonnes of carbon equivalent (tCO_2e) in our calculations, the terms "greenhouse gas" or "GHG" and "carbon emissions" are used interchangeably in this report.

% of our portfolio's emissions we expect to be covered by a credible plan to achieve net zero by 2050:

2025

67%

2030

90%

Applicable to companies in which we have significant stakes.

Target

$50B

in green investments

We know setting credible targets takes time. We established a two-year grace period for any new investment where the company does not already have emissions reduction targets defined. This should allow the company to develop a thoughtful and achievable approach. As standards and common understanding of net-zero targets continue to evolve, we expect companies' targets to cover scope 1 and 2 emissions and include scope 3[1] when those are material to the company.

Decarbonizing high emitters

Effectively managing the financial risks and opportunities tied to climate change is essential to our ability to provide lifetime pensions to our plan members. In 2022, we announced an ambitious plan to play a meaningful role in accelerating the net-zero transition. Recognizing the urgency of the climate crisis, we committed to actively investing in select emissions-intensive assets with the goal of helping them decarbonize faster. High Carbon Transition (HCT) assets will allow us the opportunity to achieve our plan to make a significant real-world impact while also making good returns.

We plan to have an initial allocation of around $5 billion to HCT assets and will be providing separate reporting and measurement to reflect our progress on these investments. HCT assets will not be covered by our interim emissions reduction targets but will be accounted for under our commitment to achieve net zero by 2050. More information on our HCT strategy is available in our Responsible Investing and Climate Strategy Report on our website.

Significantly increasing green investments

Long-term capital has an important role to play in a transition to a low-carbon economy, which is why we have been taking an active approach and steadily growing our green asset exposure over the years. In 2022, we added $3 billion in new green assets, which are companies that generate clean energy, reduce demand for fossil fuels and help build a sustainable economy. We now have nearly $34 billion in green assets, making continued progress toward our target to grow our green investments to $50 billion.

1 Scope 1 GHG emissions are direct emissions from sources that are owned or controlled by a company we invest in, such as emissions from fuel consumption within the company's operations. Scope 2 are indirect GHG emissions from the generation of purchased energy consumed by the company, such as electricity, steam, heating and cooling. Scope 3 emissions are the result of activities from assets not owned or controlled by the company, but that the organization indirectly impacts in its value chain, such as purchased goods and services and use of sold products. Scope 3 emissions include all sources not within an organization's scope 1 and 2 boundary.

Using green bonds to make an impact

In 2022, our wholly owned subsidiary, OTFT, issued a third green bond, the first in Canadian dollars. OTFT's green bond issuance increases funding for investments in eligible green assets that support the net-zero transition and a sustainable future. As at December 31, 2022, a total equivalent to $2.9 billion[1] has been issued in green bonds, and net proceeds from OTFT's green bond issuances are fully allocated to eligible green assets in our portfolio.

GREEN BOND ISSUANCES
(figures expressed in millions)

Issuance Date	Currency	Outstanding Size (local currency)	Outstanding Size (CAD equivalent)
November 25, 2020	EUR	€750	$1,162
November 24, 2021	EUR	€500	$710
November 16, 2022	CAD	$1,000	$1,000
Total amount outstanding			$2,872

The positive impacts provided by eligible green assets within the Green Bond Register as of December 2022 fall into four main categories:

- Renewable energy generation and transmission;
- Energy efficiency;
- Climate change adaptation; and
- Natural resources and land use.

The positive impacts under each category are measured and tracked on an ongoing basis. They include renewable energy generated, GHG emissions avoided or removed, water treated and produced, and others. More details on the positive climate impacts that are associated with our eligible green assets can be found in OTFT's most recent Green Bond Report on our website.

Continuous efforts

We are continuing to focus on our climate goals to help us sustainably manage our portfolio and to create a positive impact by making efforts toward:

- Actively reducing GHG emissions and accelerating the global energy transition through investments that make a real-world impact;
- Driving regenerative resource usage through investments that deliver positive environmental impact;
- Complementing our existing green bond impact metrics to better track progress on climate action and climate solutions; and
- Developing a more complete accounting of financed emissions for sovereign debt and portfolio company scope 3 emissions.

1 Foreign currency amounts were converted to Canadian dollars using the exchange rate as of the transaction date.

> “Through our portfolio companies we are aiming to accelerate the energy transition by working to make grids more resilient, efficient and sustainable worldwide.”

Charles Thomazi, Senior Managing Director, Europe, Middle East & Africa, Infrastructure & Natural Resources

Case study

Transmission critical

From the wilds of the Scottish Highlands to the frozen ground of Finland, electricity transmission poses various challenges across geographies. As we increasingly move toward renewable sources of energy, the ability for grids to safely and securely transport electricity to consumers over long distances is more important than ever.

In 2022, our Infrastructure & Natural Resources team made its largest investment in the power grid to date: £1.47 billion for a 25% stake in SSEN Transmission, Scotland-based SSE plc’s electricity transmission network business and one of the fastest growing networks in Europe. SSEN Transmission transports electricity generated from renewable resources, such as offshore wind, from the rugged environment of northern Scotland to areas of demand across the U.K. This investment will support the U.K.’s net-zero ambitions, including the delivery of 50 gigawatts of offshore wind capacity by 2030.

Alongside SSEN Transmission, our investments in the power grid also include Caruna, Finland’s largest electricity distributor; Evoltz, a leading electricity transmission platform in Brazil; and Inversiones Grupo Saesa Limitada, the second largest electricity distributor in Chile. Ontario Teachers’ also owns a 33% stake in Spark Infrastructure, which owns stakes in three major Australian electricity transmission businesses (SA Power Networks, Victoria Power Networks and Transgrid).

With each of these companies, we’re making strategic investments that support the performance of the power grid – from climate-proofing measures that will increase reliability, to smart technology that can improve efficiency. We believe that with careful stewardship, modernized power grids can support the energy needs of future generations while playing a critical role in decarbonization.

To achieve net zero, electricity use must rise from 10% to

~49%

of global energy consumption by 2050

(SOURCE: New Energy Outlook 2021, BloombergNEF)

Using our voice to help drive change

By encouraging our private and public portfolio companies to improve policies and practices involving boards, employees, operations and supply chains, we can help make them stronger, achieve better risk-adjusted returns over the long term and enhance our ability to meet our pension promise.

At our private portfolio companies, we roll up our sleeves to help navigate these factors – from selecting board members, to advising on operational issues or drawing on the expertise secured from our portfolio of over a hundred private investments. For our public holdings, we execute a corporate engagement program where we seek to speak with board members and key executives to understand how they are addressing important issues like climate change, diversity and human capital management, and offer suggestions when needed.

Driving board effectiveness through stewardship

Board effectiveness is critical to creating and maintaining sustainable businesses that deliver value over the longer term. Stewardship activities such as proxy voting, corporate engagement and issues-based risk management help align the businesses we invest in with our expectations on key topics including climate change, sustainability disclosure and diversity.

Stewardship activities that drive effective boards

Proxy voting

Exercising voting rights, holding boards and management accountable and setting expectations of appropriate behaviour.

Corporate engagement

Sharing views and encouraging the adoption of leading practices, either alone or collaboratively with peers.

Issues-based risk management

Providing corporate governance-related due diligence and monitoring ongoing board performance and new regulations.

Close to half of the companies we engaged with on gender diversity achieved or committed to a minimum

30%

representation of women on boards in 2022

We vote on every ballot proposal

with

7,426

resolutions

at

588

meetings

in

16

countries, mainly in North America, Europe and Asia

Voting to influence change among public companies

We take proxy voting very seriously. Our goal is to vote every share of every company we own at every meeting of that company's shareholders.

Why are shareholder proposals important?
Shareholder proposals are important tools that public company shareholders can use to drive corporate accountability and effective board oversight. For example, through shareholder proposals, investors can ask companies to produce reporting on how they will reduce their GHG emissions or ask them to undertake a racial audit of their workforce. In turn, this can lead to enhanced disclosure which helps equip shareholders with the information needed to make better investment decisions.

In 2022, investors submitted a larger number of shareholder proposals than in 2021, demonstrating strong engagement and a desire for accountability. In the jurisdictions where we voted, we observed more than a 100% increase in the number of environment-themed proposals, and close to a 75% increase in social-related proposals from the previous year.

Ontario Teachers' voted on nearly **280 proposals** last year. We assess every proposal on its merits using an internal framework that considers several factors including its clarity and relevance, the company's current actions and the degree of effort required to implement the proposal.

Topics we frequently vote on:

Environmental

- Reporting and action on climate change
- Developing an approach to reporting and/or reducing GHG emissions

Social

- Reviewing political spending or lobbying
- DEI issues including pay equity reporting

Governance

- Shareholder rights
- Independent board leadership

What we expect from public companies on climate change

- A clear understanding of how climate risk will materially impact their business
- Implementation of credible net-zero transition plans that include a commitment to achieve net zero on or before 2050, near-term and science-based emissions reduction targets, and details on how they will achieve their targets
- Reporting based on the frameworks set out by the Sustainability Accounting Standards Board (SASB) and the recommendations made by the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD)
- Board accountability for climate change oversight

What we expect from public companies on DEI

- Greater diversity on boards, in management and across organizations
- Developed approaches to diversity through policies or statements, with goals aiming to increase the participation of underrepresented groups on the board and within senior management
- Clear and timely diversity-related reporting
- For U.S.-based companies, reporting of the most recent EEO-1 (Equal Employment Opportunity data)

Raising the bar on board diversity

Our Proxy Voting Guidelines encourage public companies to take actions that we believe are in the best long-term economic interest of stakeholders. They also articulate our views and expectations on topics we feel are fundamental in creating effective boards and governance. We monitor current and emerging governance issues and trends to ensure our most recent and informed views are reflected.

Our most recent guidelines advocate for large-cap companies on developed market indices to seek to increase their board gender diversity to a minimum 40% representation of directors identifying as women, up from a minimum 30%. In addition, we also encourage making a distinction between gender and other forms of diversity in board diversity disclosure and distinguishing between those who self-identify as non-binary, women or men in reporting.

The guidelines continue to ask boards to set and disclose timebound targets to increase the number of board directors identifying as a member of an underrepresented group such as women, visible minorities including Black and Indigenous Peoples, 2SLGBTQ+ identified individuals and Persons with Disabilities. Reporting on achievements against those targets and the use of self-disclosure are also encouraged as they demonstrate a commitment to creating boards that are diverse beyond gender. A full version of our Guidelines is available on our website.

We advocate for a minimum

40%

representation of directors identifying as women

Delivering outstanding service to our members

We deliver outstanding member experiences by shaping everything we do around supporting our members. We're proud to provide this standard of service as we advance our omnichannel strategy to meet members where they are.

As more members rely on digital services, our data-driven omnichannel strategy continues to help us create the seamless, personalized experiences members expect from us. Our digital-first approach educates and empowers our members to make timely, informed decisions with confidence. We're listening to what members say, analyzing what they do and acting on those insights to provide the right service at the right place and time.

Consistent high-quality service

The Quality Service Index (QSI) is our primary performance measurement. By collecting an independent survey from a sample of members throughout the year, QSI evaluates the quality of our member experience, service and communications.

In 2022, 93% of our members were satisfied with our service. Our strong service quality scores year over year speak to our ability to understand members' needs at every stage of their pension journey.

	2022	2021	2020
QSI percentage of satisfied members	**93**	93	94

2022 highlights

We offered our members more options to self-serve with ease. By expanding our use of digital signature software, members can now sign a wider range of documents electronically. Our data shows that this option provides high value to our members by reducing the time and effort required to complete important documents.

We digitized 100% of our paper records ahead of our 2023 goal. With paperless records, we can store and access files securely while minimizing our operating costs and environmental footprint.

We delivered more information to members electronically. Rather than receiving mail, members who are signed up for electronic communications can conveniently access correspondence in their secure account anytime, anywhere.

"I recently had to change my mailing address in your records and was able to do it online, although I am not particularly proficient with the computer. Your clear and simple directions were easy to follow, and you made me feel like I knew what I was doing. I also find it easy to access my account regarding upcoming payment dates and amounts."

JOHN SHEA, RETIRED MEMBER

"My communication with the team was excellent. They supported my questions and were willing to reconnect when needed and also directed me to information that I did not know I needed. I am moving closer to retirement, and they were able to help me plan for the next few years."

KELLY PARLATORE, WORKING MEMBER

MEMBER PROFILE

183,000
Working members

153,000
Pensioners

336,000
Total number of working members and pensioners

7,923
New members in 2022

44
Average age of working members

5,500+
New retirees in 2022

73
Average age of pensioners

1.2 to 1
Ratio of working members to pensioners

32
Average years retired members expected to collect a pension

59
Average retirement age

26
Typical years of credit at retirement

5–110
Age range of pensioners

148
Pensioners over age 100

$50,000
Average starting pension

34
Pensions in pay for more than 50 years

Governing with excellence

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. The plan is jointly sponsored by the Ontario government through the Minister of Education, and the executive of OTF.

Role of the board

Since its inception, Ontario Teachers' has been overseen by independent board members who are required to make decisions in the best interests of plan beneficiaries. 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 and succession plans recommended by management. They monitor investment, operational, strategic and governance risks, and ensure appropriate mitigation plans are in place. The board conducts regular preliminary funding valuations to assess the pension plan's long-term financial health, which 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. More detailed information is available on our website.

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
- Benefits Adjudication Committee
- Governance Committee
- Human Resources & Compensation Committee
- Investment Committee
- Operational Risk Committee[1]

For more information about our board committees, including their members and mandates, please visit our website.

1 The board agreed to expand this committee's mandate in 2023 and renamed it the Enterprise Risk Committee.

Board effectiveness

The plan sponsors each appoint five board members and they jointly select the board's chair. This governance structure plays a crucial role in the plan's success.

When appointing board members, the sponsors look for candidates with a variety of attributes, skills and experience that maximize board effectiveness. The following table summarizes some of the key qualifications 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	•	•		•	•	•	•	•			•
ICD.D Designation	•	•	•	•	•	•		•	•		•
Age	68	63	64	58	66	69	75	62	67	74	69
Years on the board (as at January 1, 2023)	8	4	7	1.7	3	7	5	4	8	8	7

Our board members

Visit our website to view our board members' full biographies, including new directors Deborah Stein and Timothy Hodgson.

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 92%

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, GCB.D
Appointed 2016 | Attendance 96%

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

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

Former Treasurer, BMO Financial Group; Director, Audit Committee Chair, and member of the Environment, Social, Governance Committee of 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, ICD.D
Appointed 2021 | Attendance 96%

Former Chief Strategy Officer for Intact Financial Corporation; Director, Aviva Canada; Director, Assuris; Vice-Chair, UNICEF Canada; Member of the Advisory Board of the Smith School of Business at Queen's University

Member, Governance, Human Resources & Compensation and Investment Committees

Cindy Forbes, ICD.D
Appointed 2020 | Attendance 92%

Former Global Chief Analytics Officer and Chief Marketing Officer, Manulife; Former Chief Actuary and former Chief Financial Officer (Asia), Manulife; Chairperson, Board of Governors, University of Waterloo; Director, Prosperity Group Holdings, LP

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; Director of the Greater Toronto Airports Authority; Former board member, Desjardins Financial Security; Former member of the Technology Committee on the board of l'Université de Montréal; Former director, l'Université de Montréal, Tourisme Montréal, CIREM, and Musée Pointe-à-Callière

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 92%

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

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

John Murray
Appointed 2014 | Attendance 100%

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; Former partner, PwC (formerly PricewaterhouseCoopers); Former director of 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

2022 board highlights

11
board members

67
average age

5.3 years
average tenure

55%
of board members identify as women

45%
of board members identify as men

BOARD MEETINGS AND COMMITTEES

The board met **10** times for full meetings, including twice for strategy sessions

and achieved **97%** attendance across all committee and board meetings

67% of committee chairs are women

Investment Committee met **7** times

Audit & Actuarial Committee met **4** times

Operational Risk Committee met **3** times

Human Resources & Compensation Committee met **5** times

Governance Committee met **3** times

Benefits Adjudication Committee held **2** general meetings

BOARD NEWS AND PROGRESS

Welcomed new board members Deborah Stein and Timothy Hodgson

Thanked retiring board members John Murray and Bill Chinery

Conducted a board effectiveness review and refreshed the board values to reflect the outcome

Held 22 board education sessions focused on board effectiveness, international assets and geopolitical headwinds

Navigating legislative and regulatory change

Regulatory update

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, FSRA initiatives and policy development.

Legislative update

There were no material changes to pension or tax legislation applicable to Ontario Teachers'.

Pension plan update

The plan sponsors make amendments to the pension plan from time to time. 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 came into effect on September 1, 2022, and permits purchases of eligible periods that end on or after September 1, 2017.

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' takes 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 ensure that our investments remain in compliance.

As a global investor, we believe it is important for governments to ensure clarity and certainty in tax laws, and we welcome the opportunity to engage in consultations on tax policy matters with administrative authorities and policymakers worldwide. More details on our approach to taxation are available on our website.

Canadian Institute of Actuaries (CIA) Standards

The CIA Actuarial Standards Board 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.

Our performance

ONTARIO TEACHERS' PENSION PLAN

A look at our portfolio

2022 results highlights

$247.2B
Net assets

4.0%
Total-fund net return

8.5%
10-year total-fund net return per annum

$4.4B
Value added beyond our benchmark

1.8%
Return above benchmark

$10.4B
Net investment income

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 our investments 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.

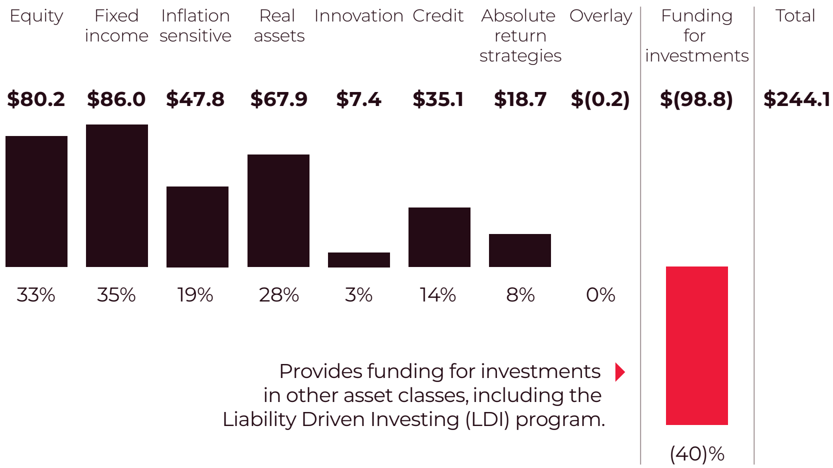
Ontario Teachers' is an active global investor with investments in more than 50 countries. We're agile, innovative investors who harness our scale, network and in-house experts to help the companies we invest in grow and thrive. Our investment departments invest across seven different asset classes that 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 a 4.0% total-fund net return in 2022, compared to the fund's benchmark return of 2.3%. This resulted in a return above the benchmark of 1.8%[1], or $4.4 billion in value added.

1 Benchmark return and return above benchmark do not add up to 4.0% due to rounding.

NET INVESTMENTS[1]

As at December 31, 2022 ($ billions)



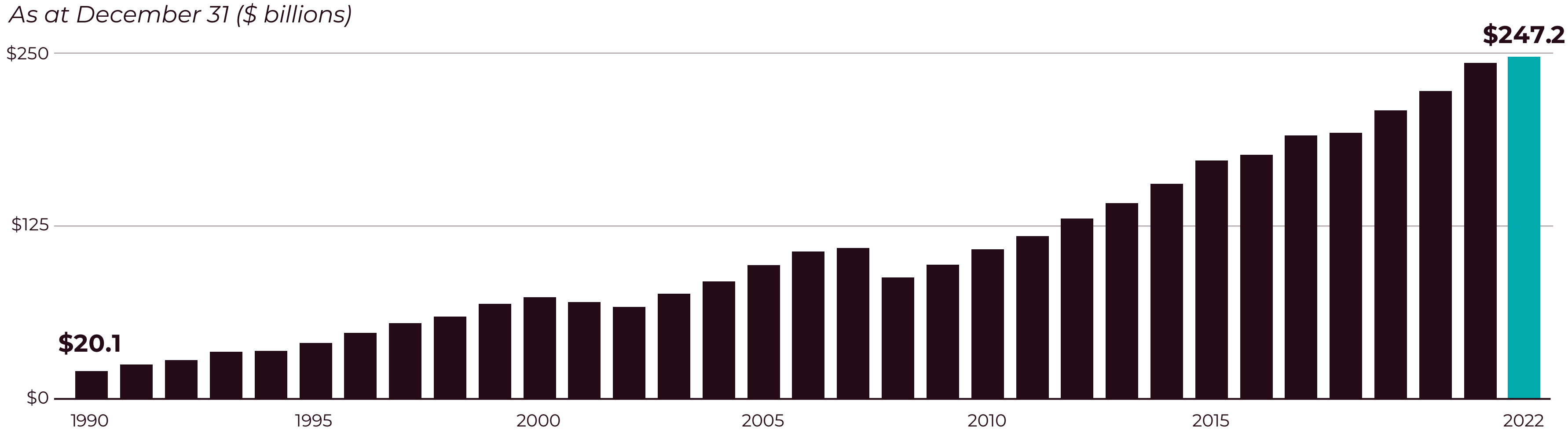
Asset mix

Ontario Teachers' looks at the total fund and shares capital across asset groups to optimize returns. One of our competitive advantages is our ability to alter the asset mix strategically to reflect market conditions and maximize returns. Significant changes to the asset mix in 2022 include:

- Increased allocation to the fixed income asset class from $45.2 billion to $86.0 billion (from 19% of net investments to 35%) as interest rates rose and made fixed income securities increasingly attractive in our portfolio construction as a source of diversification and investment income.
- Increased exposure to real assets from $52.4 billion to $67.9 billion (from 22% of net investments to 28%), with the majority of this growth coming in the infrastructure portfolio (which grew from $26.1 billion to $39.8 billion), to gain further diversification and access to reliable inflation-linked cash flows.
- Increased exposure to the credit asset class from $24.3 billion to $35.1 billion (from 10% of net investments to 14%), with a focus on high-yield bonds and levered loans, which have higher return and risk than traditional investment grade credit.

NET ASSETS[2]

As at December 31 ($ billions)



1 Comprises investments less investment-related liabilities. Total net assets of $247.2 billion at December 31, 2022 (2021 – $241.6 billion) include net investments and other net assets and liabilities of $3.1 billion (2021 – $2.6 billion).

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

DETAILED ASSET MIX

As at December 31

	2022		2021	
	Effective Net Investments at Fair Value ($ billions)	**Asset Mix %**	Effective Net Investments at Fair Value ($ billions)	Asset Mix %
Equity				
Public equity	**$21.9**	**9%**	$27.2	11%
Private equity	**58.3**	**24**	55.1	23
	80.2	**33**	82.3	34
Fixed income				
Bonds	**76.2**	**31**	33.3	14
Real-rate products	**9.8**	**4**	11.9	5
	86.0	**35**	45.2	19
Inflation sensitive				
Commodities	**25.0**	**10**	26.5	11
Natural resources	**10.1**	**4**	9.4	4
Inflation hedge	**12.7**	**5**	12.1	5
	47.8	**19**	48.0	20
Real assets				
Real estate	**28.1**	**12**	26.3	11
Infrastructure	**39.8**	**16**	26.1	11
	67.9	**28**	52.4	22
Innovation	**7.4**	**3**	7.1	3
Credit	**35.1**	**14**	24.3	10
Absolute return strategies	**18.7**	**8**	14.9	6
Overlay[1]	**(0.2)**	**–**	(0.5)	–
Funding for investments[2]	**(98.8)**	**(40)**	(34.7)	(14)
Net investments[3]	**$244.1**	**100%**	$239.0	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.

3 Comprises investments less investment-related liabilities. Total net assets of $247.2 billion at December 31, 2022 (2021 – $241.6 billion) include net investments and other net assets and liabilities of $3.1 billion (2021 – $2.6 billion).

2022 performance

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

	Net Investments ($ billions)	Rates of Return (percent)			
		1-Year		5-Year	
	2022	Actual	Benchmark	Actual	Benchmark
Equity	**$80.2**	0.1%	(5.9)%	10.6%	7.3%
Public equity	**21.9**	(12.5)	(10.2)	4.1	4.8
Private equity	**58.3**	6.1	(3.9)	15.2	9.1
Fixed income	**86.0**	(3.5)	(3.5)	3.6	3.6
Bonds	**76.2**	(5.9)	(5.9)	3.1	3.1
Real-rate products	**9.8**	7.3	7.3	5.1	5.1
Inflation sensitive	**47.8**	19.2	18.7	6.4	6.3
Commodities	**25.0**	19.5	19.5	7.3	7.3
Natural resources	**10.1**	29.6	28.2	10.1	9.1
Inflation hedge	**12.7**	9.2	9.2	2.7	2.7
Real assets	**67.9**	8.3	11.1	3.6	5.7
Real estate	**28.1**	(3.5)	6.7	(0.8)	5.1
Infrastructure	**39.8**	18.7	15.1	8.3	6.2
Credit	**35.1**	3.6	0.0	4.6	3.1
Innovation	**7.4**	(12.1)	(12.1)	–	–
Absolute return strategies	**18.7**	–	–	–	–
Overlay[1]	**(0.2)**	–	–	–	–
Funding for investments[2]	**(98.8)**	–	–	–	–
Total-fund net return	**$244.1**	4.0%	2.3%	7.3%	6.8%

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.

The total-fund net return is calculated after deducting transaction costs, management fees and investment administrative costs, and is reported in Canadian dollars for four periods: one, 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. See pages 62–72 for individual asset-class performance.

Ontario Teachers' produced a solid one-year total-fund net return of 4.0%, which was largely driven by strong results in select asset classes, with particularly good returns from inflation sensitive (commodities and natural resources) and infrastructure assets.

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 1.8%, or $4.4 billion. The performance beyond the benchmark was driven primarily by outperformance by our private equity, infrastructure and credit asset classes, which all meaningfully exceeded their individual benchmarks.

INVESTMENT PERFORMANCE[1]
(percent)

	2022	2021	5-Year	10-Year	Since Inception
Total-fund net return	**4.0**	11.1	7.3	8.5	9.5
Benchmark return	**2.3**	8.8	6.8	7.5	7.8
Return above benchmark	**1.8**	2.3	0.4	0.9	1.7

1 Benchmark return and return above benchmark do not add up to 4.0% due to rounding.

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.

Q&A with our CIO Ziad Hindo

Q: How did Ontario Teachers' portfolio perform in 2022?

Our portfolio had a positive performance in 2022 despite a difficult investment landscape. We approached 2022 with caution but also took advantage of emerging opportunities to earn a one-year total-fund net return of 4.0%. In a year where most public market indices in equities and fixed income had negative returns, we were very pleased with this positive return. Our performance was driven by solid results across the inflation sensitive and infrastructure asset classes. On a relative basis, our overall returns exceeded our benchmark by 1.8%, which, in dollar terms, contributed an additional $4.4 billion to the fund. We were also able to maintain our fully funded status for the 10th straight year, which will allow us to operate from a position of strength in the near term in markets that we expect to remain volatile.

> ***"Diversification and global growth are key ingredients in helping us execute on our strategy to grow our net assets to $300 billion by 2030."***

Q: How is the plan managing through this time of heightened inflation?

Last year, we experienced one of the most challenging investment environments in the past 100 years. Volatility in global financial markets was partly caused by the aggressive tightening in monetary policy to contain rising inflation. The traditional 60/40 portfolio recorded its worst performance since 1937, as both government bonds and equities declined by double digits. The only major assets across global financial markets to deliver positive returns were those that react positively to inflation, such as commodities and infrastructure.

Emerging from the COVID-19 pandemic, we recognized that significant monetary and fiscal stimulus would boost inflation globally. Inflation is impactful to the fund and can have an adverse effect on both the asset and liability side of the balance sheet. On the asset side, it traditionally has an adverse impact on asset prices, such as stocks and bonds, and makes earning a real return more difficult. On the liability side, higher inflation increases the cost of future pension payments.

To protect the fund against rising inflation, we adapted the asset mix to lower our sensitivity to interest rates. In 2020 and 2021, ahead of the inflation surge, we decreased the economic exposure of fixed income in the portfolio and shortened the maturity dates of our bond holdings. We increased our investments in assets that offer some inflation protection, securing a heavier weighting of our portfolio in commodities, actively seeking investments in natural resources, and assets like infrastructure – all of which tend to perform better in inflationary environments. We continue to evaluate the risk of inflation and take steps to defend our portfolio against inflation volatility.

Q: Given the heightened volatility in financial markets, are you making any adjustments to the portfolio?

We continue to focus on diversification as an important lever to earn the required risk-adjusted returns, through careful construction of a portfolio of assets that perform differently across investment environments. In 2022, given the significant sell-off in the fixed income and credit asset classes, we decided to increase the asset-mix exposure to both, thereby increasing portfolio diversification. In addition, we continued our focus on growing real assets, especially core infrastructure, which provides stable cash flows with inflation protection. Those actions helped make the portfolio more balanced from a risk perspective.

In addition to asset-class diversification, we expanded our international footprint, opening an office in Mumbai and San Francisco, our fifth and sixth global offices. Being physically located in these markets will provide us more opportunities to diversify through sourcing attractive investment opportunities. Diversification and global growth are key ingredients in helping us execute on our strategy to grow our net assets to $300 billion by 2030.

Q: How are you advancing efforts to combat climate change?

Climate change demands urgent action, and we are playing an active role in helping the transition to a low-carbon economy. In 2022, we advanced our multi-faceted climate change strategy, which is deeply rooted in driving real-world emission reductions. We made continued progress on growing our green assets, adding $3 billion worth of new green assets to our portfolio in 2022. OTFT issued another green bond, its first in Canadian dollars. Recognizing the urgent need to use our influence as a global investor, we also announced an ambitious plan to invest in high-emitting businesses with the explicit goal of decarbonizing them faster. We continue to position our portfolio for the low-carbon economy, having decreased our portfolio carbon intensity by 32% since 2019, and we're on track to achieve our interim reduction target of 45% by 2025.

We also continue to engage with our portfolio companies and provide our expertise and influence to support them on their emissions reduction journey. Read more about our climate strategy on page 38.

Finally, we continue to be guided by our Responsible Investing Principles, which are embedded in our internal processes and considered at all stages of our investment lifecycle.

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 difficult year for most global equity markets. The U.S. S&P 500 index was down 18.1%, its largest percentage drop since the financial crisis in 2008, while the S&P/TSX 60 was down 8.5%.

In this challenging environment, the Equity asset class delivered a total return of 0.1% (3.1% loss in local currency terms), compared to its benchmark, which had a loss of 5.9% (local currency benchmark had a loss of 8.9%). Modest returns in private equity assets were largely offset by losses experienced in the public equity portfolio. The five-year annualized rate of return for this asset class is 10.6%, compared to a benchmark return of 7.3%.

Net investments in the Equity asset class totaled $80.2 billion at the end of 2022, compared to $82.3 billion a year earlier.

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

Public equity

The public equity portfolio produced a loss of 12.5% (local currency loss of 12.6%), below its benchmark loss of 10.2% (10.3% loss by the local currency benchmark). The underperformance relative to the benchmark is due in part to a higher concentration in our portfolio of listed technology and healthcare companies. The five-year annualized rate of return for public equity is 4.1%, compared to a benchmark of 4.8%.

Public equity net investments totaled $21.9 billion at December 31, 2022, compared to $27.2 billion at the end of 2021. This was primarily driven by broad underperformance in public markets and a reallocation of capital to other asset classes.

Public equity portfolio highlights
As at December 31, 2022 (based on total assets)

$21.9 billion
Net investments

(12.5)%
Return

(12.6)%
Local return

(10.2)%
Benchmark

(10.3)%
Local return benchmark

Portfolio split by sector

17%	Information Technology
14%	Financials
14%	Healthcare
14%	Industrials
13%	Consumer Staples
11%	Consumer Discretionary
6%	Materials
5%	Communication Services
3%	Energy
2%	Utilities
1%	Real Estate

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 supports its portfolio companies by assisting in long-term strategic planning, creating and encouraging high-performing management teams and boards, and using the team's expertise and extensive network to create long-term value.

The private equity portfolio produced a return of 6.1% (local currency return of 1.4%), outpacing its benchmark loss of 3.9% (8.2% loss by the local currency benchmark). This outperformance was driven by earnings and profit uplift at many of our portfolio companies and an appreciation of the U.S. dollar against the Canadian dollar, which was partially offset by a compression of implied multiples attributed to private equity assets, a trend that was witnessed across the industry. Our strongest performing subsectors included financial services, energy and technology. The five-year annualized rate of return is 15.2%, compared to a benchmark of 9.1%.

Private equity net investments totaled $58.3 billion at December 31, 2022, compared to $55.1 billion at the end of 2021. Private equity assets increased primarily due to factors listed in the paragraph above. New transactions for the year were largely offset by realizations.

Private equity portfolio highlights
As at December 31, 2022 (based on total assets)

$58.3 billion
Net investments

6.1%
Return

1.4%
Local return

(3.9)%
Benchmark

(8.2)%
Local return benchmark

Portfolio split by sector

23%	Industrials
21%	Financial Services
18%	Consumer and Retail
18%	Telecom, Media and Technology
12%	Healthcare
8%	Energy and Power

Case study

Expanding high-quality early years education

Appropriately for a company that prides itself on giving children the best start in life, the story of our investment in Busy Bees is one of growth.

Ontario Teachers' first invested in the U.K.-headquartered early years education provider in 2013, when it was responsible for operating 213 centres. Today, Busy Bees offers high-quality early years education to more than 90,000 children in over 900 centres across 10 countries, including Singapore, Australia, Canada, the U.S. and the U.K.

As the company has scaled, Busy Bees has also furthered its ongoing commitment to provide rich learning opportunities and warm, nurturing environments for children. This is evidenced by 97% of Busy Bees' childcare centres in the U.K. having an Ofsted (Office for Standards in Education, Children's Services and Skills) rating of "outstanding" or "good."

The global expertise, ongoing support and shared values that Ontario Teachers' brings has helped Busy Bees grow from being based in a single country, to being the choice of parents worldwide. As founder Marg Randles said recently: "We couldn't work with anybody who does not put our children and the quality of childcare first, and very clearly Ontario Teachers' does."

Busy Bees has grown to over

900 centres

across 10 countries

"Ontario Teachers' has been a great partner for our business, beyond the obvious of providing capital. They have high integrity and share our values, which is fundamental for a partner in our business."

Simon Irons, CEO, Busy Bees

Fixed income

Ontario Teachers' uses fixed income investments to provide diversification and steady income. We own a diversified portfolio of developed market government bonds, provincial bonds, and real-return bonds. Real-return bonds, as part of our Liability Driven Investing (LDI) program, are used to mitigate the risk to our liabilities from changes in the real discount rate, helping us to minimize funding ratio volatility. We invest in inflation-linked debt issued primarily by the Canadian federal government and other high-quality Canadian issuers.

The fixed income portfolio produced a loss of 3.5% (local currency loss of 3.6%). The loss on fixed income assets can be attributed to significant increases in interest rates during the year by central banks. For instance, the Bank of Canada raised the overnight rate by 4% over the course of 2022. The extent of loss in this asset class was mitigated by a number of decisions made in 2021 to reduce the fund's sensitivity to interest rate changes. The five-year annualized rate of return for this asset class was 3.6%.

Fixed income net investments totaled $86.0 billion at December 31, 2022, compared to $45.2 billion at the end of 2021. The increase in net assets in the fixed income asset class was driven by higher interest rates, which made the asset class increasingly more attractive as a source of investment income and diversification.

Fixed income portfolio highlights
As at December 31, 2022 (based on total assets)

$86.0 billion
Net investments

(3.5)%
Return

(3.6)%
Local return

(3.5)%
Benchmark

(3.6)%
Local return benchmark

Portfolio split by sector

44%	Canadian Government
43%	Foreign Developed Market Sovereign Debt
11%	Real-Rate Products
2%	Provincial Bonds

Credit

This asset class includes levered loans and 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 3.6% (local currency loss of 2.7%), which exceeded the benchmark return of 0.0% (local benchmark loss of 6.0%). Returns on the credit asset class were driven primarily by the appreciation of the U.S. dollar compared to the Canadian dollar, as a sizeable proportion of the credit portfolio is denominated in U.S. dollars. The five-year annualized rate of return for credit is 4.6%, compared to a benchmark of 3.1%.

Net credit investments totaled $35.1 billion at December 31, 2022, compared to $24.3 billion at the end of 2021. The increase in net assets in the credit asset class was driven by higher allocations to levered loans and high-yield bonds in the second half of the year, as higher interest rates made those subsectors increasingly more attractive.

Credit portfolio highlights
As at December 31, 2022 (based on total assets)

$35.1 billion
Net investments

3.6%
Return

(2.7)%
Local return

0.0%
Benchmark

(6.0)%
Local return benchmark

Portfolio split by sector

43%	High Yield
41%	Levered Loans
12%	Emerging Market Sovereign Debt
4%	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 total return on inflation sensitive assets for 2022 was 19.2% (11.8% local currency return), which was above the benchmark return of 18.7% (local currency benchmark return of 10.9%). Performance across the inflation sensitive asset class was led by our investments in commodities and natural resources investments in energy and timberlands, all of which performed strongly in the inflationary environment. The returns were boosted further by an appreciating U.S. dollar. The five-year annualized return of 6.4% moderately exceeds the benchmark return of 6.3%.

Inflation sensitive net assets totaled $47.8 billion at the end of 2022, compared to $48.0 billion a year earlier.

Inflation sensitive portfolio highlights
As at December 31, 2022 (based on total assets)

$47.8 billion
Net investments

19.2%
Return

11.8%
Local return

18.7%
Benchmark

10.9%
Local return benchmark

Portfolio split by sector

52% Commodities
27% Inflation Hedge

Natural Resources:
10% 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, 2022, the total value of Ontario Teachers' real assets was $67.9 billion, compared to $52.4 billion at year-end 2021. Real asset investment returns for 2022 were 8.3% (local return of 6.1%), compared to a benchmark return of 11.1% (local benchmark return of 8.8%).

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 offer partial protection against inflation. Our infrastructure assets include investments in toll roads, airports, digital infrastructure, container terminals, power generation, electricity distribution and transmission, gas distribution and transmission, and water distribution and wastewater plants. They are distributed globally on five continents.

Infrastructure assets delivered a one-year return of 18.7% with a local currency return of 15.5%, outperforming the benchmark return of 15.1% (local currency benchmark return of 12.0%). The strong performance of the asset class can be attributed to higher traffic, ship and passenger volumes on toll roads and in seaports and airports, as well as increased revenues due to higher inflation. The five-year annualized rate of return is 8.3%, exceeding the benchmark of 6.2%.

Infrastructure portfolio highlights
As at December 31, 2022 (based on total assets)

$39.8 billion
Net investments

18.7%
Return

15.5%
Local return

15.1%
Benchmark

12.0%
Local return benchmark

Portfolio split by sector

47%	Energy Infrastructure
39%	Transportation and Logistics
11%	Water and Wastewater Treatment
3%	Other Infrastructure

The net value of the infrastructure portfolio increased to $39.8 billion at the end of 2022, compared to $26.1 billion a year earlier. Significant growth in the infrastructure portfolio was driven by strong investment returns across the portfolio and a significant number of infrastructure acquisitions completed during the year, including $2.4 billion for a 25% stake in SSEN Transmission, our largest-ever investment in power distribution.

Real estate

Ontario Teachers' invests in real estate through Cadillac Fairview (CF), which maintains a portfolio of high-quality Canadian assets and international investments that provide dependable cash flows.

Real estate assets delivered a one-year net loss of 3.5% (local currency loss of 4.8%), compared to a benchmark return of 6.7% (local currency benchmark return of 5.3%). The net loss for the year was due to valuation losses in the Canadian retail and office portfolios resulting from the negative impact on valuation metrics driven by the significant increase in interest rates. CF's performance vis-à-vis our benchmark can be attributed to CF's relative overconcentration in Canadian retail and office properties, which have underperformed other real estate asset classes in the benchmark. Given that retail and office real estate returns were significantly impacted since the onset of the COVID-19 pandemic in 2020, the five-year annualized rate of return for the real estate portfolio was a loss of 0.8%, compared to the five-year average benchmark return of 5.1%.

Operating income in 2022 was $1.0 billion, 9% higher than 2021 due mainly to the strong recovery in the Canadian portfolio from the impact of closures/restrictions caused by the COVID-19 pandemic in prior years. At year-end 2022, the Canadian retail occupancy rate remained stable at 91%, although with a stronger tenant base. Retail sales productivity has recovered to pre-pandemic levels. The Canadian office occupancy rate was 90% (92% in 2021) as the high-quality office portfolio remained well leased with quality tenants and strong rental rates, even as the impact of the hybrid work model continued to unfold.

The net value of the real estate portfolio increased to $28.1 billion at year-end 2022, up from $26.3 billion the previous year. The increase in net real estate assets resulted primarily from new investment activity in international markets and development capital in Canada, partially offset by net investment valuation losses.

In line with CF's focus on scaling and diversifying its global real estate platform, in 2022 it increased portfolio weightings in international markets to 27% from 14% in 2021, and diversified into new sectors with investments primarily in U.S. multi-family residential and life sciences, U.K. office and life sciences, and European industrial. In 2022, CF deployed $3.8 billion to international investment (with a total of $6.1 billion of remaining outstanding commitments as at December 31, 2022). CF also continued to execute on its Canadian development strategy with over 100 active projects in various stages of development. Progress continued on the development of the 160 Front Street West, Toronto, office complex with completion planned for the end of 2023, as well as various master plan developments including East Harbour, Toronto. Focus on densification plans on lands surrounding CF's shopping centres also progressed, including the groundbreaking of its first wholly owned 288-unit residential rental project in Ottawa, which is known as the "Rideau Registry" and is expected to be ready for occupancy in 2026.

Real estate portfolio highlights
As at December 31, 2022 (based on total assets)

$28.1 billion
Net investments

(3.5)%
Return

(4.8)%
Local return

6.7%
Benchmark

5.3%
Local return benchmark

Portfolio split by sector

43%	Canadian Retail	**9%**	Emerging Markets
22%	Canadian Office	**7%**	U.K. Investments
11%	U.S. Investments	**8%**	Other

Case study

Expanding global real estate horizons

CF is breaking new ground. As part of an ambitious international expansion plan, CF committed approximately $4 billion of new capital to invest across Europe over the past 18 months. In Canada, CF may be best known for owning many of the country's top performing malls (including CF Toronto Eaton Centre), but its global property portfolio also encompasses life sciences, industrial, residential and logistics assets.

Recent European investments include the $1.1 billion Oxford North development, a life-sciences-led, mixed-use innovation district near the renowned university. The project – a joint venture with CF's U.K. partner, Stanhope PLC, and St John's College of the University of Oxford – will offer one million square feet of state-of-the-art laboratory and working space alongside infrastructure like roads, retail amenities, housing, park space and a hotel.

CF and Stanhope have also acquired a 110,000-square-foot trio of properties and 10,197 square feet of office space at 163 Cambridge Science Park, which occupies a prominent location on the eastern side of the park. Other recent acquisitions include two industrial parks – one in Park Royal, West London, U.K., and one in the Port of Rotterdam, Netherlands – as a joint venture with pan-European investment management firm Boreal IM.

In a post-pandemic world, this diverse portfolio across sectors will support future growth for CF, as well as its continued ability to take advantage of the long-term macroeconomic trends that are shaping the changing demands of real estate.

Committed

~$4 billion

of new capital to invest across Europe over the past 18 months

"Cadillac Fairview is on an exciting growth path, diversifying its portfolio by asset class and outside of Canada, and a key component of our strategy is to partner with leading, best-in-class companies that share our values and commitment to long-term success."

Jenny Hammarlund, Managing Director, Head of Europe, Cadillac Fairview

Innovation

The innovation asset class comprises investments made by Teachers' Venture Growth (TVG), including direct investments, co-investments, funds and strategic partnerships. TVG focuses on late-stage venture and growth equity investments in companies that use technology to shape a better future. It seeks 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 loss of 12.1%, or a 17.6% loss in local currencies. The loss in the innovation asset class was largely due to valuation adjustments primarily driven by lower forecasted business performance at many of our direct investments and multiples compression. The five-year annualized rate of return figures for the innovation asset class are not available as 2022 was only the third full year for the TVG investment department. Since its inception in 2020, the innovation asset class has produced an annualized rate of return of 12.4%.

Given the uniqueness of the TVG investment program, we have not yet compared its performance to a benchmark during the initial incubation period. As of January 1, 2023, the incubation period has expired, and, moving forward, investment returns in this asset class will be compared to a benchmark.

Innovation net assets totaled $7.4 billion at the end of 2022, compared to $7.1 billion as at December 31, 2021. The slight increase in assets is due to new direct and fund investments executed during the year, offset by valuation adjustments to the direct and fund investments in the portfolio.

Innovation portfolio highlights
As at December 31, 2022 (based on total assets)

$7.4 billion
Net investments

(12.1)%
Return

(17.6)%
Local return

Portfolio split

39%	Direct Investments – North America
15%	Direct Investments – Asia-Pacific
15%	Direct Investments – Europe, Middle East and Africa
31%	Funds

Absolute return strategies

Ontario Teachers' uses absolute return strategies (ARS) to generate positive returns that have low correlation to other asset classes. Internally managed ARS 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 2022, assets employed in ARS totaled $18.7 billion at year end, compared to $14.9 billion in 2021.

Progress on our net-zero journey

Our commitment to achieving net-zero greenhouse gas emissions by 2050 sets our long-term trajectory, while our interim targets help us measure progress in the shorter term. We use our portfolio carbon footprint (PCF) to track yearly progress against our targets, and like our investment returns, our PCF can increase or decrease from year to year. Learn more about our progress below.

2022 highlights

- We decreased our portfolio emissions intensity by 32% and absolute emissions by 3% since 2019 (our interim target baseline). Our portfolio emissions intensity remained flat in 2022 relative to 2021 with an increase in both market value and absolute emissions of our portfolio carbon footprint.
- Absolute emissions from private assets increased due to capital deployment during 2022. Higher emissions were also driven by our 2022 acquisition of Puget Holdings, the parent company of Puget Sound Energy, which contributed to a slight increase in the intensity of our private assets. This is part of our decarbonization strategy – learn more about our investment in Puget Sound Energy on page 74.
- Absolute emissions increased in corporate fixed income due to an increase in capital allocated to the asset class in 2022. Strategic portfolio construction decisions throughout the year helped reduce emissions intensity. The emissions intensity of our credit assets is high due to the use of passive investments. Passive exposure tends to be higher in carbon intensity because it picks up all sectors of the economy.
- Our public equities holdings decreased in 2022 due to broad underperformance in public markets and a reallocation of capital to other asset classes. The emission intensity of our public equities holdings increased significantly, primarily due to a larger share of higher-intensity passive equity investments.
- Our operational carbon footprint (OCF) increased due to the post-pandemic resumption in air travel in 2022. However, our business travel remains 50% lower than pre-pandemic levels in 2019.

Portfolio carbon footprint

Our PCF calculation is informed by the Partnership for Carbon Accounting Financials, which is one of the only standards currently available for PCF accounting, and goes through an external assurance process. See page 149 for more information on our PCF calculation methodology.

Value of Holdings (C$ millions)	**2022**	2021	2019	2022 vs. 2019
Public equities	**12,729**	25,952	28,703	(56)%
Private assets	**145,645**	123,695	94,030	55%
Corporate fixed income	**34,194**	21,810	12,073	183%
Total	**192,568**	171,457	134,806	43%

Total Carbon Emissions ($ktCO_2e$)	**2022**	2021	2019	2022 vs. 2019
Public equities	**790**	1,070	2,970	(73)%
Private assets	**3,180**	2,511	2,300	38%
Corporate fixed income	**2,166**	1,909	1,057	105%
Total	**6,136**	5,490	6,327	(3)%

Carbon Intensity (tCO_2e/$ millions)	**2022**	2021	2019	2022 vs. 2019
Public equities	**62**	41	103	(40)%
Private assets	**22**	20	24	(9)%
Corporate fixed income	**63**	88	88	(28)%
Total	**32**	32	47	(32)%

Decarbonizing power in the Pacific Northwest

In 2021, we acquired a stake in Puget Sound Energy (PSE), the oldest and largest electric and natural gas utility in the state of Washington. Core to our investment thesis was the fact that electric utilities in Washington State are required to eliminate coal-fired power by 2025 and to supply 100% carbon-free electricity by 2045.

Today, PSE generates a small portion of its electricity by burning coal. Over the next three years, the utility has a clear, defined path to ending its coal activities and growing its portfolio of renewables. This transition will meaningfully decrease PSE's and Ontario Teachers' absolute emissions and carbon intensity.

PSE will play a key role in decarbonizing power generation in the Puget Sound region while also helping local industries and consumers to lower their carbon footprints.

Operational carbon footprint

Since running our operations incurs a relatively small amount of emissions (less than 1% of our total carbon footprint), we also report our operational carbon footprint. While we are taking actions to reduce our OCF, such as putting in place new travel guidance for our employees, our net-zero efforts are currently focused on helping our portfolio companies reduce their emissions.

Emissions (tCO_2e)	**2022**	2021	2019[1]
Scope 1: Direct emissions			
Building heating (natural gas)	**395**	443	521
Scope 1 total	**395**	443	521
Scope 2: Indirect (purchased) emissions			
Building energy use (electricity)	**232**	200	217
Building heat (steam consumption)	**8**	7	8
Building cooling (chilled water consumption)	**6**	53	1
Scope 2 total	**245**	260	226
Scope 3: Indirect (value chain) emissions			
Business travel (flights)	**4,222**	358	8,525
Business travel (ground transportation)	**76**	16	139
Printing (paper use and disposal)	**19**	10	50
Investment portfolio	Reported separately[2]		
Scope 3 total	**4,317**	384	8,714
Total	**4,957**	1,087	9,461

1 We include OCF data as of 2019 to align with our PCF reporting.

2 Given the significance of the emissions related to our investment portfolio, we report them separately as our portfolio carbon footprint.

Our people and culture

ONTARIO TEACHERS' PENSION PLAN

Investing in our people

Our people are our most valuable asset in shaping a better future for the teachers we serve, the businesses we back, and the world we live in.

WHO WE ARE

Purpose-driven, growing global investor

We're a purpose-driven, global investor with significant growth ambitions built on a successful track record.

HOW WE WORK

Authentic, inclusive, dynamic culture

We have an authentic, inclusive, dynamic culture where people can be themselves, make an impact and learn.

WHAT WE OFFER

We invest in you

We put our people first through investments in well-being, development and compelling total rewards.

At Ontario Teachers', we take a people-first approach that encapsulates everything from culture to career development to mental health and well-being. This year, we further enhanced and articulated the benefits of working at Ontario Teachers' through our Employee Value Proposition (EVP).

Industry-leading enhanced health and family benefits

Includes support for adoption or surrogacy and for gender affirmation procedures for employees or adult family members.

Enhanced focus on the mental health of employees and their families

Includes comprehensive policies and benefits, support services and education.

Promoting balance through our Flexible Travel Program

Employees have the opportunity to work from another region or country for up to one month per year. In 2022, nearly 100 employees worked from 40 different countries as part of this program.

Tailored focus on career development

Includes best-in-class leadership programs delivered in-house. Ninety-six percent of people managers completed our leadership development course this past year.

Investing in our people

Our diversity, equity and inclusion (DEI) commitment

Our long-standing focus on DEI is anchored on our belief that creating a more equitable workplace for all can also create improved performance, better businesses and a better world. In 2022, we made significant strides toward that ambition.

We're proud of the recognition our efforts have received to date, and we're making meaningful progress educating on unconscious bias, reducing barriers in the workplace and increasing cultural awareness.

Women at Ontario Teachers'

55%	**45%**	**45%**
on board	**on executive team**	**at all levels**

"It was an incredible experience volunteering our time to make a positive impact on those who may not have the same opportunities."

Kimberly Chan, Application Manager, Information Technology on participating in Make a Mark Day

Leading EDGE

We were recognized as an EDGE Lead organization, the highest certification level offered by EDGE, the leading global assessment and business certification for gender and intersectional equity. We also received EDGEplus certification for our commitment to analyzing additional dimensions of intersectionality between gender, race and ethnicity. We're the first organization in the Canadian financial industry to receive both the EDGE Lead and EDGEplus certifications.

Partnering for progress

We have a varied range of partnerships that connect candidates from equity-deserving groups with opportunities, and we support inclusive practices across sectors. In addition to building on our existing partnerships, in 2022 we launched a new relationship with the Indigenous Professional Association of Canada (IPAC), an organization dedicated to advancing Indigenous leadership in the private, public and social sectors.

Candid conversations

Our Employee Resource Groups (ERGs) raise awareness, celebrate and facilitate candid conversations about the issues that matter most. The groups cover topics including mental and physical health, gender equity and the advancement of women, awareness and support of the 2SLGBTQ+ community, multicultural education and celebration, and leading practices related to the environment and sustainability. In 2022, our ERGs collaborated on more than 100 intersectional events worldwide, including a mental health and well-being session in London, a Women in Finance gala in Hong Kong, and events to mark Black History Month, Pride and the National Day for Truth and Reconciliation in Canada.

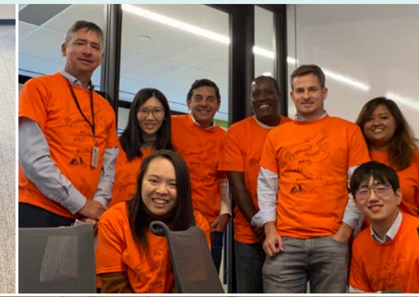
48%

Visible minorities who identify as Black, Indigenous and People of Colour[1]

1.8%

Annual improvement on representation of targeted underrepresented groups, including women, 2SLGBTQ+ identified individuals, Persons with Disabilities, and visible minorities who identify as Black, Indigenous and People of Colour

1 Figures cover permanent employees only.



Our compensation structure

ONTARIO TEACHERS' PENSION PLAN

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' 2022 performance

Under our compensation framework, the overarching driver is the performance of the total fund. In aggregate, our combined Total Fund performance was strong. The one-year total-fund rate of return was strong at 4% and our four-year real return was strong at 4.65%. The one-year total-fund return was $4.44 billion above our benchmark, resulting in a four-year cumulative value-add of $3.72 billion.

Fiscal 2022 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 2022. 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 1.63 out of 2.0.

During 2022, Mr. Taylor received a 3.6% increase to his base salary to $570,000. The board assessed Mr. Taylor against his individual objectives and determined a multiplier of 2 times his target for his 2022 annual incentive. The weighted average of factors resulted in an overall annual incentive multiplier for Mr. Taylor of 1.78x 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 $2.86 million. Overall, the HRCC believes the compensation paid for fiscal 2022 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 2022, our NEOs were:

- Jo Taylor, President and Chief Executive Officer (CEO);
- Tim Deacon, Chief Financial Officer (CFO);
- Ziad Hindo, Chief Investment Officer (CIO);
- Nick Jansa, Executive Managing Director (EMD), Europe, the Middle East and Africa; and
- Ben Chan, EMD, 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 striking a balance between both what was accomplished, and how employees demonstrated it, by activating our culture by living our values – 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 investment management organizations, banks, insurance companies, and Canadian pension funds; across the various local and international markets in which we operate.

We align our bold and ambitious goals to outperform expectations for this pension plan (i.e., plan funding, contribution levels, service excellence, strategic initiatives) and total direct compensation opportunity with 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. The overall design of the program is competitive, continues to reinforce our pay-for-performance philosophy, and supports our evolving strategy.

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, 2025.

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–3x)
25% Culture 55% Growth (incl. 4-Year Total Fund Real Return; 4-Year Total Fund Value Add; 48-month Total Fund Volatility) 20% Impact		100% 4-Year Investment Department financial metrics Annual Strategic Execution		100% *What* – Assessment of performance related to business outcomes *How* – Assessment of how employees take an active part in our evolving culture by living the values every day

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% 48-month Total Fund Volatility

LTIP Allocation to Employees

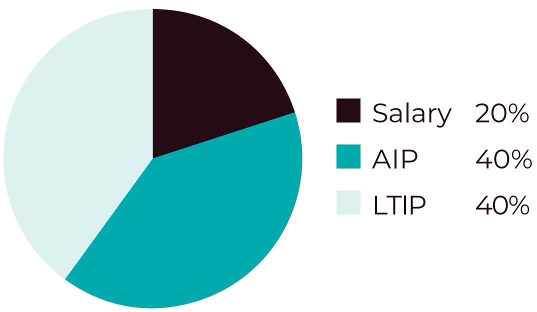
[Account Balance x 1 + Total Fund Annual Rate of Return + Annual LTIP Allocation ($)] - 35% Current-Year Payment = Account Balance

Mix of pay

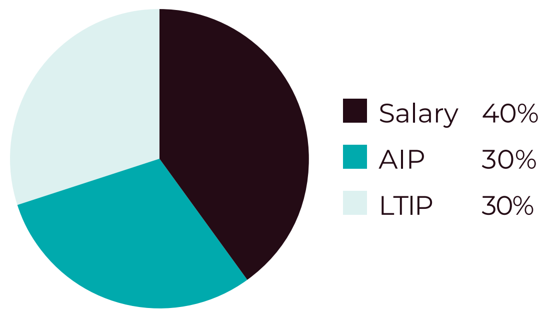
The majority of compensation paid to our senior executives is variable and at risk. Recognizing their direct influence on investment results and our objective of linking pay to performance, investment professionals and our CEO have a greater percentage of their total direct compensation (base salary, 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

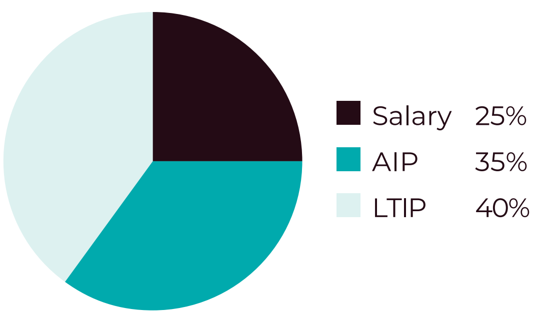
President and CEO; and CIO



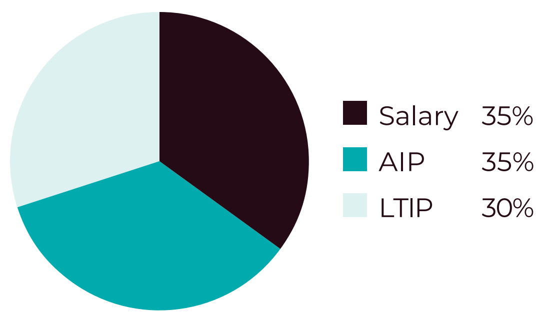
Chief Financial Officer



EMD, EMEA



EMD, APAC



Benefits and other compensation

Ontario Teachers' provides a competitive benefits and wellbeing program that includes life insurance, disability, health and dental benefits, vacation and other leave policies, wellness programs and an Employee-Family Assistance Program. Our retirement benefit for Canadian employees is a defined benefit pension plan described on page 93. 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, we 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.

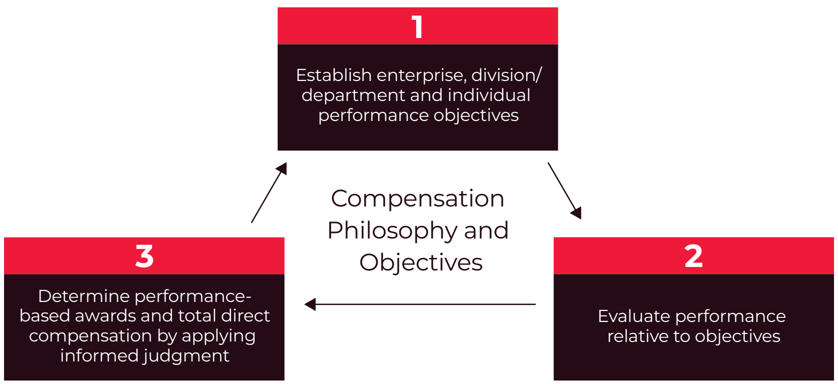
The treatment under each of the termination scenarios is governed by the Annual and Long-Term Incentive Plan documents.

	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 2023 reflecting 2022

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 three categories (culture, growth, and impact). 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 2022, employees delivered combined strong performance with a multiplier of 1.63 out of 2.0.

Total-fund performance

The table below summarizes at the total-fund level, the performance for 2019 through to 2022 relative to the targets as approved by the board. Over the four-year cumulative period, staff outperformed relative to our aggregate total fund performance.

Year	Total-Fund Value Add	Total-Fund Real Return	Total-Fund Volatility
2019 to 2022	Below Target	Exceeds Target	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 1.72 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
2019 to 2022	Exceeds Target	Exceeds Target	Met Target

Executive compensation

The compensation table represents disclosure of base salary, annual incentive, long-term incentive and other compensation earned in 2020, 2021 and 2022 by the CEO, the CFO and the three other most highly compensated executives, excluding subsidiary companies.

Name and Principal Position	Year	Base Salary A	Annual Incentive B	Long-Term Incentive Allocation C	Total Direct Compensation[1] A+B+C	Long-Term Incentive Paid D	Other[2] E	Change in Pension Value[3] F	Total Compensation[4] A+B+D+E
Jo Taylor President and CEO	2022	$566,154	$1,672,200	$2,857,800	$5,096,154	$4,115,500	$1,132	$77,400	$6,354,986
	2021	550,000	1,630,000	3,420,000	5,600,000	4,729,810	1,099		6,910,909
	2020	556,346	1,461,100	3,200,000	5,217,446	3,060,920	1,077		5,079,444
Tim Deacon CFO	2022	466,154	781,000	1,100,000	2,347,154	1,039,700	1,432	46,800	2,288,286
	2021	320,192	525,000	1,100,000	1,945,192	968,300	100,674		1,914,167
Ziad Hindo CIO	2022	495,192	1,403,300	2,500,000	4,398,492	3,682,200	991	0	5,581,683
	2021	475,000	1,352,800	3,000,000	4,827,800	4,151,400	949		5,980,149
	2020	469,231	1,181,100	2,700,000	4,350,331	2,658,600	921		4,309,852
Nick Jansa[5] EMD, EMEA All amounts are reported in GBP	2022	352,116	845,400	1,400,000	2,597,516	1,398,900		49,296	2,596,416
	2021	345,231	778,700	1,650,000	2,773,931	1,344,200		48,332	2,468,131
Ben Chan EMD, Asia-Pacific All amounts are reported in HKD	2022	5,659,677	10,180,500	9,500,000	25,340,177	11,867,000			27,707,177
	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

1 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.

2 Other compensation includes group term life insurance and accidental death & dismemberment premiums. 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.

3 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 for Ziad Hindo. Nick Jansa received employer pension contributions as cash-in-lieu.

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

5 Nick Jansa joined Ontario Teachers' on Dec 29, 2020 and received LTIP seeding of £1,500,000 and a further allocation of £1,000,000 effective Jan 1, 2021 resulting in a payment of £657,300.

Notional account balances

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

Name and Principal Position	Opening Balance	2022 Rate of Return	Long-Term Incentive Allocation	2023 Payment	Balance
Jo Taylor[1] President and CEO	8,555,977	4.03%	$2,857,800	$4,115,500	$7,643,082
Tim Deacon CFO	1,798,200	4.03%	1,100,000	1,039,700	1,930,967
Ziad Hindo CIO	7,709,778	4.03%	2,500,000	3,682,200	6,838,282
Nick Jansa EMD, Europe, the Middle East and Africa All amounts are reported in GBP	2,496,359	4.03%	1,400,000	1,398,900	2,598,062
Ben Chan EMD, Asia-Pacific All amounts are reported in HKD	23,460,224	4.03%	9,500,000	11,867,000	22,038,671

1 Notional account for Jo Taylor includes a 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, 2022	2022 Compensatory Annual Change in Pension Value	2022 Non-Compensatory[1] Annual Change in Pension Value	Present Value of Total Pension December 31, 2022
Jo Taylor[2] President and CEO	6	$67,100	$370,200	$187,400	$(110,000)	$447,600
Tim Deacon CFO	22	327,700	103,200	150,800	(104,000)	150,000
Ziad Hindo CIO	38	565,500	3,631,000	250,200	(1,408,300)	2,472,900

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.

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 2022, these expenses totalled $35,886.

Board compensation for 2022 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
For board members during their first year of tenure	$5,000

Board Member	Board Meetings	Committee Meetings	2022 Total Remuneration
Steve McGirr, Chair of the Board	10	22	$199,400
Bill Chinery, Chair, Investment Committee	10	13	114,500
Cathy Cranston, Chair, Human Resources & Compensation Committee	10	15	109,500
Patti Croft, Chair, Governance Committee	10	14	109,500
Monika Federau	10	14	95,750
Cindy Forbes	9	15	94,500
Lise Fournel, Chair, Operational Risk Committee	10	14	109,500
Gene Lewis, Chair, Benefits Adjudication Committee	10	17	114,500
M. George Lewis, Vice-Chair, Investment Committee	9	15	104,500
John Murray, Vice-Chair, Benefits Adjudication Committee	10	17	107,000
Kathleen O'Neill, Chair, Audit & Actuarial Committee	10	15	114,500

Financial statements and carbon footprint

ONTARIO TEACHERS' PENSION PLAN

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 4.30% (2.50% in 2021). 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, 2022

Ontario Teachers' ended 2022 with a financial statement surplus of $41.0 billion, an increase from the deficit of $15.9 billion at the end of 2021. The surplus represents the difference between net assets available for benefits of $247.2 billion and accrued pension benefits of $206.2 billion at year end.

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

	2022	2021
Net assets available for benefits	**$247,235**	$241,582
Accrued pension benefits	**206,197**	257,482
Surplus/(deficit)	**$ 41,038**	$ (15,900)

During 2022, net assets available for benefits increased by $5.7 billion. Net investment income of $10.4 billion and contributions of $3.4 billion increased net assets available for benefits, while benefits paid of $7.2 billion and administrative expenses of $0.9 billion decreased the net assets available. See Our Performance section on page 54 for details of investment returns.

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

	2022	2021
Net assets available for benefits, beginning of year	**$241,582**	$221,241
Net investment income	**10,360**	24,711
Contributions	**3,367**	3,354
Benefits	**(7,205)**	(6,909)
Administrative expenses	**(869)**	(815)
Increase in net assets available for benefits	**5,653**	20,341
Net assets available for benefits, end of year	**$247,235**	$241,582

Accrued pension benefits decreased by $51.3 billion during the year to $206.2 billion. Changes in actuarial assumptions decreased the accrued pension benefits amount by $68.5 billion. Benefits paid during 2022 of $7.2 billion include the addition of 5,561 retirement and disability pensions and 1,367 survivor pensions during 2022, as well as a 6.3% cost-of-living increase.

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

	2022	2021
Accrued pension benefits, beginning of year	**$257,482**	$257,330
Interest on accrued pension benefits	**6,467**	5,176
Benefits accrued	**9,614**	9,826
Experience losses	**8,301**	1,313
Benefits paid	**(7,204)**	(6,907)
Changes in actuarial assumptions and methods	**(68,463)**	(9,256)
Net (decrease)/increase in accrued pension benefits	**(51,285)**	152
Accrued pension benefits, end of year	**$206,197**	$257,482

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.

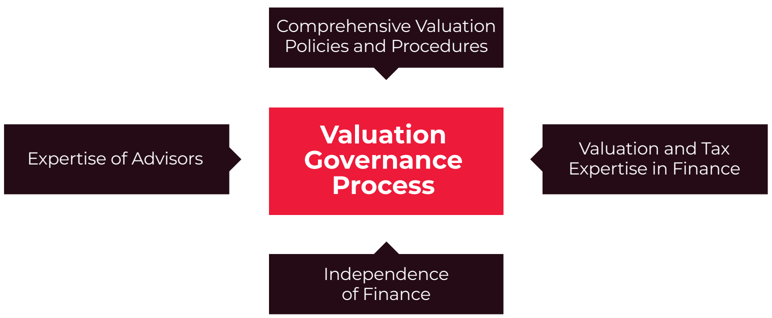
As at December 31, 2022 (Canadian $ millions)	Level 1	Level 2	Level 3	**Total**
Equity	$ 17,542	$ 1,892	$ 65,463	**$ 84,897**
Fixed income	78,595	20,421	1,412	**100,428**
Alternative investments	–	–	29,898	**29,898**
Inflation sensitive	1,231	–	10,318	**11,549**
Real assets	744	206	67,403	**68,353**
Investment-related receivables	2,336	13,793	16	**16,145**
Investment-related liabilities	(11,348)	(55,779)	(4)	**(67,131)**
Net investments	$ 89,100	$(19,467)	$174,506	**$244,139**

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 the majority of Level 3 direct investments (by value) 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, 2022, 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 2022.

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 2022, fees paid by Ontario Teachers' and its controlled entities to Deloitte Touche Tohmatsu Limited (Deloitte), of which the Canadian firm is Ontario Teachers' auditor, totaled $19.7 million ($16.8 million in 2021), of which $19.1 million was for audit activities and $0.6 million was for non-audit services.

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 9, 2023

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, 2022, 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, 2022, 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.

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, Canada

March 9, 2023

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, 2022, 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, 2022;
- 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 2022;
- 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, 2022, 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 2022, 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 appropriate for purposes of the valuation. Our opinions have been given, and our valuation has been performed, in accordance with accepted actuarial practice in Canada.

Eileen Luxton, F.C.I.A., F.S.A.

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

March 9, 2023

Consolidated statement of financial position

As at December 31 (Canadian $ millions)	2022	2021
Net assets available for benefits		
ASSETS		
Cash	**$ 1,107**	$ 484
Receivable from the Province of Ontario (note 3)	**3,298**	3,234
Receivable from brokers	**562**	26
Investments (note 2)	**311,270**	317,714
Premises and equipment	**83**	91
	316,320	321,549
LIABILITIES		
Accounts payable and accrued liabilities	**590**	693
Due to brokers	**1,364**	523
Investment-related liabilities (note 2)	**67,131**	78,751
	69,085	79,967
Net assets available for benefits	**$ 247,235**	$ 241,582
Accrued pension benefits and surplus/(deficit)		
Accrued pension benefits (note 4)	**$ 206,197**	$ 257,482
Surplus/(deficit)	**41,038**	(15,900)
Accrued pension benefits and surplus/(deficit)	**$ 247,235**	$ 241,582

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

On behalf of the Plan administrator:

Steve McGirr
Chair

Debbie Stein
Board Member

Consolidated statement of changes in net assets available for benefits

For the year ended December 31 (Canadian $ millions)	2022	2021
Net assets available for benefits, beginning of year	**$ 241,582**	$ 221,241
Investment operations		
Net investment income (note 6)	**10,360**	24,711
Administrative expenses (note 11a)	**(785)**	(732)
Net investment operations	**9,575**	23,979
Member service operations		
Contributions (note 9)	**3,367**	3,354
Benefits (note 10)	**(7,205)**	(6,909)
Administrative expenses (note 11b)	**(84)**	(83)
Net member service operations	**(3,922)**	(3,638)
Increase in net assets available for benefits	**5,653**	20,341
Net assets available for benefits, end of year	**$ 247,235**	$ 241,582

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)	2022	2021
Accrued pension benefits, beginning of year	**$ 257,482**	$ 257,330
Increase in accrued pension benefits		
Interest on accrued pension benefits	**6,467**	5,176
Benefits accrued	**9,614**	9,826
Experience losses (note 4c)	**8,301**	1,313
	24,382	16,315
Decrease in accrued pension benefits		
Benefits paid (note 10)	**7,204**	6,907
Changes in actuarial assumptions and methods (note 4a)	**68,463**	9,256
	75,667	16,163
Net (decrease)/increase in accrued pension benefits	**(51,285)**	152
Accrued pension benefits, end of year	**$ 206,197**	$ 257,482

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

Consolidated statement of changes in surplus/(deficit)

For the year ended December 31 (Canadian $ millions)	2022	2021
Deficit, beginning of year	**$ (15,900)**	$ (36,089)
Increase in net assets available for benefits	**5,653**	20,341
Net decrease/(increase) in accrued pension benefits	**51,285**	(152)
Surplus/(deficit), end of year	**$ 41,038**	$ (15,900)

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

Notes to consolidated financial statements

For the year ended December 31, 2022

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 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 income. Contributions are made by active members of the Plan and are matched by either the Province of Ontario 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

Pensions in pay 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 $184,433 (CPP-exempt members $171,000) in 2022 and $175,279 (CPP-exempt members $162,278) in 2021; 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.

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. Ontario Teachers' consolidates Ontario Teachers' Finance Trust (OTFT) an entity that supports Ontario Teachers' funding activities, and whose issued commercial paper and term debt is guaranteed by Ontario Teachers'. Wholly owned investment holding companies managed by Ontario Teachers' are also consolidated. Investment holding companies that are managed by external parties are not consolidated and are recognized as investment assets.

Change in Presentation for Real Estate
Prior to January 1, 2022, Ontario Teacher's consolidated The Cadillac Fairview Corporation Limited (CFCL) as well as the Cadillac Fairview Properties Trust (CFPT). Effective January 1, 2022, Ontario Teachers' real estate investment assets are presented on a non-consolidated basis to reflect updates made to our investment strategy for real estate investments including how equity invested in real estate is managed and evaluated. This change in accounting treatment was applied prospectively and results in a consistent treatment of real estate liabilities as compared to other asset classes.

There was no impact on Net Assets Available for Benefits. There was no change to the Consolidated Statement of Changes in Net Assets Available for Benefits.

Derivatives
Ontario Teachers' changed its presentation and disclosure in 2022 for certain derivatives which are settled-to-market, whereby variation margin is now presented on a net basis. The updated presentation has no impact on net investments, net assets available for benefits, accrued pension benefits or investment income. The prior period comparative balances in note 2 have been updated to conform to current year's presentation, which reduced Derivative-related investment-related receivables by $3,759 million and reduced Cash collateral received and Derivative-related investment-related liabilities by $1,274 million and $2,485 million, respectively.

The consolidated financial statements for the year ended December 31, 2022 were authorized for issue through a resolution of the board on March 9, 2023.

(b) Current and future changes in accounting policies

There were no newly issued standards, changes in existing standards or new interpretations in Part IV or Part I of the CPA Handbook during the year ended December 31, 2022 requiring adoption that had a material impact on the consolidated financial statements. There are no issued standards, changes in existing standards or new interpretations with effective dates on or after January 1, 2023 that are expected to have a significant impact on the consolidated financial statements.

(c) Investments

Valuation of investments
Investments and investment-related liabilities 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.

   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 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, 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 for spot forward, and 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.

- Commodity prices – 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 – 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.

The war in the Ukraine and continued COVID-19 related supply chain impacts have contributed to an uncertain and challenging economic environment, resulting in higher inflation, increasing interest rates, higher oil prices and volatility in public markets. Notwithstanding, Ontario Teachers' has continued to follow a comprehensive valuation process that includes consideration of the impact that the forgoing challenges and changes in macroeconomic factors have on the valuations of its investments and investment-related liabilities as of the date of these consolidated financial statements. However, these valuations 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 including changes in macroeconomic factors and their 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 is 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.

Interest Rate Benchmark Reform

In 2021, the UK Financial Conduct Authority (FCA) confirmed that the interest rate benchmark LIBOR (London Interbank Offered Rate) will cease publication on June 30, 2023 and have recommended that markets adopt alternative risk-free rates (RFRs). Ontario Teachers' has ceased adding new LIBOR-based exposures since December 31, 2021 and is in the process of transitioning remaining USD LIBOR based contracts before the June 30, 2023 cessation date.

In 2022, Refinitiv Benchmark Services (UK) Limited (RBSL), the administrator of the Canadian Dollar Offered Rate (CDOR), an interest rate benchmark subject to the UK Benchmark Regulation (BMR), announced that the calculation and publication of all tenors of CDOR will cease on June 28, 2024. Ontario Teachers' will cease adding new CDOR exposures as of June 30, 2023 and will transition any remaining CDOR based contracts prior to the cessation date.

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]

	2022		2021	
As at December 31 (Canadian $ millions)	**USD LIBOR**	**CDOR**	USD LIBOR	GBP LIBOR
Non-derivative financial assets	**2,745**	**–**	6,299	38
Derivative notional amounts	**10,491**	**16,542**	106,684	–

1 USD LIBOR transitioning to SOFR (Secured Overnight Financing Rate) and CDOR transitioning to CORRA (Canadian Overnight Repo Rate Average).

(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 an independent actuary (Mercer (Canada) Limited). 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 of Ontario 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 $417 million (2021 – $519 million):

As at December 31 (Canadian $ millions)	2022 Fair Value	2022 Cost	2021 Fair Value	2021 Cost
Equity				
Publicly traded				
Canadian	$ 220	$ 236	$ 1,187	$ 1,012
Non-Canadian	17,322	16,854	23,782	18,977
Non-publicly traded				
Canadian	9,975	5,490	8,826	4,318
Non-Canadian	57,380	38,457	53,006	35,735
	84,897	61,037	86,801	60,042
Fixed income				
Bonds	57,791	59,163	60,645	60,900
Short-term investments	29,436	29,282	27,534	27,527
Canadian real-rate products	9,722	7,148	11,312	7,076
Non-Canadian real-rate products	3,479	3,439	4,579	4,377
	100,428	99,032	104,070	99,880
Alternative investments	29,898	25,395	23,409	20,171
Inflation sensitive				
Commodities	1,231	853	1,143	853
Timberland	2,382	1,273	2,236	1,364
Natural resources	7,936	6,674	7,196	6,823
	11,549	8,800	10,575	9,040
Real assets				
Real estate (note 5)[1]	28,222	21,837	31,856	23,417
Infrastructure	40,131	27,727	26,118	18,919
	68,353	49,564	57,974	42,336
	$ 295,125	$ 243,828	$ 282,829	$ 231,469

1 See note 1a Change in presentation for real estate.

As at December 31 (Canadian $ millions)	2022		2021	
	Fair Value	**Cost**	Fair Value	Cost
Investment-related receivables				
Securities purchased under agreements to resell	**$ 10,723**	**$ 10,598**	$ 29,943	$ 30,017
Cash collateral deposited under securities borrowing arrangements	**2,296**	**2,296**	2,076	2,076
Cash collateral paid under credit support annexes	**13**	**13**	9	9
Derivative-related, net[1]	**3,113**	**1,891**	2,857	2,171
	16,145	**14,798**	34,885	34,273
Total investments	**$ 311,270**	**$ 258,626**	$ 317,714	$ 265,742
Investment-related liabilities				
Securities sold under agreements to repurchase	**(26,316)**	**(26,136)**	(25,529)	(25,690)
Securities sold but not yet purchased				
Equities	**(2,322)**	**(2,376)**	(2,071)	(2,027)
Fixed income	**(8,396)**	**(8,987)**	(17,103)	(17,024)
Real estate (note 5)[2]	**–**	**–**	(5,489)	(5,186)
Commercial paper	**(2,640)**	**(2,568)**	(2,501)	(2,488)
Term debt	**(24,099)**	**(27,330)**	(23,409)	(24,185)
Cash collateral received under credit support annexes	**(1,121)**	**(1,121)**	(449)	(449)
Derivative-related, net[1]	**(2,237)**	**(966)**	(2,200)	(1,013)
	(67,131)	**(69,484)**	(78,751)	(78,062)
Net investments (note 2d)	**$ 244,139**	**$ 189,142**	$ 238,963	$ 187,680

1 Prior period comparative has been updated to conform to current year's presentation. See note 1a Derivatives.

2 See note 1a Change in presentation for real estate.

(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, 2022 Total
Equity	$ 17,542	$ 1,892	$ 65,463	$ 84,897
Fixed income	78,595	20,421	1,412	100,428
Alternative investments	–	–	29,898	29,898
Inflation sensitive	1,231	–	10,318	11,549
Real assets	744	206	67,403	68,353
Investment-related receivables	2,336	13,793	16	16,145
Investment-related liabilities	(11,348)	(55,779)	(4)	(67,131)
Net investments	**$ 89,100**	**$ (19,467)**	**$ 174,506**	**$ 244,139**

(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[1]	2,164	32,669	52	34,885
Investment-related liabilities[1]	(17,377)	(59,357)	(2,017)	(78,751)
Net investments	$ 97,965	$ (7,561)	$ 148,559	$ 238,963

1 Prior period comparative has been updated to conform to current year's presentation. See note 1a Derivatives.

There were transfers of $379 million from Level 2 to Level 1 in 2022 and no transfers between Level 2 and Level 1 in 2021.

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.

(Canadian $ millions)	Equity	Fixed Income	Alternative Investments	Inflation Sensitive	Real Assets	Investment-Related Receivables	Investment-Related Liabilities	Total 2022
Balance, beginning of year	$ 59,598	$ 824	$ 23,409	$ 9,432	$ 57,261	$ 52	$ (2,017)	$ 148,559
Purchases	7,920	757	10,060	874	16,140	2	–	35,753
Sales	(5,840)	(144)	(5,741)	(1,706)	(3,988)	(7)	–	(17,426)
Transfers in[1]	–	–	–	–	(5,489)	(3)	(3,495)	(8,987)
Transfers out[1]	–	–	–	–	–	(1)	5,492	5,491
Gains/(losses) included in investment income[2]	3,785	(25)	2,170	1,718	3,479	(27)	16	11,116
Balance, end of year	**$ 65,463**	**$ 1,412**	**$ 29,898**	**$ 10,318**	**$ 67,403**	**$ 16**	**$ (4)**	**$ 174,506**

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. Transfers into real assets and transfers in and out of investment-related liabilities reflect the impact of a change in presentation for real estate. See note 1a Change in presentation for real estate.

2 Includes realized gains from investments of $3,482 million and change in unrealized gains from investments of $7,634 million.

(Canadian $ millions)	Equity	Fixed Income	Alternative Investments	Inflation Sensitive	Real Assets	Investment-Related Receivables	Investment-Related Liabilities	Total 2021
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[3]	–	–	–	–	–	(2)	3	1
Transfers out[3]	(2,201)	(2)	–	–	(94)	(80)	198	(2,179)
Gains/(losses) included in investment income[4]	12,173	(45)	1,334	1,662	1,211	8	97	16,440
Balance, end of year	$ 59,598	$ 824	$ 23,409	$ 9,432	$ 57,261	$ 52	$ (2,017)	$ 148,559

3 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.

4 Includes realized gains from investments of $2,930 million and change in unrealized gains from investments of $13,510 million.

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	**2022 Increase/ (Decrease) to Fair Value**	2021 Increase/ (Decrease) to Fair Value
Non-publicly traded equity	Multiple[1]	+/- 10%	**$7,372/ (7,340)**	$ 6,907/ (6,881)
Infrastructure and Natural resources	Discount Rate	+/- 0.50%	**3,655/ (3,316)**	2,514/ (2,340)
Real estate	Capitalization Rate	+/- 0.50%	**2,461/ (2,062)**	3,219/ (2,583)

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 $48.8 billion (2021 – $40.5 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 $7.3 billion (2021 – $5.4 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)		2022			2021		
			Fair Value			Fair Value[1]	
		Notional	Assets	Liabilities	Notional	Assets	Liabilities
Equity and commodity derivatives							
Swaps		**$ 39,775**	**$ 752**	**$ (524)**	$ 44,637	$ 1,028	$ (213)
Futures		**23,535**	**–**	**–**	15,596	–	–
Options: Listed	– purchased	**1,296**	**17**	**–**	–	–	–
	– written	**378**	**–**	**(10)**	–	–	–
OTC	– purchased	**23,056**	**1,389**	**–**	25,866	644	–
	– written	**18,760**	**–**	**(241)**	21,294	17	(287)
		106,800	**2,158**	**(775)**	107,393	1,689	(500)
Interest rate derivatives							
Swaps		**110,159**	**171**	**(60)**	114,945	260	(184)
Futures		**75,012**	**–**	**–**	230,787	–	–
Options: Listed	– purchased	**–**	**–**	**–**	12,395	12	–
	– written	**–**	**–**	**–**	12,363	–	(5)
OTC	– purchased	**15,270**	**155**	**–**	12,864	84	(5)
	– written	**21,723**	**–**	**(125)**	33,391	17	(91)
		222,164	**326**	**(185)**	416,745	373	(285)
Currency derivatives							
Swaps		**621**	**5**	**(28)**	792	16	(1)
Forwards		**65,512**	**281**	**(641)**	73,912	391	(1,060)
Options: OTC	– purchased	**26,572**	**199**	**–**	34,987	181	–
	– written	**–**	**–**	**–**	10,366	–	(37)
		92,705	**485**	**(669)**	120,057	588	(1,098)
Credit derivatives							
Credit default swaps	– purchased	**70,152**	**33**	**(109)**	40,435	9	(122)
	– written	**74,430**	**92**	**(208)**	45,058	142	(139)
Swaps		**68**	**3**	**–**	82	3	–
		144,650	**128**	**(317)**	85,575	154	(261)
		566,319	**3,097**	**(1,946)**	729,770	2,804	(2,144)
Net cash collateral paid/(received) under derivative contracts			**16**	**(291)**		53	(56)
Notional and fair value of derivative contracts		**$ 566,319**	**$ 3,113**	**$ (2,237)**	$ 729,770	$ 2,857	$ (2,200)

1 Prior period comparative has been updated to conform to current year's presentation. See note 1a Derivatives.

(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:

	2022		2021	
	Effective Net Investments at Fair Value ($ millions)	**Asset Mix %**	Effective Net Investments at Fair Value ($ millions)	Asset Mix %
Equity				
Public equity	**$ 21,904**	**9%**	$ 27,218	11%
Private equity	**58,324**	**24**	55,056	23
	80,228	**33**	82,274	34
Fixed income				
Bonds	**76,174**	**31**	33,324	14
Real-rate products	**9,824**	**4**	11,867	5
	85,998	**35**	45,191	19
Inflation sensitive				
Commodities	**25,046**	**10**	26,455	11
Natural resources	**10,105**	**4**	9,405	4
Inflation hedge	**12,726**	**5**	12,099	5
	47,877	**19**	47,959	20
Real assets				
Real estate	**28,071**	**12**	26,262	11
Infrastructure	**39,753**	**16**	26,075	11
	67,824	**28**	52,337	22
Innovation	**7,438**	**3**	7,103	3
Credit	**35,105**	**14**	24,294	10
Absolute return strategies	**18,690**	**8**	14,938	6
Overlay	**(220)**	**–**	(452)	–
Funding for investments	**(98,801)**	**(40)**	(34,681)	(14)
Net investments	**$ 244,139**	**100%**	$ 238,963	100%

(e) Risk management

Objectives

Ontario Teachers' primary long-term risk is that the Plan's assets will fall short of its liabilities (i.e., benefits owed to members). Therefore, Ontario Teachers' utilizes an approach of asset diversification. The objective is to achieve a diversification of risks and returns in a manner that seeks to minimize the likelihood of an overall reduction in total fund value and maximize the opportunity for gains in aggregate.

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 include pension payments and meeting mark-to-market payments resulting from Ontario Teachers' derivatives exposure.

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 is to 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, 2022 was last amended on June 16, 2022 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 – 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 total asset risk parameters, total fund active risk budget, liquidity requirements and board approvals required for different types of investments. The board approves this policy and reviews it regularly.

- CEO (Chief Executive Officer) Investment Risk Policy – This policy articulates CEO oversight of the Investment Division and the associated roles and responsibilities of the Investment Division, Risk and other functional partners.

- Investment Division Policy – This policy outlines the CIO's (Chief Investment Officer) oversight of the Investment Division for the purpose of undertaking the investment and risk management of the fund. The policy specifies the active risk budget for each investment department and CIO approvals required for different types of investments.

- 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 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
Board members approve strategic plans, budgets, risk appetite, the acceptable range of risk, investment policies, benchmarks, performance, compensation and succession plans recommended by management. They monitor investment, operational, strategic and governance risks, and ensure appropriate mitigation plans are in place.

Ontario Teachers' uses risk budgeting to allocate active risk across the investment asset classes. The active risk budget for the fund 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. The Finance Division independently measures investment risk exposures and the liquidity position on a daily basis. Exposures are provided to the Investment Division daily and the Investment Committee of the Board on at least a quarterly basis.

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), chaired by the CIO.

- The IC-TF is responsible for considerations around the overall investment program with a focus on managing investment risks at the total-fund level. This committee brings together the experience, investment and 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.

- 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 & Governance Committee and the Investor Stewardship Committee.

- The Enterprise Risk & Governance Committee (ER&GC) is management's senior governance committee interpreting the Board's risk appetite and providing governance on factors that may have a significant impact on Ontario Teachers' strategy, performance and/or reputation. The CEO's executive team and other senior individuals are members of this committee. In 2022, certain management committees chaired by the CEO, including the CEO-Led Risk Committee (Investments), the CEO-Led Risk Committee (Member Services), and the Enterprise Risk Management Committee were replaced by the Enterprise Risk & Governance Committee.

- The Investor Stewardship Committee (ISC) is management's senior committee overseeing Ontario Teachers' stewardship activities, including proxy voting, engagement and advocacy efforts, in accordance with Ontario Teachers' Responsible Investing Principles. The CIO, Chief Risk Officer, and senior representatives from each investment department are members of this committee and it is chaired by the CEO.

(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 exposure is deemed high Ontario Teachers' takes action to mitigate the risks. Such actions may include reducing exposures and/or using 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.

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:

					2022
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)	**$ 64,409**	**$ 9,451**	**$ –**	**$ –**	**$ –**
AA/R-1 (mid)	**954**	**2,129**	**1,479**	**–**	**242**
A/R-1 (low)	**5,945**	**1,607**	**5,727**	**–**	**1,371**
BBB/R-2	**1,808**	**–**	**–**	**–**	**–**
Below BBB/R-2	**11,060**	**–**	**–**	**–**	**–**
Unrated[1]	**3,051**	**14**	**3,517**	**15,149**	**–**
	$ 87,227	**$ 13,201**	**$ 10,723**	**$ 15,149**	**$ 1,613**

					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

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)	2022	2021
Guarantees	$ 947	$ 505
Loan commitments	369	268
Notional amount of written credit derivatives	74,430	45,058
Total off balance sheet credit risk exposure	**$ 75,746**	$ 45,831

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, 2022, 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 $60.7 billion (2021 – $59.3 billion), U.S. Treasury issued securities of $5.5 billion (2021 – $8.2 billion), Province of Ontario bonds of $3.0 billion (2021 – $3.8 billion), and receivable from the Province of Ontario (see note 3) of $3.3 billion (2021 – $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 current economic environment reflects the challenges arising from a war in Europe and strained supply chains driven by COVID-19 impacts. These conditions have produced higher inflation, a higher expectation for interest rates, higher oil prices and lower global equity prices which contributed to exceptional volatility in financial markets during 2022 and continue to contribute to global economic uncertainty. As of December 31, 2022, Ontario Teachers' exposures across all risk parameters including market, credit, liquidity and leverage, have 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 scenarios. 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.

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The ETL as at December 31, 2022 was $50.0 billion (2021 – $58.0 billion)[1].

The specific scenarios that drive the most adverse outcomes can differ by asset class. The ETL for each asset class based on its respective worst 1% of scenarios is shown in the table below:

(Canadian $ billions)[2]	2022	2021
Equity		
Public equity	**$ 6.5**	$ 7.5
Private equity	**23.5**	22.5
Fixed income		
Bonds	**13.5**	1.0
Real-rate products	**2.5**	3.5
Inflation sensitive		
Commodities	**5.5**	6.0
Natural resources	**2.0**	2.0
Inflation hedge	**2.5**	2.5
Real assets		
Real estate	**4.5**	4.0
Infrastructure	**7.5**	5.0
Innovation	**5.0**	3.0
Credit	**5.5**	3.5
Absolute return strategies	**2.5**	2.0
Overlay	**7.0**	10.0
Funding for Investments	**29.0**	17.5

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

2 Rounded to the nearest $0.5 billion.

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 (note 4).

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 $5.9 billion (2021 – $0.8 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 $0.3 billion (2021 – $0.2 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 $1.6 billion (2021 – $2.1 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	**2022 Net Exposure**	2021 Net Exposure
United States Dollar	**$ 67,555**	$ 44,983
Euro	**9,919**	10,276
British Pound Sterling	**6,625**	4,389
Chinese Renminbi	**4,792**	6,372
Mexican Peso	**4,700**	2,787
Brazilian Real	**2,992**	1,992
Australian Dollar	**2,958**	2,046
Chilean Peso	**2,842**	3,242
Japanese Yen	**2,184**	2,393
Indian Rupee	**2,126**	1,255
Other	**7,792**	6,654
	$ 114,485	$ 86,389

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	**2022 Change in Net Investment Value**	2021 Change in Net Investment Value
United States Dollar	**$ 3,378**	$ 2,249
Euro	**496**	514
British Pound Sterling	**331**	219
Chinese Renminbi	**239**	319
Other	**1,280**	1,018
	$ 5,724	$ 4,319

(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, 2022, Ontario Teachers' maintains $59.7 billion of available liquid assets (2021 – $79.0 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**	**2022 Total**
Securities sold under agreements to repurchase	**$ (26,316)**	**$ –**	**$ –**	**$ (26,316)**
Securities sold but not yet purchased				
Equities	**(2,322)**	**–**	**–**	**(2,322)**
Fixed income	**(8,396)**	**–**	**–**	**(8,396)**
Real estate	**–**	**–**	**–**	**–**
Commercial Paper	**(2,640)**	**–**	**–**	**(2,640)**
Term debt	**(1,969)**	**(11,673)**	**(10,457)**	**(24,099)**
Cash collateral received under credit support annexes	**(1,121)**	**–**	**–**	**(1,121)**
Derivative-related, net	**(2,237)**	**–**	**–**	**(2,237)**
	$ (45,001)	**$ (11,673)**	**$ (10,457)**	**$ (67,131)**

(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	(449)	–	–	(449)
Derivative-related, net[1]	(2,200)	–	–	(2,200)
	$ (49,409)	$ (15,443)	$ (13,899)	$ (78,751)

1 Prior period comparative has been updated to conform to current year's presentation. See note 1a Derivatives.

(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 permitted 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, 2022 is $nil (2021 – $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)	2022	2021
Securities purchased under agreements to resell and sold under agreements to repurchase		
Gross amounts of securities purchased under agreements to resell[1]	**$ 14,647**	$ 37,618
Collateral held	**14,537**	37,908
Gross amounts of securities sold under agreements to repurchase[1]	**30,240**	33,204
Collateral pledged	**30,701**	33,973
Securities borrowing and lending		
Securities borrowed	**2,322**	2,259
Collateral pledged[2]	**2,618**	2,562
Derivative-related		
Collateral received[3]	**3,560**	1,805
Collateral pledged[4]	**6,905**	4,469

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

2 Includes cash collateral of $2,296 million (2021 – $2,076 million).

3 Includes cash collateral of $1,121 million (2021 – $449 million) and initial margin collateral of $1,862 million (2021 – 944 million). Prior period comparative has been updated to conform to current year's presentation.

4 Includes cash collateral of $13 million (2021 – $9 million) and initial margin collateral of $1,450 million (2021 – 1,015 million). Prior period comparative has been updated to conform to current year's presentation.

(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. For certain derivatives, gross amounts include the daily settlement of variation margin which is netted against the fair value of the derivatives. 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:

						2022
(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
Financial assets						
Securities purchased under agreements to resell	$ 14,647	$ (3,924)	$ 10,723	$ (10,446)	$ (273)	$ 4
Derivative-related receivables	3,113	–	3,113	(1,452)	(1,592)	69
	$ 17,760	$ (3,924)	$ 13,836	$ (11,898)	$ (1,865)	$ 73
Financial liabilities						
Securities sold under agreements to repurchase	$ (30,240)	$ 3,924	$ (26,316)	$ 10,446	$ 15,842	$ (28)
Derivative-related liabilities	(2,237)	–	(2,237)	1,452	674	(111)
	$ (32,477)	$ 3,924	$ (28,553)	$ 11,898	$ 16,516	$ (139)

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 2021
Financial assets						
Securities purchased under agreements to resell	$ 37,618	$ (7,675)	$ 29,943	$ (19,775)	$ (9,674)	$ 494
Derivative-related receivables[1]	2,857	–	2,857	(1,812)	(762)	283
	$ 40,475	$ (7,675)	$ 32,800	$ (21,587)	$ (10,436)	$ 777
Financial liabilities						
Securities sold under agreements to repurchase	$ (33,204)	$ 7,675	$ (25,529)	$ 19,775	$ 5,739	$ (15)
Derivative-related liabilities[1]	(2,200)	–	(2,200)	1,812	387	(1)
	$ (35,404)	$ 7,675	$ (27,729)	$ 21,587	$ 6,126	$ (16)

1 Prior period comparative has been updated to conform to current year's presentation. See note 1a Derivatives.

(k) Significant investments

Investments with either a fair value or cost exceeding 1% of the fair value or cost, respectively, of total net investment assets as at December 31 are as follows:

	2022			2021		
(Canadian $ millions)	**Number of Investments**	**Fair Value**	**Cost**	Number of Investments	Fair Value	Cost
Public investments[2]	**14**	**$ 57,404**	**$ 56,494**	17	$ 43,897	$ 41,847
Private investments[3]	**10**	**30,404**	**19,072**	7	21,757	13,971
	24	**$ 87,808**	**$ 75,566**	24	$ 65,654	$ 55,818

2 As at December 31, 2022, includes fixed income investments in Government of Canada Bonds, Government of Canada treasury bills, Real-return Government of Canada bonds and U.S. treasury bills.

3 As at December 31, 2022, includes ownership interests in: Caruna, Heritage Royalty Limited Partnership, IDEAL Group, SSEN Transmission, Storapod Holding Company, Inc., The Brussels Airport Company; Fund investments in: Baldr Fund Inc., EWP PA Fund, LTD.; and Real estate: Toronto-Dominion Centre Office Complex, Toronto Eaton Centre.

Note 3.
Receivable from the Province of Ontario

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

As at December 31 (Canadian $ millions)		2022		2021
Contributions receivable	**$**	**3,249**	$	3,191
Accrued interest receivable		**49**		43
	$	**3,298**	$	3,234

The receivable as at December 31, 2022, from the Province of Ontario consists of $1,656 million, which was received in January 2023, and an estimated $1,642 million to be received with interest in January 2024. The receivable as at December 31, 2021, from the Province of Ontario consisted of $1,604 million, which was received in January 2022, and an initial estimate of $1,630 million which was received in January 2023. The difference between the initial estimates and the actual amount received was primarily due to additional interest accrued between the period of estimate and time of receipt.

Note 4.
Accrued pension benefits

(a) Actuarial assumptions and methods

The actuarial assumptions used in determining the value of accrued pension benefits of $206,197 million (2021 – $257,482 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	2022	2021
Nominal discount rate[1]	**4.30%**	2.50%
Salary escalation rate[2]	**3.10%**	2.85%
Long-term inflation rate[3]	**2.10%**	1.85%
YMPE/ITA limit growth[4]	**2.85%/3.10%**	2.60%/2.85%
Real discount rate[5]	**2.15%**	0.65%

1 As at December 31, 2022, holding all other assumptions constant, a 1% decrease in the discount rate would result in an increase in pension liabilities of approximately $39.8 billion (2021 – $60.3 billion).

2 Represents the estimated salary escalation rate per year commencing September 1, 2022 (2021 – 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).

3 As at December 31, 2022, holding all other assumptions constant, an additional 1% increase in the assumed annual pension benefit increase for 2024 would result in an increase in pension liabilities of approximately $1.1 billion (2021 – $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 2022. These changes in economic assumptions resulted in a net decrease in the value of accrued pension benefits of $68,485 million (2021 – $9,256 million decrease).

At the time these Financial Statements were approved, the collective bargaining process related to school years beginning September 1, 2022 onward was in progress. New salary contracts in effect for the length of the contract, the impact of which may be material, will be reflected in future valuations once known.

The non-economic assumptions were updated in 2022 to reflect recent experience of Plan members related to the age difference between Plan members and their spouses. The changes in non-economic assumptions increased the accrued pension benefits by $22 million. There were no changes to the non-economic assumptions as at December 31, 2021.

The changes in economic and non-economic assumptions resulted in a net decrease in the value of accrued pension benefits of $68,463 million (2021 – $9,256 million net decrease).

(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, 2022 accrued pension benefits reflect the inflation protection levels as stated in the January 1, 2022 funding valuation report.

As noted in the filed January 1, 2022 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 2022 and 2021 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, 2022 and 2021 funding valuations.

(c) Experience gains and losses

Experience losses on the accrued pension benefits of $8,301 million (2021 – $1,313 losses) arose from differences between the actuarial assumptions and actual results.

Accrued pension benefits as at December 31, 2022 reflect the actual January 1, 2023 inflation adjustment to pensions in pay of 6.3%. Also reflected is an estimate of the January 1, 2024 inflation adjustment of 4.3%. This estimate was determined using known CPI data through to November 2022 and applying the assumed funding valuation long-term inflation rate thereafter to September 30, 2023. Beyond January 1, 2024, inflation adjustments to pensions in pay assume a long-term inflation rate of 2.10%.

Accrued pension benefits as at December 31, 2021 reflected the actual January 1, 2022 inflation adjustment to pensions in pay of 2.4%. Beyond January 1, 2022, inflation adjustments to pensions in pay assumed a long-term inflation rate of 1.85%.

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.

The tables below provide additional information on the real estate portfolio.

As at December 31 (Canadian $ millions)	**2022**		2021	
	Fair Value	**Cost**	Fair Value	Cost
Assets				
Real estate properties[1]	**$ 22,319**	**$ 16,973**	$ 27,560	$ 18,943
Investments	**5,903**	**4,864**	3,405	3,583
Other assets	**–**	**–**	891	891
Total assets	**28,222**	**21,837**	31,856	23,417
Liabilities[1]	**–**	**–**	5,489	5,186
Net investment in real estate	**$ 28,222**	**$ 21,837**	$ 26,367	$ 18,231

1 Real estate properties as at December 31, 2022 are presented net of liabilities of $4,661, which include issued debt with fair value of $2,421. As at December 31, 2021 issued debt with fair value of $3,494 was included in real estate liabilities. None of the outstanding liabilities at December 31, 2022 or December 31, 2021 were guaranteed by Ontario Teachers'. See note 1a Change in presentation for real estate.

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 for the year ended December 31, is as follows:

Net Investment Income (Canadian $ millions)	Income[1]	Net Gain (Loss) on Investments[2]	Investment Income[3]	Management Fees	Transaction Costs	Net Investment Income 2022
Equity						
Publicly traded						
Canadian	$ 32	$ 195	$ 227	$ –	$ (1)	$ 226
Non-Canadian	234	(2,257)	(2,023)	(29)	(34)	(2,086)
Non-publicly traded						
Canadian	183	107	290	(25)	(25)	240
Non-Canadian	687	3,327	4,014	(470)	(80)	3,464
	1,136	1,372	2,508	(524)	(140)	1,844
Fixed income						
Bonds	456	(22)	434	(3)	(27)	404
Short-term investments	1	338	339	(2)	–	337
Canadian real-rate products	238	(1,657)	(1,419)	–	–	(1,419)
Non-Canadian real-rate products	14	102	116	–	–	116
	709	(1,239)	(530)	(5)	(27)	(562)
Alternative investments	226	2,192	2,418	(51)	(4)	2,363
Inflation sensitive						
Commodities	(385)	3,460	3,075	–	(1)	3,074
Timberland	76	662	738	–	(1)	737
Natural resources	732	1,050	1,782	(5)	(21)	1,756
	423	5,172	5,595	(5)	(23)	5,567
Real assets						
Real estate	725	(1,652)	(927)	(2)	(101)	(1,030)
Infrastructure	930	5,282	6,212	(43)	(176)	5,993
	1,655	3,630	5,285	(45)	(277)	4,963
Overlay	(5)	(3,810)	(3,815)	–	–	(3,815)
Total	$ 4,144	$ 7,317	$ 11,461	$ (630)	$ (471)	$ 10,360

1 Income includes interest, dividends, and other investment-related income and expenses.

2 Includes realized gain from investments of $3,603 million and change in unrealized gains from investments of $3,714 million.

3 Net of certain management and performance fees.

Net Investment Income (Canadian $ millions)	Income[1]	Net Gain (Loss) on Investments[2]	Investment Income[3]	Management Fees	Transaction Costs	Net Investment Income 2021
Equity						
Publicly traded						
Canadian	$ 40	$ (381)	$ (341)	$ (1)	$ (1)	$ (343)
Non-Canadian	332	4,999	5,331	(61)	(67)	5,203
Non-publicly traded						
Canadian	218	1,340	1,558	(12)	(46)	1,500
Non-Canadian	1,447	10,655	12,102	(535)	(245)	11,322
	2,037	16,613	18,650	(609)	(359)	17,682
Fixed income						
Bonds	781	(1,349)	(568)	–	(45)	(613)
Short-term investments	–	35	35	(2)	–	33
Canadian real-rate products	279	(245)	34	–	–	34
Non-Canadian real-rate products	5	146	151	–	–	151
	1,065	(1,413)	(348)	(2)	(45)	(395)
Alternative investments	108	1,403	1,511	(28)	(3)	1,480
Inflation sensitive						
Commodities	(11)	2,074	2,063	–	(2)	2,061
Timberland	190	(84)	106	(1)	(9)	96
Natural resources	288	1,743	2,031	(21)	(13)	1,997
	467	3,733	4,200	(22)	(24)	4,154
Real assets						
Real estate	788	(142)	646	(2)	(21)	623
Infrastructure	703	1,479	2,182	(28)	(155)	1,999
	1,491	1,337	2,828	(30)	(176)	2,622
Overlay	(5)	(827)	(832)	–	–	(832)
Total	$ 5,163	$ 20,846	$ 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 Includes realized gain from investments of $16,935 million and change in unrealized gains from investments of $3,911 million. Prior period comparative has been updated to conform to current year's presentation.

3 Net of certain management and performance fees.

Note 7.
Investment returns and related benchmark returns

The total-fund net return is calculated after deducting transaction costs, management fees and investment administrative costs. Asset-class returns are calculated before deducting investment administrative costs. Investment returns and related benchmark returns by investment asset class for the year ended December 31 are as follows:

	2022		2021	
	Investment Returns	**Investment Benchmark Returns**	Investment Returns	Investment Benchmark Returns
Equity	**0.1%**	**(5.9)%**	21.3%	15.5%
Fixed Income	**(3.5)**	**(3.5)**	(6.3)	(6.3)
Inflation sensitive	**19.2**	**18.7**	11.4	10.9
Real assets	**8.3**	**11.1**	5.4	5.3
Innovation	**(12.1)**	**(12.1)**	39.0	39.0
Credit	**3.6**	**(0.0)**	3.5	1.2
Total fund net return[1]	**4.0%**	**2.3%**	11.1%	8.8%

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

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 of Ontario 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, 2022, by the external actuary and disclosed a funding surplus of $17.2 billion. The co-sponsors classified the surplus as a contingency reserve.

Note 9.
Contributions

(Canadian $ millions)	**2022**	2021
Members		
Current service[1]	**$ 1,602**	$ 1,597
Optional credit	**40**	45
	1,642	1,642
Province of Ontario		
Current service	**1,592**	1,584
Interest	**42**	33
Optional credit	**34**	40
	1,668	1,657
Designated employers	**38**	37
Transfers from other pension plans	**19**	18
	57	55
	$ 3,367	$ 3,354

1 Contributions past due are less than $3 million in 2022 and less than $2 million in 2021.

Note 10. Benefits

(Canadian $ millions)	2022	2021
Retirement pensions	$ 6,522	$ 6,259
Death benefits	504	483
Disability pensions	23	24
Commuted value transfers	123	109
Family law transfers	24	23
Transfers to other plans	8	9
Benefits paid	$ 7,204	$ 6,907
Other payments[1]	1	2
	$ 7,205	$ 6,909

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)	2022	2021
Salaries, incentives and benefits	$ 558.4	$ 540.2
Premises and equipment	74.4	70.2
Professional and consulting services	75.1	64.3
Information services	37.7	33.0
Communication and travel	17.4	4.9
Custodial fees	7.6	8.6
Statutory audit fees	4.6	3.7
Board and committee remuneration	1.3	1.3
Other	8.6	5.5
	$ 785.1	$ 731.7

(b) Member services expenses

(Canadian $ millions)	2022	2021
Salaries, incentives and benefits	$ 52.5	$ 47.4
Premises and equipment	21.8	24.9
Professional and consulting services	7.9	9.0
Communication and travel	1.2	0.8
Board and committee remuneration	–	0.1
Other	0.9	0.9
	$ 84.3	$ 83.1

(c) 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 2023 are approximately $17.8 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 $(1.5) million (2021 – $5.8 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.
Related party transactions

Ontario Teachers' primary related parties include its co-sponsors (Province of Ontario and Ontario Teachers' Federation); key management personnel; subsidiaries related to the administration of the pension plan; and investment-related subsidiaries, joint ventures, associates.

The primary transactions undertaken between Ontario Teachers' and the Government of Ontario consist of the funding contributions outlined in note 9. Amounts Receivable from the Province of Ontario related to matching contributions and interest thereon are disclosed in note 3. Ontario Teachers' investments in Province of Ontario issued bonds are disclosed in note 2f. There are no material transactions between Ontario Teachers' and its other co-sponsor, OTF.

Related-party transactions with investment-related subsidiaries, joint ventures, and associates consist primarily of investments and investment income. These transactions are measured at fair value and will, therefore, have the same impact on net assets available for benefits and net investment income as those investment transactions with unrelated parties. Guarantees made on behalf of related parties are disclosed in note 16.

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 as at December 31 is summarized below:

(Canadian $ millions)		**2022**		2021
Short-term employee benefits	**$**	**25.5**	$	23.2
Post-employment benefits		**(1.9)**		(1.5)
Termination benefits		**5.7**		–
Other long-term benefits		**27.3**		33.8
	$	**56.6**	$	55.5

Note 13.
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 (see note 8). As stated in the Partners' Agreement,[1] the Plan cannot be in a deficit position when such reports are filed.[2] 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).

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

2 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 14. 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 of Ontario 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 $ millions)	2022	2021
Statements of financial position		
NET ASSETS AVAILABLE FOR BENEFITS		
Assets	**$ 59.3**	$ 61.0
Liabilities	**(2.3)**	(3.4)
	$ 57.0	$ 57.6
ACCRUED PENSION BENEFITS AND DEFICIT		
Accrued pension benefits	**$ 475.2**	$ 484.4
Deficit	**(418.2)**	(426.8)
	$ 57.0	$ 57.6

For the year ended December 31 (Canadian $ millions)	2022	2021
Statements of changes in net assets available for benefits		
Contributions	**$ 12.2**	$ 15.4
Investment income	**0.2**	0.1
	12.4	15.5
Benefits paid	**(12.9)**	(12.3)
Expenses	**(0.2)**	(0.2)
	(13.1)	(12.5)
(Decrease)/increase in net assets available for benefits	**$ (0.7)**	$ 3.0

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 pension benefits is highly sensitive to salary increases, both actual and assumed, and to the assumed maximum pension limit per the ITA. 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 ITA and its regulations relating to pensions.

Note 15. 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, 2022, these commitments totaled $37,171 million (2021 – $33,185 million).

Note 16. 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 2022 or 2021 under these guarantees.

Ontario Teachers' guarantees certain investee loan and credit agreements which will expire by 2027. Ontario Teachers' maximum exposure is $706 million as at December 31, 2022 (2021 – $315 million). The companies have drawn $414 million under the agreements (2021 – $144 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, 2022 (2021 – $74 million). There were no default lease payments in either 2022 or 2021.

Ontario Teachers' also guarantees the ability of certain investee companies to settle certain financial obligations. Ontario Teachers' maximum exposure is $166 million as at December 31, 2022 (2021 – $87 million).

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 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	€750 million	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%
April 2022	USD	$1.50 billion	April 2027	3.000%
April 2022	EUR	€1.25 billion	May 2032	1.850%
October 2022	EUR	€500 million	October 2029	3.300%
November 2022[1]	CAD	$1.00 billion	June 2032	4.450%

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, 2022 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, 2022, commercial paper issued amounted to $2,664 million (2021 – $2,501 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, 2022 and the operational carbon footprint indicators for the year ended December 31, 2022 as disclosed in the 2022 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 73 and 74 of the Report, which are determined using the enterprise value ownership method, for the year ended December 31, 2022.

We reviewed Ontario Teachers' operational carbon footprint[1] total presented on page 74 of the Report, for the year ended December 31, 2022.

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, the Partnership for Carbon Accounting Financials ("PCAF")[2] and the definitions by Ontario Teachers' as stated in the Report. The GHG Protocol and PCAF definitions can be found at http://ghgprotocol.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, PCAF[2] and Ontario Teachers' definitions described in the Report.

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.

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 Management 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or 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.

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 are comprised of the GHG Protocol, PCAF[1] 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, PCAF[1] 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 9, 2023

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

Portfolio carbon footprint 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:

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

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, 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 75% of our net assets as of December 31, 2022. Most of the remainder of our portfolio is composed of sovereign debt, primarily Government of Canada bonds. We continue to track the development of standards and methodologies for considering emissions associated with sovereign debt, but note that the output would not be directly comparable to the emissions from our current portfolio carbon footprint.

Limitations

At the portfolio level, a carbon footprint is not a direct measure of portfolio risk. The implications of higher footprints vary, depending on sector and geography, and companies' supply chain and competitive risks are not captured. All assets face additional risks relating to climate change, not just risks relating to emissions. At the company level, the data do not capture forward-looking dynamics, such as corporate decisions that may reduce future emissions. Many companies still do not report their carbon footprint, necessitating estimation, thus reducing accuracy and making carbon footprints less useful as the basis for engagement or targeting reductions. In addition, because of different reporting timelines and delays in data availability, companies may provide carbon footprint data one to two years after their financial data.

Emissions data

Public equities or credit: Emissions data was taken from Trucost[1], part of S&P Global. Trucost applies the following approach for estimating emissions:

1. Company-reported emissions
2. Estimate based on company-specific factors
3. Proprietary sector-based model

Any public equity or credit holdings not covered by the Trucost database are estimated by proxy using Global Industry Classification Standard (GICS) sub-industry average emissions calculated from Trucost's database.

Private assets: Carbon emissions were assessed using the following approach, which is similar to Trucost's, in preferential order:

1. Company-reported emissions
2. Estimate based on company-specific factors
3. Estimate based on similar publicly listed companies
4. Proxy based on GICS sub-industry average emissions

The following table breaks down the estimated methods used by number of companies and percentage of holdings:

	Public Equity and Corporate Fixed Income			Private Assets and Corporate Fixed Income			Total	
Methodology/Data Sources	% of Public Emissions	% of Total OTPP Emissions	% of Holdings	% of Private Emissions	% of Total OTPP Emissions	% of Holdings	% of Emissions	% of Holdings
1. Company-reported emissions	45%	16%	31%	57%[2]	37%	64%	53%	59%
2. Estimate based on company-specific factors	11%	4%	19%	3%	2%	2%	6%	5%
3. Estimate based on similar publicly listed companies				2%	1%	3%	1%	2%
4. Proxy based on GICS sub-industry average emissions	34%	12%	34%	38%	25%	31%	37%	31%
5. Trucost models	10%	3%	16%				3%	3%
Total	**100%**	**35%**	**100%**	**100%**	**65%**	**100%**	**100%**	**100%**

1 Source: ©2022 S&P Trucost Limited (Trucost), an affiliate of S&P Global Market Intelligence. All rights in the Trucost data and reports vest in Trucost and/or its licensors. Neither Trucost, nor its affiliates, nor its licensors accept any liability for any errors, omissions or interruptions in the Trucost data and/or reports. No further distribution of the data and/or reports is permitted without Trucost's express written consent.

2 This number is calculated using emissions from all private positions (i.e., direct investment, funds and corporate fixed income). In our direct investment portfolio, 88% are company-reported emissions.

Operational 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 using a combination of actual reported data and estimates. These are the leading industry standards to guide the calculation of an operational carbon footprint.

Given our international footprint, we use emissions factors from a range of sources with a bias to those reported through international governance mechanisms. This can introduce additional time lags and variations in Global Warming Potentials in the data used.

Scope

Our reported operational carbon footprint covers fiscal years 2022, 2021 and 2019 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.

Forward-looking statements

This annual report contains forward-looking information and statements that are intended to enhance the reader's ability to assess the future financial and business performance of Ontario Teachers'. Forward-looking information and statements include all information and statements regarding Ontario Teachers' current beliefs, targets, intentions, plans, and expectations concerning its objectives, future performance, strategies, and financial results, as well as any other information or statements that relate to future events or circumstances and which do not directly and exclusively relate to historical facts. Forward-looking information and statements often but not always use words such as "trend," "potential," "opportunity," "believe," "expect," "anticipate," "current," "intention," "estimate," "position," "assume," "outlook," "continue," "remain," "maintain," "sustain," "seek," "achieve," and similar expressions, or future or conditional verbs such as "will," "would," "should," "could," "may" and similar expressions. Because the forward-looking information and statements are based on estimates and assumptions that are subject to significant business, economic and competitive uncertainties, many of which are beyond Ontario Teachers' control or are subject to change, actual results or events could be materially different. Although Ontario Teachers' believes that the estimates and assumptions inherent in the forward-looking information and statements are reasonable, such information and statements are not guarantees of future performance and, accordingly, readers are cautioned not to place undue reliance on such information or statements due to the inherent uncertainty therein. Ontario Teachers' forward-looking information and statements speak only as of the date of this annual report or as of the date they are made and should be regarded solely as Ontario Teachers' current plans, estimates and beliefs. Ontario Teachers' does not intend or undertake to publicly update such statements to reflect new information, future events, and changes in circumstances or for any other reason.

Cautionary statement

In connection with our multi-faceted climate strategy, we have made certain commitments and set certain goals and targets ("**Targets**"). In establishing our Targets, we relied on various laws, guidelines, taxonomies, methodologies, frameworks, market practices and other standards (collectively, "**Standards**") and also made good faith assumptions and estimates in establishing our Targets. Given the complex and evolving nature of the global response to climate change, these Standards may change over time, and our assumptions and estimates may prove incorrect or inaccurate for reasons we cannot foresee or predict.

To monitor and report on our progress toward our Targets, we rely on data obtained from our portfolio companies and other third-party sources. Although we believe these sources are reliable, we have not independently verified this data, or assessed the assumptions underlying such data, and cannot guarantee its accuracy or completeness. We also attempt to improve accuracy in the data through an independent limited assurance review. The data may be of varying quality or usefulness and may change over time as Standards evolve. These factors could impact our Targets and our ability to achieve them.

Online supplements

Please visit our website to view our lists of major investments over $200 million,
as well as our 11-year financial review and filed funding valuation history.

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