Rating Report

Ontario Teachers' Pension Plan Board and Ontario Teachers' Finance Trust

Morningstar DBRS
May 31, 2024

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Ratings

Issuer	Debt	Rating	Rating Action	Trend
Ontario Teachers' Pension Plan Board	Issuer Rating	AAA	Confirmed	Stable
Ontario Teachers' Finance Trust	Long-Term Notes	AAA	Confirmed	Stable
Ontario Teachers' Finance Trust	Canadian Short-Term Promissory Notes	R-1 (high)	Confirmed	Stable
Ontario Teachers' Finance Trust	U.S. Commercial Paper Notes	R-1 (high)	Confirmed	Stable

Rating Update

DBRS Limited (Morningstar DBRS) confirmed the Issuer Rating of the Ontario Teachers' Pension Plan Board (Ontario Teachers') at AAA. Morningstar DBRS also confirmed the ratings on Ontario Teachers' Finance Trust's (OTFT) Long-Term Notes, Canadian Short-Term Promissory Notes, and U.S. Commercial Paper (CP) Notes at AAA, R-1 (high), and R-1 (high), respectively. All trends remain Stable. The ratings are supported by the strong legislative and governance frameworks that create a highly captive asset base, require the Ontario Teachers' Pension Plan (the Plan) sponsors to be responsive to deteriorations in funding status, and impose high standards of care and prudence on Ontario Teachers' board and management. The ratings are further supported by the Plan's fully funded status on a going-concern basis for 11 consecutive years, substantial net assets and liquidity, strong long-term investment returns, and low recourse debt burden.

Ontario Teachers' achieved a net return of 1.9% in 2023, underperforming its benchmark (BM) of 8.7% by 680 basis points (bps). Strong performances in public equities and credit investments were partially offset by negative returns in real estate and infrastructure assets, which were affected by valuation adjustments to reflect the high interest rate environment and some specific asset events. The underperformance with respect to the BM was in part due to many asset classes being benchmarked against global stock indices, which performed extremely well during the year and Ontario Teachers' relative low allocation to public equities in the asset mix. As a result of the modest net positive investment results, net assets remained almost flat, increasing by $278 million to $247.5 billion.

Effective January 1, 2024, Ontario Teachers' established an in-house real estate group to oversee its global real estate investment activities. This initiative aligned its global real estate investment approach with that of other asset groups, which Ontario Teachers' expects will enable information sharing and co-sourcing investments across its global platform. Ontario Teachers' will focus on global real estate investment and portfolio management, while Cadillac Fairview Corporation (wholly owned by Ontario Teachers') will focus on growth, diversification, and densification of its real estate portfolio in Canada.

Debt with recourse to Ontario Teachers' rose in 2023 to $28.5 billion or 10.3% of adjusted net assets. During 2023, OTFT issued two senior unsecured notes, including a green bond. Recourse debt remains low compared with total net assets, providing considerable room for cyclical fluctuations in asset values. Morningstar DBRS notes that Ontario Teachers' continues to meet Morningstar DBRS criteria for CP liquidity support as outlined in the appendix to the *Rating Canadian Public Pension Funds & Related Exclusive Asset Managers* methodology titled "Self-Liquidity for Canadian Public Pension Funds and Related Exclusive Asset Managers' CP Programs." Ontario Teachers' liquidity position remains sound with sufficient same-day available funds equal to at least five business days of upcoming liabilities and discounted assets equal to the remaining maximum authorized CP program limit, which is consistent with Morningstar DRBS' policy on backup liquidity support for pension plans and provides considerable short-term financial flexibility.

Ontario Teachers' primary challenge continues to be the Plan's demographics. The ratio of active-to-retired members stands at 1.2 times (x) in 2023, and is expected to fall in the near term. The aging demographics result in growing net pension payments (contributions minus benefit payments) and reduced ability to equitably offset significant investment losses through contribution increases. To help mitigate the risk of its declining active-to-retired ratio, the Plan sponsors introduced conditional inflation protection in the Plan in 2008, which promotes intergenerational equity by allowing retired members to share the risk of a funding shortfall along with active members. Furthermore, to mitigate risk relating to increasing net pension payments, Ontario Teachers' has been increasing its capital allocation to private assets, which tend to provide more predictable income.

The Plan's surplus, on a financial statement basis, declined to $36.1 billion in 2023 from $41.0 billion in 2022. While the valuation of the pension liability decreased because of a 20 bps increase in the discount rate (net of the long-term inflation rate), this was offset by lower-than-expected investment returns, higher-than-expected increases to pensions in pay, and a provision for the estimated impact of retroactive salary increases for certain years. The discount rate used to value the pension liability in the financial statements is based on market rates of bonds issued by the Province of Ontario (Ontario or the Province; rated AA (low) with a Positive trend by Morningstar DBRS), with characteristics similar to the obligations under the Plan. On a going-concern basis, the Plan has been fully funded for 11 consecutive years. The Plan sponsors filed the funding valuation in 2023 and classified the $17.5 billion surplus as a contingency reserve, maintaining the average contribution rate at 11% and the 100% inflation protection on all pensions. As of January 1, 2024, the Plan had a preliminary surplus of $19.1 billion. The January 1, 2024, valuation is not required to be filed with the regulatory authorities, but the Plan sponsors may elect to do so.

Morningstar DBRS expects the ratings to remain stable, given the current outlook for the Plan's funding status.

Exhibit 1 Financial Information

	For the year ended December 31				
(CAD billions)	**2023**	**2022**	**2021**	**2020**	**2019**
Net assets available for benefits	247.5	247.2	241.6	221.2	207.4
Surplus (deficit)	36.1	41.0	(15.9)	(36.1)	(17.3)
Recourse debt	28.455	26.739	25.910	21.615	16.460
- as % of adjusted net assets (%)[1]	10.3%	9.8	9.7	8.9	7.4
Total net return (%)[2]	1.9%	4.0	11.1	8.6	10.4
BM return (%)	8.7%	2.3	8.8	10.7	12.2

1 For the purposes of this calculation, Morningstar DBRS adjusts net assets to include recourse debt.
2 Total net return is net of all investment costs.

Issuer Description

Ontario Teachers' was created by the Province in 1990 as an independent organization to assume the management of the defined-benefit pension plan of teachers in Ontario. The Plan is governed by the Teachers' Pension Act (Ontario) and subject to the Pension Benefits Act (Ontario) and the Income Tax Act (Canada) and is jointly sponsored by the Province and Ontario Teachers' Federation (OTF). OTFT is a wholly owned subsidiary of Ontario Teachers' and issues debt with recourse to the Plan. The ratings on the debts issued by OTFT are predicated on the unconditional and irrevocable guarantee provided by Ontario Teachers'.

Rating Considerations

Strengths

1. Exclusive mandate to manage pension assets

The legislative framework established Ontario Teachers' at arm's length from Plan sponsors and provides Ontario Teachers' with an exclusive and indefinite mandate to manage the assets and administer the benefits of the Ontario Teachers' Pension Plan.

2. Strong governance framework and sponsors

Ontario Teachers' has a strong governance framework, which provides the board and management with a high degree of independence from Plan sponsors and a clear delegation of duties and responsibilities. The Plan is jointly sponsored by the Province and OTF. Under this framework, the Funding Management Policy within the Partners' Agreement clearly outlines how funding deficiencies and surpluses are to be addressed, which provides bondholders with comfort that the Plan sponsors will be responsive to deteriorations in funding status. Moreover, the Province's involvement as a sponsor adds considerable stability and certainty to pension contributions, given its strong financial profile.

3. Low debt burden and substantial liquidity

Ontario Teachers' maintains a significant asset base and ample liquidity to meet obligations as they arise. As at December 31, 2023, Ontario Teachers' had $247.5 billion in net assets while recourse debt was $28.5 billion. Ontario Teachers' maintains significant cash and high-quality debt holdings and is able to access additional liquidity through committed credit lines as well as the use of repurchase agreements.

4. History of strong investment returns
Ontario Teachers' continues to show a high degree of skill in controlling risks and managing assets with enhancements made to internal risk-management systems and practices since the significant losses in 2008. Ontario Teachers' investment portfolio has generated an annualized net return of 7.6% over the last 10 years, surpassing the 7.5% BM return by 10 bps.

Challenges
1. Declining ratio of active to retired teachers
Demographics and workforce projections point toward a continued decline in the ratio of active to retired members as life expectancies increase. As at YE2023, the Plan had 1.2 active teachers for every pensioner, down from 2.0 in 2000 and 4.0 in 1990. This ratio is lower than those of most other major Canadian pension funds and is expected to continue to fall in the future, which will make it increasingly difficult to address any shortfall with measures aimed at active members, such as contribution rate increases. To help mitigate the risk of its declining active-to-retired ratio, the Plan sponsors introduced conditional inflation protection in the Plan in 2008, which allows inflation protection to vary based on the financial health of the Plan. Conditional inflation protection, if fully invoked, is currently capable of absorbing an asset loss of $57 billion as of 2023, as estimated by Ontario Teachers'.

2. Volatility inherent in investment activities and actuarial benefit obligations
Asset valuations fluctuate over time. The challenging investment environment with highly volatile public equity and bond markets, persistent inflationary pressures, uncertainty around the direction and size of potential changes to central banks' policy rate, heightened geopolitical risk, climate-related risks, and economic uncertainty can lead to high volatility and lower asset valuations. A significant decline in asset valuations could result in a material erosion in the Plan’s asset base. However, this challenge is mitigated by Ontario Teachers' prudent and proactive approach to risk management, focus on high-quality assets, diversified portfolio, history of strong investment results, and low recourse debt burden that provides considerable cushion for asset base movements.

3. Legal and political risks
The AAA and R-1 (high) ratings rely heavily on the captivity of the asset base and Ontario Teachers' independence from Plan sponsors. While only a remote possibility, legislative changes or political intervention that weakens either of these factors could affect the ratings.

Investment Performance

Ontario Teachers' achieved a net return of 1.9% in 2023, underperforming its BM return of 8.7% by 680 bps. The modest net positive investment results, increased net assets by $278 million to $247.5 billion. As a long-term investor, Ontario Teachers' performance is better measured on a long-term basis. Over the last decade, Ontario Teachers' has achieved an average annual return of 7.6%, exceeding its BM return of 7.5% by 10 bps.

In 2023, Ontario Teachers' investments in public equities and credit investments produced gains of 20.0% and 9.1%, respectively. Public equities benefitted from the rally in global equity markets, while the strong results in credit investments were driven by solid returns in levered loans, high yield, investment grade and emerging market debt. Private equity, which delivered strong results in recent years, posted a 3.6% gain in 2023, while fixed income generated a 1.2% gain, attributed to yield volatility throughout the year.

The real estate, infrastructure, and inflation-sensitive portfolios generated losses of 5.9%, 2.8%, and 1.0% respectively, partially offsetting the gains delivered by public equities, credit investments, private equity, and fixed income portfolios. The real estate portfolio generated a loss of 5.9% underperforming its BM gain of 2.0%. The underperformance in the year relative to the benchmark was attributed to valuation adjustments driven by the higher interest rate environment and underperformance by the international portfolio, because of the challenging global office market and the U.S. life sciences development assets. During the year, Ontario Teachers' continued to focus on scaling and diversifying its real estate portfolio, increasing its exposure to international markets to 31% from 27% in 2022 and from 10% in 2020, and diversifying further the portfolio by sector mix, with new investments in residential and industrial properties, which has reduced the concentration in Canadian retail and Canadian office assets to 41% and 20% of the real estate portfolio, respectively, from 55% and 30%, respectively in 2020. Ontario Teachers' announced a strategic change to its real estate operating model in 2023 and implemented it in 2024. Effective January 1, 2024, Ontario Teachers' established an in-house real estate group to oversee its global real estate investment activities. This initiative aligned its global real estate investment approach with that of other asset groups, which Ontario Teachers' expects will enable information sharing and co-sourcing investments across its global platform. Ontario Teachers' will focus on global real estate investment and portfolio management, while Cadillac Fairview Corporation will focus on growth, diversification, and densification of its real estate portfolio in Canada.

After delivering strong results in recent years, the infrastructure portfolio generated a loss of 2.8% in 2023, underperforming its BM gain of 7.6%. The loss in 2023 was attributed in part to valuation adjustments resulting from changes made to the discount rates to reflect the higher interest rate environment. Similarly, the inflation sensitive asset class posted a 1.0% loss, exceeding the 0.2% losses from the BM. Positive performance from timberlands, agriculture, aquaculture, and investments in gold were more than offset by weaker performance from other commodities in the portfolio, mining, and natural climate solutions.

Ontario Teachers' manages currency from a total fund perspective and hedges in certain circumstances to reduce exposure to currency risk that comes from investing globally. In 2023, the portfolio suffered a $2.2 billion loss from currency risk as some assets denominated in foreign currencies depreciated in value. This corresponds to a negative impact on the total return of 0.8%.

Ontario Teachers' underperformance with respect to the BM was in part due to many asset classes being benchmarked against global stock indices, which performed extremely well during the year and Ontario Teachers' relative low allocation to public equities in the asset mix.

Exhibit 2 Investment Returns

			For the year ended December 31				
	10-year avg.	**Five-year avg.**	**2023**	**2022**	**2021**	**2020**	**2019**
Portfolio (%)	7.6	7.2	1.9	4.0	11.1	8.6	10.4
BM (%)[1]	7.5	8.5	8.7	2.3	8.8	10.7	12.2

1 The total fund BM aggregates the BM returns from each of the asset-class BMs.

Exhibit 3 Investment Returns[1]

	For the year ended December 31						
	2023			2022	2021	2020	2019
	Return	**BM**	**Variance**	**Return**	**Return**	**Return**	**Return**
Fixed income (%)	1.2	1.2	–	(3.5)	(6.3)	20.7	6.3
Bonds (%)	0.6	0.6	–	(5.9)	(9.4)	24.6	5.9
Real-return products (%)	7.3	7.3	–	7.3	(1.4)	12.8	7.5
Equity (%)	7.4	17.1	(9.7)	0.1	21.3	13.2	12.4
Publicly traded (%)	20.0	20.3	(0.3)	(12.5)	9.0	15.2	15.2
Non-publicly traded (%)	3.6	16.3	(12.7)	6.1	29.0	13.5	9.4
Venture Growth[3]	(0.7)	12.8	(13.5)				
Real assets (%)	(4.1)	5.3	(9.4)	8.3	5.4	(7.6)	5.8
Real estate (%)	(5.9)	2.0	(7.9)	(3.5)	2.5	(13.7)	6.2
Infrastructure (%)	(2.8)	7.6	(10.4)	18.7	7.9	2.6	4.2
Inflation sensitive (%)	(1.0)	(0.2)	(0.8)	19.2	11.4	(2.4)	2.7
Natural resources (%)	0.2	3.3	(3.1)	29.6	28.1	(11.2)	2.1
Commodities (%)	(0.5)	(0.5)	–	19.5	7.9	4.3	8.0
Inflation hedge (%)	(3.0)	(3.0)	–	9.2	8.0	(4.4)	(3.9)
Credit (%)[2]	9.1	9.6	(0.5)	3.6	3.5	2.6	7.3
Innovation (%)[3]				(12.1)	39.0	16.3	
Total Plan (%)[4]	1.9	8.7	(6.8)	4.0	11.1	8.6	10.4

1 Gross returns by asset class; net returns for total fund return.
2 Credit asset class created in F2017; includes corporate and emerging-markets debt.
3 Innovation asset class created in F2019; focuses on emerging opportunities as a result of the unprecedented technological change. Effective January 1, 2023, investments included in the innovation asset class are now included in Equity and Credit.
4 Absolute return strategies and money markets are included in the total plan return, but their returns are not attributed to specific asset classes.

Investment and Risk Management

Investment Allocations and Strategy

Ontario Teachers' objective is to maintain stable contribution and benefit levels as well as achieve returns that, at a minimum, support the long-term sustainability of the Plan. The long-term asset allocation incorporates these requirements as well as expectations for the demographics of the Plan, expected liquidity requirements, and other portfolio-management considerations. Within the context of the long-term asset allocation, Ontario Teachers' seeks to maximize returns within the implied risk tolerance. Ontario Teachers' also continues to focus on broad diversification across asset classes and the moderate use of leverage.

Management determines the asset-mix policy within board-approved risk parameters. Over the medium term, management expects to continue making small adjustments to the portfolio as it seeks to further incorporate risk-management considerations into portfolio allocations and decision-making. Ontario Teachers' continues to map the impacts of common risk factors across asset classes as well as potential impacts arising from emerging risks, such as higher interest rates, inflationary pressures, or geopolitical risk. During 2023, Ontario Teachers' made small adjustments to the asset mix to adapt to the current investment environment. These adjustments led to an increase of its exposure to fixed income and credit, as both asset classes have become increasingly attractive due to higher interest rates and high valuations in other asset classes. The fixed income portfolio grew to $95.8 billion in 2023 from $86.0 billion in 2022 or to 39.3% of net assets from 35.2%, while the credit portfolio grew to $38.6 billion in 2023 from $35.2 billion in 2022 or to 15.8% of net assets from 14.4%. The equity asset class grew to 37.5% of net assets from 35.9% driven primarily by the strong performance in the public equities portfolio, which increased the value of holdings. The risk profile could evolve as Ontario Teachers' actively manages the Plan funding and investment risk together, but always within the board-approved risk parameters.

Ontario Teachers' considers the impact that environmental, social, and governance (ESG) issues may have on the Plan's financial performance in a manner that is consistent with the board's objective to meet the pension liabilities over the short-term and long-term horizon. This is consistent with Morningstar DBRS view that pension funds that proactively address ESG risks and opportunities are expected to have stronger credit risk profiles, as ESG factors can affect their cash flows and the long-term value of their investments and therefore their ability to meet their financial obligations to bondholders. Ontario Teachers' has made several commitments that include reaching net-zero greenhouse gas emissions in its portfolio by 2050, supported by interim targets to decrease the portfolio emissions intensity by 45% by 2025 and by 67% by 2030 from the 2019 baseline, and has reported it has achieved already a 39% reduction in the portfolio emissions intensity. Ontario Teachers' has also set interim targets to have by 2025, 67% of their portfolio's emissions from companies in which they have significant stakes, aligned with a credible plan to achieve net zero by 2050. The target increases to 90% by 2030. In 2023, Ontario Teachers' made progress on this target and initiated decarbonization efforts with 24 private companies across infrastructure, natural resources, equities and real estate, which represent more than 80% of the eligible emissions. Ontario Teachers' has also committed to achieve diversity, equity, and inclusion in the workplace through employee resource groups and partnerships with organizations such as the BlackNorth Initiative, 30% Club, Catalyst, and the Investor Leadership Network and has added an increased focus on social governance elements in its investment decision-making.

Ontario Teachers' manages about 80% of assets in-house and uses external managers for mandates where the Plan lacks internal expertise. All external managers are overseen by Ontario Teachers' to ensure appropriate accountability.

Net Investments by Asset Class

Exhibit 4 Net Investments by Asset Class

	Long-term asset mix policy[1]		As at December 31				
	Min.	**Max.**	**2023**	**2022**	**2021**	**2020**	**2019**
Equities (%)	30.0	45.0	37.5	32.9	34.4	38.7	36.8
Fixed income (%)	0.0	67.0	39.3	35.2	18.9	15.9	45.6
Inflation sensitive (%)	15.0	25.0	18.6	19.6	20.1	16.8	17.7
Real assets (%)	25.0	37.0	27.7	27.8	21.9	20.6	22.4
Innovation (%)[2]	–	–	–	3.0	3.0	1.6	
Credit (%)	10.0	20.0	15.8	14.4	10.2	8.2	8.0
Absolute return strategies (%)	4.0	14.0	8.0	7.7	6.2	6.2	8.1
Overlay (%)			0.0	(0.1)	(0.2)	0.4	0.1
Funding for investments (%)	(108.0)	10.0	(46.8)	(40.5)	(14.5)	(8.4)	(38.8)

1 The asset allocation to money markets is negative because Ontario Teachers' uses short borrowings to fund investments in other asset classes.
2 Effective January 1, 2023 investments formerly included in the Innovation asset class are now included in Equity and Credit asset classes.

Risk Management

Ontario Teachers' has an extensive enterprise risk framework aimed at ensuring the Plan meets its short- and long-term objectives. The board sets the overall direction for Ontario Teachers' risk-management activities through the development of key policies and risk-appetite statements and by providing oversight through its various committees. Senior management has implemented systems and internal controls to meet the policy requirements and has established a number of committees to ensure compliance and to address issues or concerns as they arise.

Investment risk management is achieved through broad diversification of risk exposures. In practice, Ontario Teachers' uses risk budgets informed by the risk-appetite statements to allocate risk across investment departments. Investment departments are responsible for adhering to their risk allocations as well as other risk-related policies and procedures. The Finance Division independently measures the investment risk exposure and provides the information to the Investment Committee of the board.

Ontario Teachers' measures total asset risk using the expected tail loss (ETL) methodology, a Value at Risk (VaR)–type approach, over a one-year horizon at a 99% confidence level. This approach is more conservative than the standard VaR at a given quantile level as it is the average of all the losses in the tail. The ETL methodology captures the investment risk exposure by asset class and reflects the risk of potential losses in net assets caused by market and credit risk factors. As at December 31, 2023, the total asset risk was measured at $48.0 billion, lower than the $50 billion total asset risk as at December 31, 2022.

Valuation of Private-Market Assets

Ontario Teachers' measures all of its investments at fair value in accordance with International Financial Reporting Standards and board policy. Real estate, private equities, infrastructure, timberland, and natural resources are valued based on estimated fair values determined by using appropriate techniques and best estimates by either management, appraisers, or both. Private market assets, for which there is no active market, are generally valued at least annually and Ontario Teachers' seeks to ensure that valuations are reasonable through the application of multiple valuation approaches to confirm reasonableness. Investment divisions create valuation models for all major investments and the Finance department has a staff of Chartered Business Valuators to review valuations and make adjustments as necessary. Where external appraisers are engaged to perform the valuation, management ensures that the appraisers are independent. For example, within the real estate portfolio, at least 70% of the rental properties are independently appraised annually and all properties valued at more than $250 million are independently appraised every year. The intent is to have a rigorous process with multiple layers of review/assessment to arrive at fair valuations. Ontario Teachers' also conducts back-testing and reviews underlying assumptions to ensure their appropriateness.

Liquidity Management

Liquidity risk management falls within Ontario Teachers' broader enterprise risk framework. Overall liquidity management is dictated by board-level policies seeking to ensure that Ontario Teachers' will have sufficient liquidity to meet its expected and unexpected liquidity requirements as they arise. Ontario Teachers' monitors its liquidity daily and uses a stress-test framework to estimate its liquidity needs under severe market conditions. Ontario Teachers' adopted the liquidity coverage ratio used by the banking sector but tailored it to reflect the unique characteristics of the fund. Ontario Teachers' maintains sufficient liquidity in the form of highly marketable assets, including Canadian and U.S. government bonds and publicly traded equities that are traded on major stock exchanges.

Leverage and Debt

Ontario Teachers' had investment-related liabilities of $61.4 billion as of the end of 2023, consisting mainly of securities sold under repurchase agreements, recourse debt, and securities sold short.

Ontario Teachers' makes use of repurchase agreements to fund its investment activities and to manage day-to-day liquidity while it maintains economic exposure to the underlying securities. As at December 31, 2023, Ontario Teachers' had sold $23.8 billion in securities under repurchase agreements and had purchased $8.1 billion in securities under agreements to resell.

In 2015, OTFT was established for issuing debt guaranteed by Ontario Teachers'. Recourse debt, consisting of OTFT’s short-term borrowing program and term debt, amounted to $28.5 billion as at December 31, 2023, or 10.3% of adjusted net assets. OTFT’s short-term borrowing programs in Canada and the U.S. have an authorized aggregate limit of $10.0 billion and as at December 31, 2023, a total of

$2.6 billion was outstanding. OTFT continues to diversify funding sources by currency and by maturity, through its Global Debt Program, while being committed as a regular issuer in the USD market. During 2023, OTFT issued two senior unsecured notes. One was its fourth green bond issuance amounting to CAD $1 billion, with the proceeds being invested in assets that enable the net-zero transition, and the second issuance was a five-year USD $1.5 billion bond. So far in 2024, OTFT has remained active in the term market, issuing another five-year USD $1.5 billion bond. Including new issuance, Ontario Teachers' recourse debt remains low compared with net assets, providing considerable room for cyclical fluctuations in asset values.

OTFT's internal policies require staggering maturities of short-term promissory notes and CP, and impose limits on the amounts maturing in any given one-week and four-week period. OTFT meets the Morningstar DBRS criteria for CP liquidity support outlined in the appendix to *Rating Canadian Public Pension Funds & Related Exclusive Asset Managers*. The liquidity position remains sound with sufficient same-day available funds equal to at least five business days of upcoming liabilities and discounted assets equal to the remaining maximum authorized CP program limit, which is consistent with Morningstar DBRS' policy on backup liquidity support for pension plans and provides considerable short-term financial flexibility. As an additional source of liquidity, OTFT maintains a USD 1.0 billion credit facility, which has been internally committed to backstop the short-term borrowing programs.

Ontario Teachers' uses derivatives extensively to achieve various portfolio objectives, including attaining geographic, commodity, and equity market exposure; carrying out absolute-return strategies; and hedging. Ontario Teachers' seeks to manage credit and counterparty risks related to its derivatives positions by conducting internal credit assessments, imposing counterparty concentration limits, netting through International Swaps and Derivatives Association Master Agreements for over-the-counter derivatives, and exchanging collateral through credit-support annexes.

Exhibit 5 Investment-Related Liabilities and Capital Market Debt

	For the year ended December 31				
As at December 31 (CAD millions)	**2023**	**2022**	**2021**	**2020**	**2019**
Securities sold short	6,181	10,718	19,174	8,238	10,817
Securities sold under repurchase agreements	23,795	26,316	25,529	14,185	19,821
Derivative-related liabilities	2,072	2,237	2,200	4,661	3,186
Cash collateral received	909	1,121	449	3,356	988
CP	2,557	2,640	2,501	3,637	8,490
Real estate debt (including debentures)[2]	-	-	5,489	5,491	5,228
Term debt	25,898	24,099	23,409	17,212	7,187
Total	**61,412**	**67,131**	**78,751**	**56,780**	**55,717**
Total recourse debt	**28,455**	**26,739**	**25,910**	**21,615**	**16,460**
As a share of adjusted net assets (%)[1]	10.3	9.8	9.7	8.9	7.4

1 For the purposes of this calculation, Morningstar DBRS adjusts net assets to include recourse debt.
2 Effective January 1, 2022, real estate investment assets are presented on a nonconsolidated basis.

Exhibit 6 Capital Market Debt Outstanding

As at December 31, 2023 (CAD millions)	Maturity	Interest Rate (%)	Fair Value
Commercial Paper			2,557
• Canadian Short-Term Promissory Notes	< 364 days		
• U.S. Commercial Paper Notes	< 397 days		
OTFT USD 1.75 Billion Senior Notes	Sep. 2024	1.625	
OTFT USD 1.00 Billion Senior Notes	Apr. 2025	1.375	
OTFT EUR 1.50 Billion Senior Notes	May 2025	0.500	
OTFT USD 1.50 Billion Senior Notes	Sep. 2030	1.250	
OTFT CAD 1.25 Billion Senior Notes	Oct. 2027	1.100	
OTFT EUR 0.75 Billion Senior Notes (Green Bond)	Nov. 2030	0.050	
OTFT USD 1.50 Billion Senior Notes	Apr. 2031	2.000	
OTFT EUR 1.25 Billion Senior Notes	May 2028	0.100	
OTFT EUR 1.25 Billion Senior Notes	May 2041	0.900	
OTFT USD 2.00 Billion Senior Notes	Sep. 2026	0.875	
OTFT GBP 0.50 Billion Senior Notes	May 2026	1.125	
OTFT EUR 0.50 Billion Senior Notes (Green Bond)	Nov. 2051	0.950	
OTFT USD 1.50 Billion Senior Notes	Apr. 2027	3.000	
OTFT EUR 1.25 Billion Senior Notes	May 2032	1.850	
OTFT EUR 0.50 Billion Senior Notes	Oct. 2029	3.300	
OTFT CAD 1.00 Billion Senior Notes (Green Bond)	Jun. 2032	4.450	
OTFT CAD 1.00 Billion Senior Notes	Nov. 2029	4.150	
OTFT USD 1.50 Billion Senior Notes	Apr. 2028	4.250	
Total			**25,898**

Funding Status and Net Assets

Financial Statements

In 2023, net assets available for benefits rose by 0.1% to $247.5 billion, up from $247.2 billion the year before. Net investment income of $5.5 billion offset net pension payments (contributions minus benefit payments) of $4.3 billion and operating expenses of $910 million.

The Plan’s surplus, on a financial statement basis, declined to $36.1 billion in 2023 from $41.0 billion in 2022. While the valuation of the pension liability decreased because of a 20 bps increase in the discount rate (net of the long-term inflation rate), this was offset by lower-than-expected investment returns, higher-than-expected increases to pensions in pay, and a provision for the estimated impact of retroactive salary increases for certain years. The discount rate used to value the pension liability in the financial statements is based on market rates of bonds issued by the Province, with characteristics similar to the obligations under the Plan.

Actuarial Funding Valuations

Ontario Teachers', like other defined-benefit pension plan administrators, is required to file an actuarial funding valuation with regulatory authorities at least triennially. The funding status established by the actuarial funding valuation differs from that used for financial statements as it includes future contributions and benefits as well as smooths investment earnings. The actuarial funding valuation provides a truer representation of the Plan’s long-term sustainability and is the valuation that is used by Plan sponsors to determine whether changes in benefit levels, contribution rates, and inflation protection are warranted. For the January 1, 2024, preliminary funding valuation, Ontario Teachers' board opted to increase the real discount rate by 10 bps to 2.55%, taking into consideration the continued higher interest rate levels, the relative maturity of the Plan and potential funding challenges that may arise from the current uncertain and unpredictable investment environment. This discount rate is low compared with other public-sector pension plans in Canada.

In 2008, the Plan sponsors introduced conditional inflation protection in the Plan, which allows inflation protection to vary based on the financial health of the Plan. Inflation protection can vary between 50% and 100% of the Consumer Price Index for pension credit earned between 2010 and 2013, and can vary between 0% and 100% for pension credit earned after 2013. Conditional inflation protection and changes to indexation levels can be invoked only when a valuation is filed.

On a going-concern basis, the Ontario Teachers' Pension Plan has been fully funded for 11 consecutive years.

In 2023, Ontario Teachers' filed a valuation with the regulatory authorities. The valuation established a surplus of $17.5 billion after maintaining the indexation levels for pension credit earned after 2009 at 100%. The January 1, 2023, surplus was fully allocated to a contingency reserve to reduce volatility in the funded position of the Plan and facilitate stability in members’ contributions and benefits.

The January 1, 2024, valuation established a preliminary surplus of $19.1 billion, after increasing the real discount rate to 2.55%, applying a short-term inflation adjustment to pensions in pay at January 1, 2025, estimated at 2.6% and maintaining the long-term inflation rate steady at 2.00%. Although the January 1, 2024, valuation is not required to be filed with the regulatory authorities, the Plan sponsors may elect to do so.

Outlook

In comparison with other public-sector plans in Canada, the Plan is relatively mature. The ratio of active-to-retired members has fallen sharply over the last two decades as longevity has improved. The challenge for Ontario Teachers' is that, as the pension plan matures, there is less ability to recover from large losses without considerable increases in contributions or reductions to benefits. Ontario Teachers' estimates that current contributions would have to rise by 5.6% to offset a funding deficit equivalent to approximately 10% of assets. To help mitigate the risk of its declining active-to-retired ratio, the Plan sponsors introduced conditional inflation protection in the Plan in 2008, which allows inflation protection to vary based on the financial health of the Plan. Conditional inflation protection, if fully invoked, is currently capable of absorbing an asset loss of $57 billion as estimated by Ontario Teachers'.

At present, the ratio of active-to-retired members is about 1.2x and that ratio is expected to continue to fall in the future. In 2023, the average retirement age was 59 and teachers spent, on average, 32 years in retirement.

Exhibit 7 Demographics

	2023	2010	2005	1990	1970
Average retirement age	59	59	57	58	61
Expected years on pension	32	30	28	25	20
Ratio of active teachers to pensioners	1.2	1.5	1.6	4	10

Exhibit 8 Net Assets Available for Benefits and Accrued Pension Benefits

(CAD millions)	As at December 31				
Assets	**2023**	**2022**	**2021**	**2020**	**2019**
Cash	501	1,107	484	283	643
Receivable from Province of Ontario	3,284	3,298	3,234	3,179	3,146
Receivables from brokers	792	562	26	655	205
Investments	305,335	311,270	317,714	274,706	259,763
Premises and equipment	291	83	91	122	130
Total assets	**310,203**	**316,320**	**321,549**	**278,945**	**263,887**
Liabilities	**2023**	**2022**	**2021**	**2020**	**2019**
Accounts payable and accrued liabilities	686	590	693	584	563
Due to brokers	592	1,364	523	340	195
Investment-related liabilities	61,412	67,131	78,751	56,780	55,717
Total liabilities	**62,690**	**69,085**	**79,967**	**57,704**	**56,475**
Net assets available for benefits	247,513	247,235	241,582	221,241	207,412
Pension obligations	211,393	206,197	257,482	257,330	224,669
Funding surplus (deficit)	**36,120**	**41,038**	**(15,900)**	**(36,089)**	**(17,257)**

Exhibit 9 Changes in Net Assets Available for Benefits

(CAD millions)	For the year ended December 31				
Change in net assets available for benefits	**2023**	**2022**	**2021**	**2020**	**2019**
Net investment income	5,525	10,360	24,711	18,011	20,185
Contributions	3,347	3,367	3,354	3,232	3,223
Pension payments	(7,684)	(7,205)	(6,909)	(6,700)	(6,415)
Operating expenses	(910)	(869)	(815)	(714)	(693)
Increase (decrease) in net assets	**278**	**5,653**	**20,341**	**13,829**	**16,300**
Net assets available for benefits	**247,513**	**247,235**	**241,582**	**221,241**	**207,412**
Change in accrued pension benefits					
Increase in pension obligations	**2023**	**2022**	**2021**	**2020**	**2019**
Interest on accrued pension benefits	8,835	6,467	5,176	5,629	6,151
Benefits accrued	6,196	9,614	9,826	7,690	6,281
Changes in actuarial assumptions/methods	–	–	–	27,138	25,515
Changes in benefits/provisions	–	–	–	–	–
Experience losses	3,944	8,301	1,313	–	853
	18,975	24,382	16,315	40,457	38,800
Decrease in pension obligations	**2023**	**2022**	**2021**	**2020**	**2019**
Benefits paid	7,682	7,204	6,907	6,699	6,412
Changes in actuarial assumptions/methods	6,097	68,463	9,256		–
Experience gains	–	–	–	1,097	–
	13,779	75,667	16,163	7,796	6,412
Net increase in pension obligations	**5,196**	**(51,285)**	**152**	**32,661**	**32,388**
Accrued pension benefits	**211,393**	**206,197**	**257,482**	**257,330**	**224,669**

About Ontario Teachers'

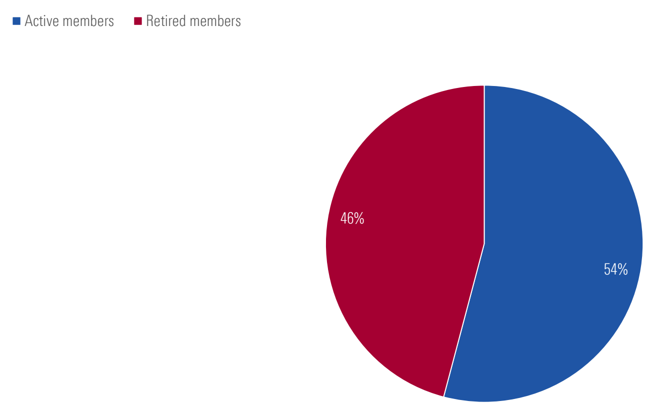
Ontario Teachers' has managed the contributory defined-benefit pension plan for Ontario teachers since its creation on January 1, 1990. The Plan is governed by the Teachers' Pension Act and subject to the Pension Benefits Act (Ontario) and the Income Tax Act (Canada).

Ontario Teachers' Pension Plan

The pension plan is mandatory for all district school board teachers and those from designated private institutions in Ontario. The Plan works with the Canada Pension Plan (CPP) to provide pensioners with annual benefits equal to 2% per year of service multiplied by the average of the member's best five annual salaries. The Plan provides bridging for those who retire before the age of 65 and, when CPP payments commence at 65, pension payments are reduced accordingly. The Plan also provides inflation protection. Pension credit earned prior to 2010 is fully indexed while pension credit earned in 2010 and subsequent years is subject to conditional indexation, whereby the cost-of-living adjustment is contingent on the funded status of the Plan. When the Plan is in surplus, the sponsors can restore inflation protection for previously unrecognized inflation. In prior years, the Plan sponsors have restored post-2009 inflation protection to 100% because of recurring surpluses.

The Plan has 340,000 members, 184,000 of which are active members and 156,000 are retired members. The Plan is maturing and the ratio of active-to-retired members has been tracking lower, reaching 1.2x in 2023, down from about 2.0x in 2000. In addition, teachers tend to retire relatively younger at an average age of 59 years and tend to live longer than the general population.

Exhibit 10 Ontario Teachers' Pension Plan (as of December 31, 2023)



The Ontario Teachers’ Pension Plan is jointly sponsored by the Province and Plan members as represented by OTF. The sponsors are responsible for ensuring that the Plan is fully funded over the long term. They share responsibility for any funding surplus or deficiency as well as setting contribution rates and benefit levels. Ontario Teachers' provides the sponsors with analytical and actuarial support for decision-making related to the Plan. Decisions are made jointly by the sponsors.

The Funding Management Policy, contained within the Partners’ Agreement, sets out a framework for addressing funding surpluses and deficiencies as well as establishes a 10% cushion, restricting the ability of Plan sponsors to improve benefits or reduce contribution rates when the funding status is less than 110%. The intent of this is to provide a buffer against possible market downturns. Contribution rates are currently 10.4% up to the yearly maximum pensionable earnings (YMPE) threshold for the CPP and 12.0% for earnings above the YMPE.

Ontario Teachers' Governance

Ontario Teachers' is governed by an 11-member board with five members selected by the Province, five members selected by OTF, and the chair jointly selected. The professional board comprises individuals with significant executive-level experience in a range of industry sectors, including investment management, finance, business, actuarial science, economics, accounting, and education. Board members can serve up to four consecutive two-year terms.

The board is required to act independently of both the sponsors and management and to make decisions in the best interest of the Plan's beneficiaries. While day-to-day management of the Plan is delegated to senior management, the board remains responsible for providing management oversight, strategic planning, ensuring that there are adequate internal controls and risk-management systems, developing and approving corporate governance policies, developing appropriate investment policies, and preparing actuarial valuations. The board operates through the following six board subcommittees: the Human Resources & Compensation Committee, the Governance Committee, the Audit & Actuarial Committee, the Investment Committee, the Benefits Adjudication Committee, and the Enterprise Risk Committee.

Ontario Teachers' has a strong and stable management team as many members of senior management have been with the organization for many years.

Ontario Teachers' has offices in Toronto, London, Hong Kong, Singapore, Sao Paolo, and Dallas, and opened two new offices in 2022 in Mumbai and San Francisco, which will enable the expansion of Ontario Teachers' footprint into targeted international markets.

Ranking and Guarantees

The Teachers' Pension Act is silent on the ranking of counterparty obligations relative to pension obligations in the event of a wind-up; however, in 2015, Ontario Teachers' sought to provide greater clarity on ranking. In a schedule to the Teachers' Pension Act, which contains the detailed provisions of the Plan, a section was added that states that, in the event of a windup (as defined in the Pension Benefits Act (Ontario)), the assets of the pension fund would first be used to pay or satisfy properly incurred liabilities to creditors. The provision is consistent with a legal opinion Ontario Teachers' obtained when developing its short-term borrowing program in late 2015. While this is a positive development, Morningstar DBRS generally puts limited emphasis on legal opinions and Plan provisions, given the absence of legal certainty pertaining to the issue.

Ontario Teachers' unconditionally guarantees, by way of separate guarantees, the full payment of principal and interest for the short-term notes and long-term debt of OTFT. The guarantees are unconditional, cannot be revoked for any reason, and will continue until the debts are repaid. Morningstar DBRS has reviewed legal opinions confirming that the guarantees provided by Ontario Teachers' on the debt issued by OTFT are enforceable and are in accordance with legislation and Ontario Teachers' bylaws.

Rating History

	Current	2023	2022	2021	2020
Ontario Teachers' Pension Plan Board					
• Issuer Rating	AAA	AAA	AAA	AAA	AAA
Ontario Teachers' Finance Trust					
• Long-Term Notes	AAA	AAA	AAA	AAA	AAA
• U.S. Commercial Paper Notes	R-1 (high)	R-1 (high)	R-1 (high)	R-1 (high)	R-1 (high)
• Canadian Short-Term Promissory Notes	R-1 (high)	R-1 (high)	R-1 (high)	R-1 (high)	R-1 (high)

Related Research

- *Rating Canadian Public Pension Funds & Related Exclusive Asset Managers* (April 16, 2024).
- *North American Structured Finance Flow-Through Ratings* (November 13, 2023).

Commercial Paper Limit

- $10 billion.

Previous Report

- Ontario Teachers’ Pension Plan Board and Ontario Teachers' Finance Trust: Rating Report, June 2, 2023.

Notes:
All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on dbrs.morningstar.com.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.

Appendix A — Environmental, Social, and Governance (ESG) Considerations

Ontario Teachers' Pension Plan Board

ESG Checklist

ESG Factor		ESG Credit Consideration Applicable to the Credit Analysis: Y/N		Extent of the Effect on the ESG Factor on the Credit Analysis: Relevant (R) or Significant (S)*
Environmental		**Overall:**	**N**	**N**
	Emissions, Effluents, and Waste	Do we consider that the costs or risks for the issuer or its clients result, or could result, in changes to an issuer's financial, operational, and/or reputational standing?	N	N
	Carbon and GHG Costs	Does the issuer face increased regulatory pressure relating to the carbon impact of its or its clients' operations resulting in additional costs and/or will such costs increase over time affecting the long-term credit profile?	N	N
	Climate and Weather Risks	In the near term, will climate change and adverse weather events potentially disrupt issuer or client operations, causing a negative financial impact?	N	N
		In the long term, will the issuer's or client's business activities and infrastructure be materially affected financially under key IPCC climate scenarios up to a 2°C rise in temperature by 2050?	N	N
		Climate and Weather Risks	**N**	**N**
	Passed-through Environmental credit considerations	Does this rating depend to a large extent on the creditworthiness of another rated issuer which is impacted by environmental factors (see respective ESG checklist for such issuer)?	N	N
Social		**Overall:**	**N**	**N**
	Social Impact of Products and Services	Do we consider that the social impact of the issuer's products and services pose a financial or regulatory risk to the issuer?	N	N
	Human Capital and Human Rights	Is the issuer exposed to staffing risks, such as the scarcity of skilled labour, uncompetitive wages, or frequent labour relations conflicts, that could result in a material financial or operational impact?	N	N
		Do violations of rights create a potential liability that could can negatively affect the issuer's financial wellbeing or reputation?	N	N
		Human Capital and Human Rights	**N**	**N**
	Product Governance	Does failure in delivering quality products and services cause damage to customers and expose the issuer to financial and legal liability?	N	N
	Data Privacy and Security	Has misuse or negligence in maintaining private client or stakeholder data resulted, or could it result, in financial penalties or client attrition to the issuer?	N	N
	Community Relations	Does engagement, or lack of engagement, with local communities pose a financial or reputational risk to the issuer?	N	N
	Access to Basic Services	Does a failure to provide or protect with respect to essential products or services have the potential to result in any significant negative financial impact on the issuer?	N	N
	Passed-through Social credit considerations	Does this rating depend to a large extent on the creditworthiness of another rated issuer which is impacted by social factors (see respective ESG checklist for such issuer)?	N	N
Governance		**Overall:**	**N**	**N**
	Bribery, Corruption, and Political Risks	Do alleged or actual illicit payments pose a financial or reputational risk to the issuer?	N	N
		Are there any political risks that could affect the issuer's financial position or its reputation?	N	N
		Bribery, Corruption, and Political Risks	**N**	**N**
	Business Ethics	Do general professional ethics pose a financial or reputational risk to the issuer?	N	N
	Corporate / Transaction Governance	Does the issuer's corporate structure allow for appropriate board and audit independence?	N	N
		Have there been significant governance failures that could negatively affect the issuer's financial wellbeing or reputation?	N	N
		Does the board and/or management have a formal framework to assess climate-related financial risks to the issuer?	N	N
		Corporate / Transaction Governance	**N**	**N**
	Passed-through Governance credit considerations	Does this rating depend to a large extent on the creditworthiness of another rated issuer which is impacted by governance factors (see respective ESG checklist for such issuer)?	N	N
		Consolidated ESG Criteria Output:	**N**	**N**

* A Relevant Effect means that the impact of the applicable ESG risk factor has not changed the rating or rating trend on the issuer.
A Significant Effect means that the impact of the applicable ESG risk factor has changed the rating or trend on the issuer.

Ontario Teachers' Finance Trust

ESG Checklist

ESG Factor		ESG Credit Consideration Applicable to the Credit Analysis: Y/N		Extent of the Effect on the ESG Factor on the Credit Analysis: Relevant (R) or Significant (S)*
Environmental		**Overall:**	N	N
	Emissions, Effluents, and Waste	Do we consider that the costs or risks for the issuer or its clients result, or could result, in changes to an issuer's financial, operational, and/or reputational standing?	N	N
	Carbon and GHG Costs	Does the issuer face increased regulatory pressure relating to the carbon impact of its or its clients' operations resulting in additional costs and/or will such costs increase over time affecting the long-term credit profile?	N	N
	Climate and Weather Risks	In the near term, will climate change and adverse weather events potentially disrupt issuer or client operations, causing a negative financial impact?	N	N
		In the long term, will the issuer's or client's business activities and infrastructure be materially affected financially under key IPCC climate scenarios up to a 2°C rise in temperature by 2050?	N	N
		Climate and Weather Risks	N	N
	Passed-through Environmental credit considerations	Does this rating depend to a large extent on the creditworthiness of another rated issuer which is impacted by environmental factors (see respective ESG checklist for such issuer)?	N	N
Social		**Overall:**	N	N
	Social Impact of Products and Services	Do we consider that the social impact of the issuer's products and services pose a financial or regulatory risk to the issuer?	N	N
	Human Capital and Human Rights	Is the issuer exposed to staffing risks, such as the scarcity of skilled labour, uncompetitive wages, or frequent labour relations conflicts, that could result in a material financial or operational impact?	N	N
		Do violations of rights create a potential liability that could can negatively affect the issuer's financial wellbeing or reputation?	N	N
		Human Capital and Human Rights	N	N
	Product Governance	Does failure in delivering quality products and services cause damage to customers and expose the issuer to financial and legal liability?	N	N
	Data Privacy and Security	Has misuse or negligence in maintaining private client or stakeholder data resulted, or could it result, in financial penalties or client attrition to the issuer?	N	N
	Community Relations	Does engagement, or lack of engagement, with local communities pose a financial or reputational risk to the issuer?	N	N
	Access to Basic Services	Does a failure to provide or protect with respect to essential products or services have the potential to result in any significant negative financial impact on the issuer?	N	N
	Passed-through Social credit considerations	Does this rating depend to a large extent on the creditworthiness of another rated issuer which is impacted by social factors (see respective ESG checklist for such issuer)?	N	N
Governance		**Overall:**	N	N
	Bribery, Corruption, and Political Risks	Do alleged or actual illicit payments pose a financial or reputational risk to the issuer?	N	N
		Are there any political risks that could affect the issuer's financial position or its reputation?	N	N
		Bribery, Corruption, and Political Risks	N	N
	Business Ethics	Do general professional ethics pose a financial or reputational risk to the issuer?	N	N
	Corporate / Transaction Governance	Does the issuer's corporate structure allow for appropriate board and audit independence?	N	N
		Have there been significant governance failures that could negatively affect the issuer's financial wellbeing or reputation?	N	N
		Does the board and/or management have a formal framework to assess climate-related financial risks to the issuer?	N	N
		Corporate / Transaction Governance	N	N
	Passed-through Governance credit considerations	Does this rating depend to a large extent on the creditworthiness of another rated issuer which is impacted by governance factors (see respective ESG checklist for such issuer)?	N	N
		Consolidated ESG Criteria Output:	N	N

* A Relevant Effect means that the impact of the applicable ESG risk factor has not changed the rating or rating trend on the issuer.
A Significant Effect means that the impact of the applicable ESG risk factor has changed the rating or trend on the issuer.

ESG Considerations

Environmental

There were no environmental factors that had a relevant or significant effect on the credit analysis. For more details about which environmental factors could have an effect on the credit analysis, please refer to the checklist above.

Social

There were no social factors that had a relevant or significant effect on the credit analysis. For more details about which social factors could have an effect on the credit, please refer to the checklist above.

Governance

There were no governance factors that had a relevant or significant effect on the credit analysis. For more details about which governance factors could have an effect on the credit analysis, please refer to the checklist above.

The above ESG discussion relates to credit risk factors that could impact the issuer's credit profile and, therefore, the ratings on the Issuer, Long-Term Notes and CP. They are separate from ESG sustainability factors, which are generally outside the scope of this analysis. A description of how Morningstar DBRS considers ESG factors within the Morningstar DBRS analytical framework can be found in *the Morningstar DBRS Criteria: Approach to Environmental, Social, and Governance Risk Factors in Credit Ratings* at https://dbrs.morningstar.com/research/427030 (January 23, 2024).

Appendix B — Scope and Meaning of Financial Obligations

Morningstar DBRS' credit rating on Ontario Teachers' Pension Plan Board and Ontario Teachers' Finance Trust addresses the credit risk associated with the identified financial obligations in accordance with the relevant transaction documents. For Information on the associated financial obligations, please refer to the corresponding press release published for this credit rating action.

Morningstar DBRS' credit rating does not address non-payment risk associated with contractual payment obligations contemplated in the applicable transaction document(s) that are not financial obligations.

Morningstar DBRS' long-term credit ratings provide opinions on risk of default. Morningstar DBRS considers risk of default to be the risk that an issuer will fail to satisfy the financial obligations in accordance with the terms under which a long-term obligation has been issued. The Morningstar DBRS short-term debt rating scale provides an opinion on the risk that an issuer will not meet its short-term financial obligations in a timely manner

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We rate more than 4,000 issuers and nearly 60,000 securities worldwide, providing independent credit ratings for financial institutions, corporate and sovereign entities, and structured finance products and instruments. Market innovators choose to work with us because of our agility, transparency, and tech-forward approach.

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