Teachers' Pension Plan

2021 Annual Report

Safe and secure,
strong and sustainable.

tpp.pensionsbc.ca

Contents

Trustees' Message

The Teachers' Pension Plan: Safe and secure, strong and sustainable

The past two and a half years have been remarkable.In what feels like an eternity ago, we were confronted with the largest global pandemic in a century.

As the social, economic and societal impacts of the pandemic turned our lives upside down, we assured members that the Teachers' Pension Plan was built to last: that it had been through almost a century of economic recessions and downturns, global and national political tensions, and generational changes.

And, as predicted, the plan has continued to show its resilience as the pandemic evolves into 2022.

Last year, we reported a 1-year annual return of 10.7 per cent and a 10-year return of 9.2 per cent. This year, our annual return is 11.6 per cent with a 10-year return of 10.1 per cent. The numbers are impressive on their own, but perhaps more importantly, they exceed 5.75 per cent.

Why is 5.75 per cent important? It represents the long-term return that the plan actuary believes is needed (all other factors being equal) to ensure current and future pensions can be paid without significant changes to contribution rates.

2020 valuation

In addition to showing our strong returns, the plan's most recent valuation demonstrates the plan's ongoing sustainability.

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As at December 31, 2020, the plan's actuarial surplus is $1.58 billion, based on assets of $31.54 billion and liabilities of $29.96 billion. The plan has a funding ratio of 105.3 per cent.

With the surplus, we had some decisions to make.

The provincial *Pension Benefits Standards Act* (PBSA) requires we set aside a large portion of the surplus to act as a buffer to protect the plan in the case of an economic downturn.

For the remainder of the surplus, we used the Teachers' Pension Plan Joint Trust Agreement (JTA) to help us weigh our options. The JTA, established by the plan partners (BC Teachers' Federation and the Government of BC), serves as a governance framework, giving us guidelines on how to manage the plan.

After considering the direction from the PBSA and JTA, we decided to leave the surplus in the plan's basic account. Keeping our assets in the basic account ensures these assets will help the plan's financial position when future valuations are undertaken.

Review of the plan's post-retirement group health benefits

We have started work on a review of the group health benefits program we make available to retired members.

Why are we doing this? We believe it is important that we ensure the program remains affordable, effective and attractive for retired members.

We expect our review to continue into 2023. We will keep plan members informed of our progress on this initiative.

Thank you

Thank you for taking the time to read this *Annual Report*. We hope after reading it you'll understand why we're proud of the plan and honoured to provide thousands of British Columbia educators, now and in the future, the secure and dignified retirement they deserve.

Retired members Karen and Grant Giles

Executive summary

2021 by the numbers

Net assets

(as at December 31)

2019
$31.5 billion

2020
$34.3 billion

2021
$37.8 billion

Benefits

The plan paid out
$1.3 billion
in benefits in 2021

As at December 31, 2021, there were
40,473 pensions being paid

Membership

The plan has more than
103,200
members

Growth of active members in 2021 1.4%

Growth of retired members in 2021 1.7%

Performance

11.6%
2021 annual rate of return
exceeds the performance benchmark of 8.4%

10.1%
10-year annualized rate of return
exceeds the performance benchmark of 8.8%

Teachers' Pension Plan

Plan financials

Investment strategy

The primary objective of the Teachers' Pension Plan Board of Trustees is to ensure the pension plan is secure and stable over the long term. This depends on several factors, including whether the plan earns enough through returns on its investments.

The board oversees this responsibility through the selection of its investment management agent, the British Columbia Investment Management Corporation (BCI). The board sets the investment beliefs and financial goals of the plan, and BCI puts the appropriate investment strategy into action.

The board takes a long-term approach to investing as the plan's commitment to its members is long term. Through the investment activities, the goal is to meet or exceed the plan's investment return objective—the minimum amount the plan needs to earn to be able to meet its pension obligations—without taking on too much risk. Risk management is a fiduciary responsibility of the board and BCI. This includes analyzing risk and taking appropriate steps to limit exposure and capitalize on opportunities.

To manage risk effectively, the board and BCI have constructed a portfolio that is invested in multiple asset types, industry sectors and global markets. With investments across a wide range of assets, the portfolio is protected if one type of asset generates lower returns in any given period. Depending on the market outlook, or future anticipated risk, investment holdings will be adjusted to either protect the plan or take advantage of opportunities to add value.

With investments across a wide range of assets, the portfolio is protected if one type of asset generates lower returns in any given period.

In recent years, the plan's long-term asset mix policy has increased focus on investing in real assets (tangible investments, such as land and buildings), as well as regulated utilities and renewable resources. These types of private market assets have characteristics that align with the plan's long-term view on investing: they typically increase in value over time, protect against inflation and help buffer against the short-term volatility associated with public markets. Many of these investments also present opportunities for direct asset management. This enables BCI to influence the strategic direction of these companies and create long-term value for the plan.

Investment highlights

In 2021, the global economy experienced a strong recovery despite continued market volatility and uncertainty as the world faced ongoing headwinds from the COVID-19 pandemic. Supply chain disruptions persisted and regional differences in vaccine availability affected the pace of economies reopening around the world. These were all challenges that BCI took into account when managing the plan's portfolio throughout the year.

Overall plan performance

Over the year, the plan's assets grew to $37.8 billion, a $3.5 billion increase from the prior year. Investment activities helped drive the growth in assets, delivering a 1-year return of 11.6 per cent relative to the benchmark of 8.4 per cent, and a 10-year return of 10.1 per cent, which was above the benchmark of 8.8 per cent. These returns surpass the plan's investment return objective of 5.75 per cent.

$3.5 billion
increase in assets from the prior year.

Public and private equities

Strong performance in public and private equities were the primary drivers of returns in the year. Public equities returned 15.6 per cent, slightly underperforming the benchmark of 15.7 per cent. Public equities in developed markets performed well over the year. In contrast, public equities in the emerging markets underperformed as these markets were affected by slower economic reopening due to lower vaccination rates and increasing geopolitical tensions. Over five years, public equities returned 12.5 per cent against the benchmark of 12.1 per cent. BCI's active management approach and increased share of assets managed in-house reduced dependence on higher-cost external managers and contributed to the outperformance against the benchmarks.

Private equities were an exceptional source of investment returns for the plan, earning 30.6 per cent for the year compared to the benchmark of 19.5 per cent. As more investors seek exposure to private equity assets, competition in the market has grown and, consequently, the price of assets has increased. BCI took advantage of market opportunities to strategically sell assets and deliver returns to the plan.

15.6%
Public equity

30.6%
Private equity

Fixed income

Over the year, the fixed income portfolio returned -0.7 per cent against the benchmark of -1.3 per cent. The performance of fixed income was affected by rising interest rates, which resulted in a drop in the value of the fixed income securities. Over the five-year period, returns have been strong, with the portfolio returning 3.4 per cent compared to the benchmark of 3.1 per cent.

Real estate

Real estate, particularly commercial real estate, was the hardest hit sector early in the pandemic. But as global economies reopened, the real estate market recovered, as reflected in the plan's one-year real estate return of 14.5 per cent against the benchmark of 6.8 per cent. This is in part because the plan has been careful to maintain low exposure to hard-hit sectors like retail, while increasing investment in sectors like warehousing and logistics, which have experienced growing demand. On a five-year basis, the portfolio returned 7.3 per cent, exceeding the benchmark of 6.2 per cent.

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Infrastructure and renewable resources

The plan's infrastructure and renewable resources (I&RR) investments benefited from increased demand for shipping, lumber and grain over the last year, a trend driven by the COVID-19 pandemic. As a result, the one-year return of 12.4 per cent outperformed the benchmark of 6.6 per cent. This outperformance is viewed as one-time in nature and not expected to continue as the economic fallout from the pandemic settles. Over five years, the I&RR portfolio returned 9.5 per cent against the benchmark of 6.9 per cent. BCI's I&RR program will continue to seek renewable energy and sustainability-focused investments as the global demand for these assets increases.

Developments since December 31, 2021

In February 2022, Russia invaded Ukraine, resulting in a humanitarian crisis and significant economic reaction from the global community.

Prior to the invasion, BCI started selling down its holdings in Russian securities. Shortly after the invasion, trading in these securities was halted by international sanctions, trading restrictions and Russia's ban on foreigners selling Russian securities. BCI has stated publicly that it will continue to sell the remaining Russian stock as it is able to do so.

BCI recognizes that holding Russian securities in the portfolio is not aligned with its values as an organization or those of the plan and other clients.

Responsible investing

Responsible investing is a key part of the plan's investment approach and beliefs. Responsible investing means taking environmental, social and governance (ESG) factors into account when making investment decisions. These factors can be company specific, like board compensation or employee safety; they can also be widespread and systemic, like climate change, water management and data security. Both the board and BCI believe that responsible investing is a core part of understanding and managing the opportunities and risks associated with long-term investments, and to meeting the mandate to grow and protect the value of the plan's fund.

BCI considers material ESG factors in every investment decision made for the plan, and it monitors these factors throughout the life of an investment. Taking a multi-pronged approach, BCI:

- **Integrates** ESG factors together with traditional financial analysis into assessments of new investments or monitoring the portfolio
- **Influences** companies and policy makers to promote good ESG practices and policies
- **Invests** in ESG-related opportunities that have positive risk or return characteristics for the plan
- Uses ESG-related **insight** to adapt and improve its investment strategies to better support the plan's investment goals

It is important to the board that BCI collaborate with like-minded investors and organizations. BCI is a signatory to the Principles for Responsible Investment (PRI), a United Nations–supported, international network of investors that share the goal of incorporating ESG elements into the processes and activities of institutional investors. As part of this commitment, BCI takes part in an annual assessment of its responsible

BCI's *ESG Strategy* and *ESG Governance Policy*

Visit bci.ca to read these documents.

investing activities and progress on behalf of the plan. In addition, the board supports BCI in responsible investing as a member of the steering committee for the 30% Club, which advocates for companies to enhance gender diversity, and the Sustainability Accounting Standards Board, which has a mandate to promote standards of sustainability reporting.

BCI had an active 2021 on the ESG front, advancing numerous initiatives and being recognized for its business practices on behalf of the plan. For example, in December 2021, BCI tied for top spot on a global list of the most responsible asset allocators, recognizing strength in categories such as disclosure, accountability and ESG commitment. QuadReal, which manages BCI's real estate investments, also achieved top rankings in the 2021 Global Real Estate Sustainability Benchmark, a global assessment of real estate sustainability.

To learn more about BCI's responsible investing activities on behalf of the plan, visit bci.ca/ESG.

Climate change

Climate change is one of the most significant social and economic risks the world faces today. It remains a concern for the board, plan members and global investors. BCI's Climate Action Plan outlines the steps BCI is taking to manage climate change risk in the portfolio, integrate climate change information into decision making and capitalize on investment opportunities from the long-term transition to a lower-carbon economy.

As a large, long-term investor, BCI uses its influence on behalf of the plan to encourage companies and partners to be transparent about their ESG risks and to adopt best practices for corporate governance, disclosure and operations. For example, BCI participates in Climate Action 100+, an investor initiative to engage the world's largest greenhouse gas emitters in taking necessary action in the transition to a lower-carbon world in line with the goals of the Paris Agreement. Through its participation, BCI leads or co-leads engagement with North American companies in the oil and gas, and mining sectors.

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BCI also collaborates with other organizations to advance its objectives in mitigating climate change risks. These include the International Corporate Governance Network, CDP (formerly Carbon Disclosure Project) and Investor Network on Climate Risk. In October 2021, BCI joined 35 institutional investors across Canada in signing a joint statement to issuers, government and other stakeholders on the climate crisis, sending a unified message that Canadian institutional investors support the transition to a net-zero economy.

Where it is in the financial best interests of clients, BCI also seeks investment opportunities created from the global energy transition. BCI is increasing its investments in sustainable bonds, which are bonds that offer returns for the plan as well as exposure to positive environmental and social outcomes. As at December 31, 2021, BCI had cumulative historical participation of $2.5 billion in sustainable bonds and anticipates reaching $5 billion by 2025.

To learn more about BCI's ESG and Climate Action Plan activities, visit bci.ca/ESG.

Managing investment costs

BCI operates on a cost-recovery, not-for-profit basis, meaning the plan pays fees only to cover the cost of managing the investments. Managing investment costs is important to the board, and BCI's fees continue to be competitive with its peers and are much lower than those charged by investment managers in the private sector.

Investment management fees are affected by the types of assets, the plan's asset mix (what is in the portfolio) and BCI's investment strategy. Some asset classes, such as private markets that produce higher returns, require complex systems and processes, which are more expensive to manage and, in turn, affect fees. However, since BCI manages a large amount of assets, it has access to significant economies of scale when investing on behalf of the plan. Over the long term, BCI's transition to active, in-house management of funds away from more expensive external managers will also assist in reducing fees. The goal is to earn enough investment income to fulfil the plan's pension promises at reasonable cost.

Member Elaine Li, John Henderson Elementary, SD39 (Vancouver)

Actuarial valuation: The plan's report card

The actuarial valuation is the most important measurement of the plan's health. Using a series of economic and demographic assumptions, it determines how much money the plan needs to pay current and future pensions. An independent actuary—a professional with specialized training in financial modelling, laws of probability and risk management—performs the valuation at least every three years.

For the valuation, the actuary compares current assets, future contributions and investment returns against the money to be paid out in the future for pension benefits.

If the valuation shows the plan's assets are the same as or more than its liabilities, the plan is fully funded. The board then uses the Teachers' Pension Plan Joint Trust Agreement to help it weigh its options on what to do with the surplus. If the valuation shows there is a shortfall in assets, there is an unfunded liability. The board must address an unfunded liability by adjusting contribution rates for members and employers.

The most recent complete actuarial valuation, measured as at December 31, 2020, showed the plan is 105.3 per cent funded. At the time of the valuation, the plan's basic account had actuarial assets of $31.54 billion and actuarial liabilities of $29.96 billion, with a surplus of $1.58 billion.

The next valuation will be measured as at December 31, 2023, with results expected in the last quarter of 2024.

Please read this report's trustees' message for more information on the most recent valuation.

Valuation history ($ millions)
as at December 31

	Basic pension benefit surplus		
	2020	**2017**	**2014**
For funding purposes (entry-age basis)	$1,584	$644	$449
Funding ratio	105.3%	102.5%	102.0%

Tables, charts and graphs

Investment asset mix and performance (%)
as at December 31, 2021

	Approved range	Target asset mix	Actual asset weight	Rate of return	Performance benchmark
Leverage	(15)–0	(10)	(9.7)	0.2	0.2
Fixed income					
Short-term	0–10	2	2.3	0.0	(0.3)
Government bonds	5–35	26	25.3	(2.8)	(2.5)
Credit	0–20	14	11.2	4.3	2.6
Mortgages	0–10	4	2.8	4.7	1.9
	15–60	**46**	**41.6**	**(0.7)**	**(1.3)**
Equity					
Canadian equities	0–10	3	3.1	25.7	25.1
Global equities	5–30	13	18.7	19.1	20.6
Emerging markets	0–10	4	5.4	(0.9)	(3.4)
Private equity	5–25	13	14.3	30.6	19.5
	25–55	**33**	**41.5**	**20.9**	**16.8**
Real estate	**10–25**	**17**	**15.9**	**14.5**	**6.8**
Infrastructure and renewable resources	**5–20**	**14**	**10.4**	**12.4**	**6.6**
Other	**0–5**	**0**	**0.3**	**—**	**—**
Total asset mix		**100**	**100.0**	**11.6**	**8.4**

Investment performance (%)
year ended December 31, 2021

	Market value	Rates of return
	Investment returns	Performance benchmark
Annual rates		
2021	**11.6**	**8.4**
2020	10.7	11.2
2019	13.0	13.1
2018	2.3	0.8
2017	11.8	10.5
Five-year annualized rates		
2021	**9.9**	**8.7**
2020	8.7	8.3
Ten-year annualized rated		
2021	**10.1**	**8.8**
2020	9.2	8.1

Five-year financial summary ($ millions)
year ended December 31

	2021	**2020**	**2019**	**2018**	**2017**
Increase in assets					
Investment income	**$ 4,071**	$ 3,392	$ 3,712	$ 720	$ 3,038
Contributions					
Members	**401**	384	365	404	381
Employers	**404**	387	368	413	392
Transfers from other plans	**10**	11	6	6	10
Total increase in assets	**4,886**	4,174	4,451	1,543	3,821
Decrease in assets					
Pension benefits	**1,318**	1,293	1,248	1,203	1,166
Transfers to other plans	**11**	6	3	9	7
Investment and administration costs[1]	**72**	95	64	81	61
Total decrease in assets	**1,401**	1,394	1,315	1,293	1,234
Increase in net assets	**3,485**	2,780	3,136	250	2,587
Net assets available for benefits at beginning of year	**34,282**	31,502	28,366	28,116	25,529
Net assets available for benefits at end of year	**$37,767**	$34,282	$31,502	$28,366	$28,116
Investment and administration costs as a percentage of net assets (%)[1, 2]					
Investment management[1, 2]	**0.31**	0.37	0.35	0.35	0.29
Benefits administration	**0.05**	0.05	0.05	0.05	0.05

1 Investment costs as a percentage of net assets include certain external investment management costs totalling 51.2 million (2020—$36.9 million; 2019—$55.7 million; 2018—$32.0 million; 2017—$28.7 million) that are netted against investment income; they are not included in investment and administration costs in the financial statements.

2 Investment costs as a percentage of net assets exclude external indirect investment management costs netted against investment income on the statement of changes in net assets available for benefits. This is consistent with current industry practice; including these costs using the budgeted amount would have increased investment management costs as a percentage of net assets by an estimated 34 basis points in 2021. External indirect investment management costs include limited partnership management fees and other fees principally incurred within investments held in the private equity, infrastructure and global real estate asset classes.

Investments held
as at December 31, 2021

	Market value ($ millions)	Asset mix market value (%)
Short-term		
Money market	**$ 851**	**2.3**
Leverage	**(3,658)**	**(9.7)**
Bonds		
Government bonds	5,651	15.0
Leverage bond fund	3,889	10.3
	9,540	**25.3**
Credit		
Corporate bond fund	2,640	7.0
Principal credit	1,599	4.2
	4,239	**11.2**
Mortgages	**1,064**	**2.8**
Canadian equities		
Indexed	611	1.6
Active	554	1.5
	1,165	**3.1**
Global equities		
Global indexed	2,025	5.4
Global active	5,013	13.3
	7,038	**18.7**
Emerging markets	2,048	5.4
Real estate[1]	**5,995**	**15.9**
Private equity[1]	**5,385**	**14.3**
Infrastructure and renewable resources	**3,911**	**10.4**
Centralized currency management	**10**	**0.0**
Cash and unsettled trades	**130**	**0.3**
Total investments	**37,718**	**100.0**
2020 comparison	$34,266	

1 Asset classifications vary from the financial statements for the purpose of performance reporting on strategic investments and infrastructure.

Member Sonia Jagpal, John Henderson Elementary, SD39 (Vancouver)

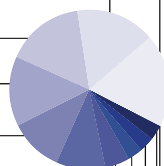
Top 25 security holdings[1]
total public equity exposure—worldwide

Security	% of portfolio calculated	% of public equity calculated	Total exposure ($ millions)
Microsoft Corp	0.8	2.8	$ 291
Apple Inc	0.6	2.4	241
Taiwan Semiconductor Manufacturing Co Ltd	0.5	1.9	193
Alphabet Inc	0.4	1.5	155
Amazon.com Inc	0.4	1.3	134
Samsung Electronics Co Ltd	0.3	1.3	130
Tencent Holdings Ltd	0.3	1.0	106
UnitedHealth Group Inc	0.2	0.9	91
Mastercard Inc	0.2	0.8	85
Tesla Inc	0.2	0.7	73
Royal Bank of Canada	0.2	0.7	70
Shopify Inc	0.2	0.7	69
Meta Platforms Inc	0.2	0.6	67
Toronto-Dominion Bank	0.2	0.6	66
NVIDIA Corp	0.2	0.6	64
Iberdrola SA	0.2	0.6	60
Alibaba Group Holding Ltd	0.2	0.6	60
Siemens AG	0.2	0.6	60
SAP SE	0.2	0.6	58
Fidelity National Information Services Inc	0.2	0.6	57
CVS Health Corp	0.1	0.5	55
NIKE Inc	0.1	0.5	54
LVMH Moet Hennessy Louis Vuitton SE	0.1	0.5	53
Fraport AG Frankfurt Airport Services Worldwide	0.1	0.5	53
SK Hynix Inc	0.1	0.5	53
Total top 25	**6.4**	**23.3**	**$ 2,398**
Total public equity			**$10,251**
Total portfolio			**$37,718**

1 Company regional exposures are based on pool fund asset class designations, following the Statement of Investment Policy and Procedures.

Investment holdings—market value
($ billions)
as at December 31, 2021

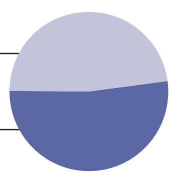
Global equities	7.0	19%
Real estate	6.0	16%
Bonds net of leverage	5.9	16%
Private equities	5.4	14%
Credit	4.2	11%
IRR[1]	3.9	10%
Emerging markets	2.0	5%
Canadian equities	1.2	3%
Mortgages	1.1	3%
Short-term	0.9	3%
Other	0.1	0%



1 Infrastructure and renewable resources

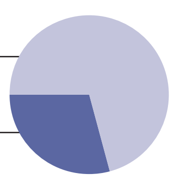
Canadian equities (%)
market value as at December 31, 2021

Actively managed	48
Indexed	52



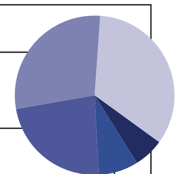
Global equities (%)
market value as at December 31, 2021

Actively managed	71
Indexed	29



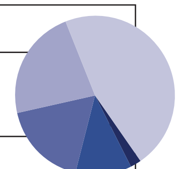
Domestic real estate, by type (%)
as at December 31, 2021

Residential	34
Office	29
Industrial	23
Alternatives	8
Retail	6



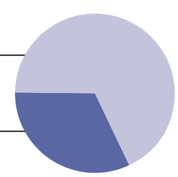
Real estate, by location (%)
as at December 31, 2021

International	49
Ontario	22
British Columbia	17
Alberta	10
Rest of Canada	2

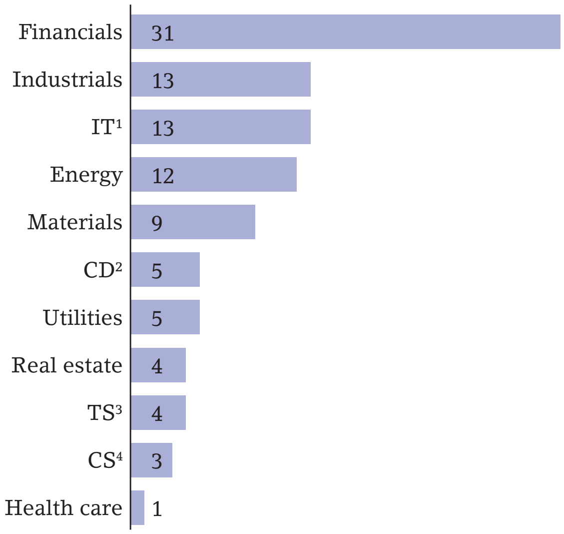


Bonds (%)
market value as at December 31, 2021

Government	68
Corporate	32

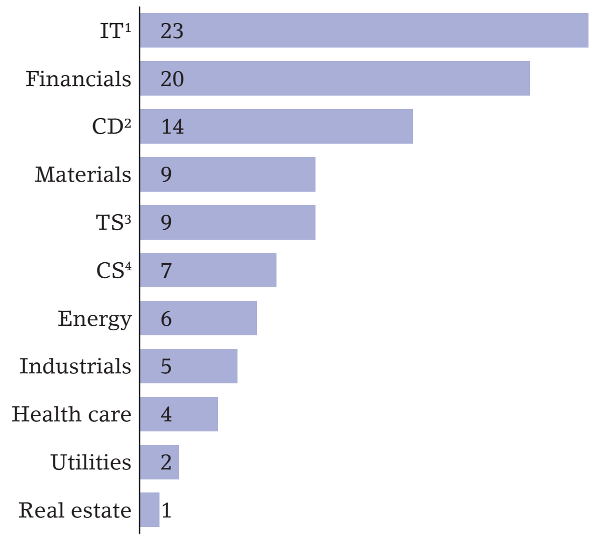


Canadian equities, by sector (%)
as at December 31, 2021



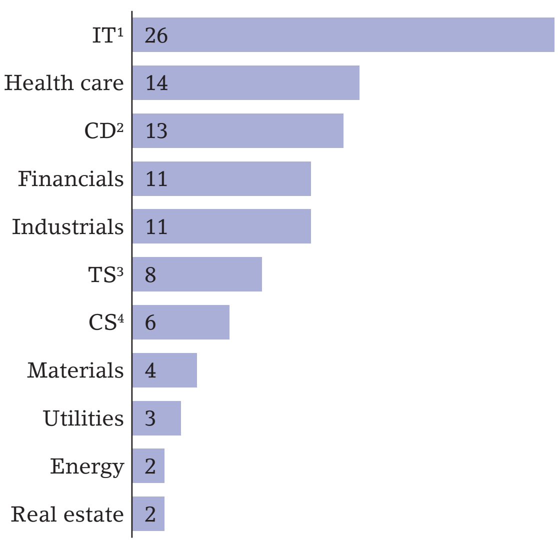
1 Information technology
2 Consumer discretionary
3 Telecommunication services
4 Consumer staples

Emerging markets equities, by sector (%)
as at December 31, 2021



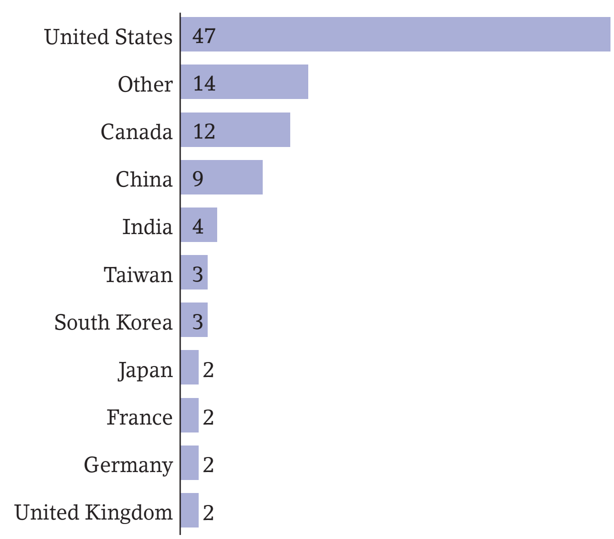
1 Information technology
2 Consumer discretionary
3 Telecommunication services
4 Consumer staples

Global equities, by sector (%)
as at December 31, 2021

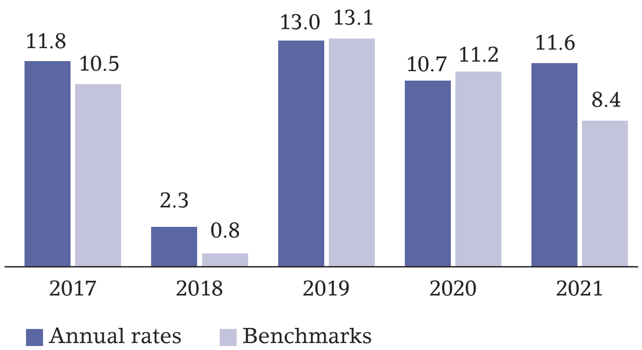


1 Information technology
2 Consumer discretionary
3 Telecommunication services
4 Consumer staples

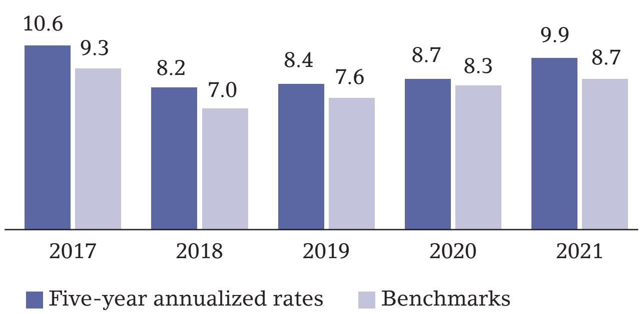
Equity exposure, by region (%)
as at December 31, 2021



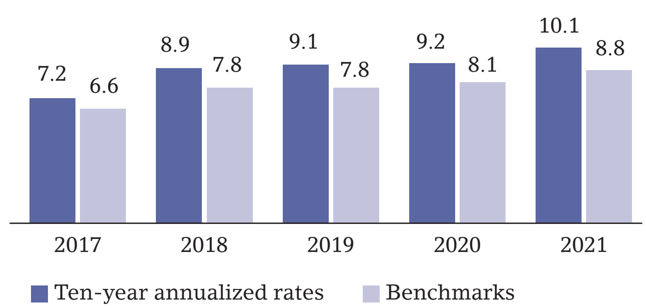
Annual rates of return vs. benchmarks (%)



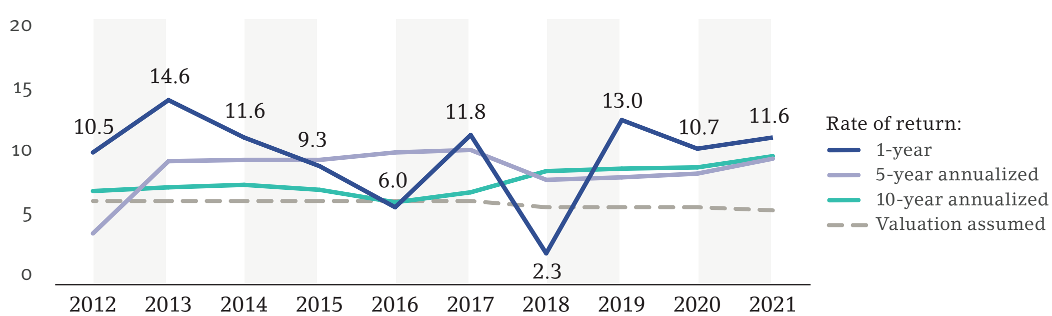
Five-year annualized rates of return vs. benchmarks (%)



Ten-year annualized rates of return vs. benchmarks (%)



Investment returns (%)
Ten-year history



Who we are

The Teachers’ Pension Board of Trustees

The board is made up of trustees appointed by the employer partner (Province of British Columbia) and the member partner (BC Teachers’ Federation). The board appoints a chair and vice-chair.

The board’s mission is “To provide retirement income to plan members by effectively and efficiently meeting the pension promise and fulfilling the joint trust placed on us by the Plan Partners.”

As part of its responsibilities, the board appoints directors to the boards of British Columbia Investment Management Corporation (BCI), which provides investment management services, and British Columbia Pension Corporation, which provides pension administration services.

Meet the trustees

as at December 31, 2021

Rob Taylor, chair
Appointed by: British Columbia Teachers’ Federation
Committees: Benefits and communications, executive forum, interplan audit, interplan coordination, interplan investment, interplan trustee education
Appointed in 2015

Reg Bawa, vice-chair
Appointed by: Province of British Columbia
Committees: Governance
Appointed in 2010

Elizabeth Baverstock
Appointed by: British Columbia Teachers’ Federation
Boards: BC Pension Corporation Board of Directors
Committees: Benefits and communications
Appointed in 2018

Cheryl Eason
Appointed by: Province of British Columbia
Boards: BC Pension Corporation Board of Directors
Committees: Governance (chair), interplan investment
Appointed in 2018

Chung Yan Ip
Appointed by: British Columbia Teachers' Federation
Committees: Benefits and communications (chair), governance
Appointed in 2011

Lynda Reeve
Appointed by: Province of British Columbia
Appointed in 2020

Leslie Roosa
Appointed by: British Columbia Teachers' Federation
Committees: Benefits and communications, governance
Appointed in 2019

Chris Skillings
Appointed by: Province of British Columbia
Appointed in 2021

Ken Tannar
Appointed by: British Columbia Teachers' Federation
Boards: BCI Board of Directors
Committees: Benefits and communications, governance, interplan trustee education
Appointed in 2008

Hilary Woodward
Appointed by: Province of British Columbia
Committees: Interplan audit (vice-chair)
Appointed in 2019

Trustee remuneration

The plan compensates trustees or their employers for time spent on board business. Guidelines and rates are set out in the board's remuneration policy. Under the policy, remuneration may be adjusted annually by an amount equal to the cost-of-living adjustment made to pension payments.

Trustee remuneration
year ended December 31, 2021

Board member	Meeting days	Per diem	Annual stipend	Chair and vice-chair remuneration	Total payments	Paid to
Rob Taylor (chair)	53.0	$22,683.00	$4,280.00	$4,280.00	$31,243.00	Board member
Reg Bawa (vice-chair)	27.0	11,556.00	4,280.00	2,140.00	17,976.00	Minister of Finance
Elizabeth Baverstock	20.5	8,774.00	4,280.00		13,054.00	Richmond Teachers' Association
Cheryl Eason	23.0	9,844.00	4,280.00		14,124.00	Royal Roads University
Chung Yan Ip	19.5	8,346.00	—		8,346.00	BC Teachers' Federation
	—	—	4,280.00		4,280.00	Board member
Lynda Reeve	19.0	8,132.00	—		8,132.00	Surrey School District
	—	—	4,280.00		4,280.00	Board member
Leslie Roosa	20.0	11,984.00	—		11,984.00	BC Teachers' Federation
	—	—	4,280.00		4,280.00	Board member
Chris Skillings[1]	7.0	2,996.00	1,070.00		4,066.00	Minister of Finance
Ken Tannar	29.0	12,412.00	4,280.00		16,692.00	Board member
Brad Underwood[2]	14.0	5,992.00	2,140.00		8,132.00	Public Sector Employers' Council Secretariat
	3.5	1,498.00	1,070.00		2,568.00	Board member
Hilary Woodward	12.0	5,136.00	4,280.00		9,416.00	Legislative Assembly of British Columbia
Total		**$109,353.00**	**$42,800.00**	**$6,420.00**	**$158,573.00**	

1 Term started September 2021
2 Term ended September 2021

Trustee activities

In 2021, the board held seven meetings, virtually and in person, over 12 days. Trustees also participated in standing and ad hoc committees. In-person educational and conference activities were curtailed due to the pandemic.

Teachers' Pension Board of Trustees committees

Benefits and communications committee

This committee provides advice and recommendations to the board on benefits and communications issues, and makes decisions under authority delegated by the board. It meets to address the following:

- Post-retirement group benefits
- Plan rule amendments
- Reciprocal transfer agreements
- Communications products, including *Report to Members* for active members, *Pension Life* for retired members and the *Annual Report*.

This committee met three times in 2021. In addition, a subcommittee of the committee met five times.

Governance committee

This committee assists the board in fulfilling its governance responsibilities by considering:

- Board policy development and review
- Risk management review
- Board strategic planning mechanisms
- Development of the board's assessment tools
- Succession planning
- Any other item referred by the board

This committee met three times in 2021. In addition, a subcommittee of the committee met five times.

Interplan committees and forums

Interplan committees and forums address issues common to the four BC public sector pension plans: Teachers' Pension Plan, College Pension Plan, Municipal Pension Plan and Public Service Pension Plan. Members are made up of trustees from three or four of these pension plans (some committees do not include the Municipal Pension Plan).

Executive forum

This forum is designed to share areas of common interest among the Teachers', College, Municipal and Public Service pension plans, and provides an opportunity for plan board chairs, vice-chairs and senior administrators to keep up with the activities of the boards.

The forum met twice in 2021.

Interplan audit committee
This committee meets on behalf of the Teachers', College, Municipal and Public Service pension boards of trustees to help provide the following:

- A timely and cost-effective system of accounting and reporting
- Financial statements consistent with Canadian accounting standards for pension plans
- An independent audit of the financial statements
- An annual report with audited financial statements

The forum met three times in 2021.

Interplan coordination committee
This committee facilitates communication to ensure that the College, Public Service and Teachers' pension boards of trustees meet their common governance and operational requirements. Additionally, it oversees the operation of Pension Board Secretariat.

This committee met four times in 2021.

Interplan investment committee
This committee examines investment issues common to the Teachers', College and Public Service pension boards of trustees. It makes recommendations to each board on generic investment policy and procedure statements, and on investment issues identified by a board, BCI or the committee itself. It considers:

- Investment industry trends
- Regulatory and legal developments
- Responsible investing issues
- Asset class reviews
- Updates on capital markets
- New investment products

This committee met four times in 2021.

Interplan trustee education committee
This committee allows the Teachers', College, Municipal and Public Service pension boards of trustees to develop trustee knowledge and skills, work together on common educational issues and provide information on trends in a variety of jurisdictions (e.g., benefits, pensions, investments). This group organizes the annual BC Public Sector Pension Conference.

This committee met three times in 2021.

Retired member Bob Chown

Agents and service providers

British Columbia Investment Management Corporation (BCI)
BCI provides investment management services on behalf of the board. BCI is one of Canada's largest investment managers, with a portfolio of $200 billion as at March 31, 2021. It offers investment options across a range of asset classes, including infrastructure, renewable resources and long-term strategic themes.

British Columbia Pension Corporation
The corporation provides professional pension services for the plan on behalf of the board. One of Canada's largest pension service providers, the corporation serves the largest public sector pension plans in British Columbia, representing more than 650,000 members and their employers. Services include providing plan information to members and employers, managing contributions and member records, paying pensions, and providing policy, financial and communication services to the board.

Eckler Ltd.
Eckler serves as the plan's independent actuary. It conducts an actuarial valuation on the plan's funding every three years and supports the board in its decision making as appropriate. The results of the next valuation, as at December 31, 2023, will be published in late 2024 or early 2025.

Green Shield Canada
Green Shield Canada provides retired plan members access to voluntary group extended health care and dental coverage.

KPMG LLP
KPMG provides external audit services to the plan.

Lawson Lundell LLP
Lawson Lundell is the plan's legal counsel.

Pension Board Secretariat
Pension Board Secretariat, a branch within BC Pension Corporation, provides day-to-day professional and operational support to help the board meet its governance and fiduciary obligations.

Willis Towers Watson
Willis Towers Watson is the board's benefits advisor.

Plan details

How a pension is built

The foundation of member pensions: Contributions
Members and employers both make contributions to the Teachers' Pension Plan.

Contributions are automatically deducted from a member's pay and sent directly to the plan along with employer contributions.

Contributions are based on a percentage of salary (shown below, effective since January 1, 2019):

› Members contribute 11.17 per cent of salary.
› Employers contribute 11.30 per cent of salary.

An independent actuary regularly monitors the plan's financial health. If the actuary finds that contributions are insufficient to pay current and future benefits, they will recommend increased contributions.

When the member and employer contributions are received by the plan, they are pooled and invested.

Building up: Pensions grow
British Columbia Investment Management Corporation (BCI), the plan's investment management agent, determines how best to invest the plan's assets within guidelines determined by the plan's board of trustees. These guidelines include environmental, social and governance factors.

BCI's relatively low fees (about 0.3 per cent of net assets) help maximize the amount of money going toward pensions.

Over time, long-term investments form the basis of the plan's financial health, making up the largest portion of the money needed to pay pensions. About 75 per cent of a member's pension is generated from investments.

Ready to retire: Calculating the pension
The plan provides members a defined benefit pension calculated based on:

› Years of pensionable service
› The average of the member's five highest years of salary (not necessarily the last five years)

The monthly pension payment the member receives also depends on factors that include:

› The member's age at retirement and, if applicable, their spouse's age
› The pension option they choose on retirement

Members receive a pension for their lifetime.

After a member dies, depending on the pension option they chose at retirement, the plan may continue to pay:

- A pension to the member's spouse (if the member has one)
- Pension benefits to other beneficiaries
- A lump-sum payment to the member's estate or an organization the member has named as their beneficiary

Learn more about benefits for active and retired members starting on page 32.

Why the plan is valuable

Beyond providing more than 100,000 education professionals a secure, predictable lifetime retirement income now and in the future, the plan is valuable to members and employers for many other reasons.

Ability to increase the pension
When a member goes on an approved leave of absence, they can buy the service for the leave, meaning they can increase their pension, which may allow them to retire earlier.

An impressive return on contributions
The average retired member receives far more in pension payments than they contribute (interest included) during their teaching career.

Protection for loved ones
Depending on the pension option chosen, a pension may continue to the member's spouse or beneficiaries after the member dies.

Portability
Members can move seamlessly between any of the employers in the plan with no effect on their pension. They may also be able to transfer service into and out of pension plans in other Canadian jurisdictions.

A strong recruitment and retention tool
By offering a defined benefit pension, plan employers have a powerful tool to recruit new teachers; the employer becomes an employer of choice.

Intergenerational fairness
Member lifetime pensions are pre-funded; the plan is designed fairly to ensure each generation pays in advance for its own benefits

Tables, charts and graphs

Average and median value of pensions in pay[1]
as at December 31, 2021

Average value[2]	$31,764
Median value[3]	$31,856

1 Includes bridge benefit for those receiving the pension before age 65.
2 The average value reflects the total value of all pensions paid by the plan divided by the total number of recipients in the plan.
3 The median value denotes the halfway point: half of the pensions paid by the plan are more than this amount and half are less.

Contribution rates as a percentage of salary
Flat rate on all salary (%)

	Effective January 1, 2018	Effective January 1, 2019
Member	12.92	11.17
Employer	13.23	11.30
Total	**26.15**	**22.47**

Pensions 2012–2021
year ended December 31

	New pensions during year	Pension terminations	In force at end of year	$ millions Basic pensions paid	Inflation supplements paid	Total pensions paid
2021	**1,335**	**665**	**40,473**	**$ 1,038.6**	**$ 237.5**	**$ 1,276.1**
2020	1,258	601	39,803	1,014.3	239.8	1,254.1
2019	1,290	609	39,146	991.9	224.6	1,216.5
2018	1,333	438	38,465	969.9	206.0	1,175.9
2017	1,586	526	37,570	938.9	194.9	1,133.8
2016	1,518	607	36,510	906.2	187.8	1,094.0
2015	1,432	488	35,599	877.4	184.2	1,061.6
2014	1,687	482	34,655	846.7	171.4	1,018.1
2013	1,651	363	33,450	810.9	167.4	978.3
2012	1,544	365	32,162	773.6	162.3	935.9

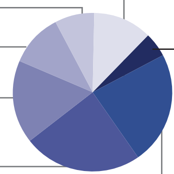
Average value of new pensions[1]
year ended December 31, 2021

Service (years)	Total new pensions	Average annual salary base	Average annual pension	Median annual pension	Average lifetime annual pension	Median lifetime annual pension
< 10	161	$71,000	$ 6,500	$ 5,900	$ 4,900	$ 4,000
10 < 15	106	81,000	17,900	17,500	13,800	14,000
15 < 20	152	87,000	27,600	27,300	21,400	20,900
20 < 25	230	89,000	36,100	35,800	28,300	28,100
25 < 30	318	91,000	46,900	46,600	36,100	35,200
30 < 35	303	97,000	58,200	56,300	45,700	43,500
≥ 35	65	102,000	60,800	57,200	54,600	48,800
Total	**1,335**					
Average		**$89,000**	**$38,900**	**$39,700**	**$30,600**	**$30,500**

1 Average value reflects the total value of new pensions granted during the year divided by the total number of recipients—in the case of median pensions, half of retirees receive more than this amount and half receive less; pensions started before age 65 typically include a bridge benefit, which ends at age 65.

New pension recipients, by years of service (%)
year ended December 31, 2021

< 10 years	12
10 < 15 years	8
15 < 20 years	11
20 < 25 years	17
25 < 30 years	24
30 < 35 years	23
≥ 35 years	5



New pensions, by age at retirement
year ended December 31, 2021

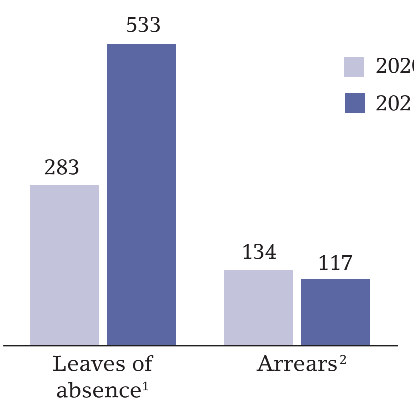
Years of service	< 55	55 < 60	60 < 65	≥ 65	Total
< 10	6	52	52	51	**161**
10 < 15	5	34	37	30	**106**
15 < 20	0	65	56	31	**152**
20 < 25	5	90	83	52	**230**
25 < 30	2	138	146	32	**318**
30 < 35	1	159	113	30	**303**
≥ 35	0	7	25	33	**65**
Total	**19**	**545**	**512**	**259**	**1,335**
Average years of service					
Male	11	25	25	24	
Female	17	24	23	21	
Average	**16**	**24**	**24**	**22**	**23**
Average age at retirement					**61**

New pensions, by type 2012–2021
year ended December 31

	Regular	Limited members	Survivor	Disability	LTD[1] to pension	Deferred	Total
2021	**1,055**	**40**	**13**	**–**	**88**	**139**	**1,335**
2020	989	28	15	–	83	143	1,258
2019	1,033	34	15	–	82	128	1,290
2018	1,080	38	17	–	82	116	1,333
2017	1,317	49	16	–	98	106	1,586
2016	1,256	36	12	–	92	122	1,518
2015	1,148	50	13	1	114	106	1,432
2014	1,421	54	13	–	108	91	1,687
2013	1,334	70	13	–	113	121	1,651
2012	1,278	37	19	1	117	92	1,544

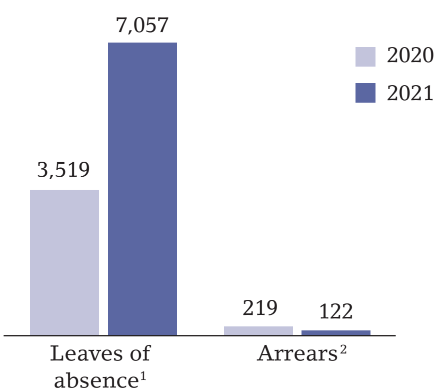
1 Long-term disability

Number of purchases of service
year ended December 31



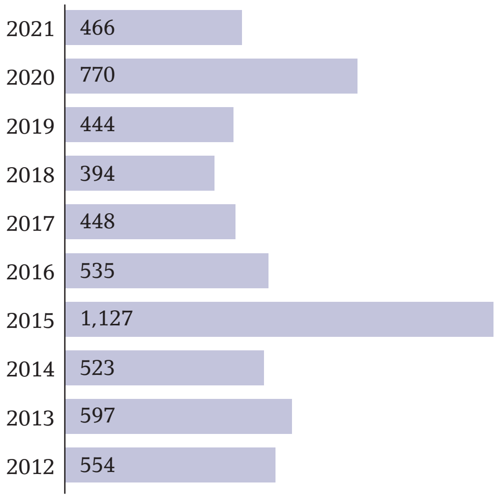
1 A leave of absence is an employer-approved absence from work.
2 Arrears occur when contributions should have been made on a member's behalf but were not.

Value of purchases of service
($ thousands)
year ended December 31



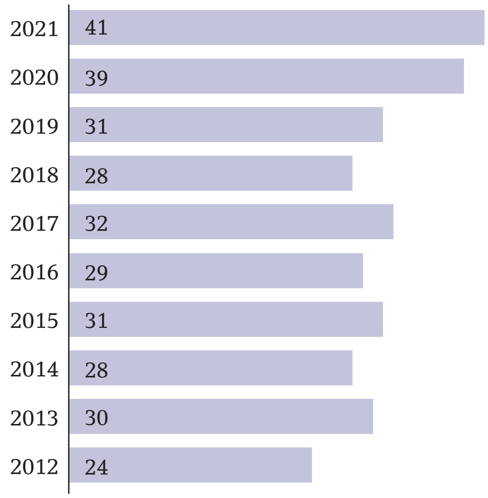
1 A leave of absence is an employer-approved absence from work.
2 Arrears occur when contributions should have been made on a member's behalf but were not.

Number of termination and refund benefits[1] paid[2]
year ended December 31



1 A member who ends their participation in the plan may, if eligible, choose to receive a refund or termination benefit.
2 Includes death benefits paid.

Value of termination and refund benefits[1] paid[2] ($ million)
year ended December 31



1 A member who ends their participation in the plan may, if eligible, choose to receive a refund or termination benefit.
2 Includes death benefits paid.

Plan membership and services

Eligibility for membership

Plan membership is open to the following:

- Members of:
  - BC Principals' and Vice-Principals' Association
  - BC School Superintendents Association
  - BC Teachers' Federation
- Associated professionals appointed by a board of education in BC's public school system
- Eligible employees of employers approved by the board

New employees are immediately enrolled in the plan and cannot opt out.

Member types

Active members

Active members are those currently contributing to the plan, on an approved leave of absence or receiving benefits from an approved long-term group disability plan. There are 50,031 active members in the plan—a 1.4 per cent increase from 2020.

Inactive members

Members in this group have ended their employment with a plan employer but have chosen to leave their contributions in the plan and therefore are entitled to receive a benefit from the plan in the future. They may return to work for a plan employer, make contributions and accrue additional service. There are 12,714 inactive members in the plan—a 2.1 per cent increase from 2020.

Retired members

Retired members are those receiving a pension, including a survivor pension. For the purposes of this report, members receiving disability benefits from the plan are also counted in this group. There are 40,073 retired plan members—a 1.7 per cent increase from 2020.

Limited members

Former spouses of plan members fall into this category. Limited members are entitled to a portion of the plan member's pension. A person must apply to become a limited member, whereas enrolment in other membership types is automatic. Limited members are included in the retired members total if they are receiving a pension.

Retired member Maria Luisa Di Tomasco

Benefits for members

Basic lifetime pension benefit

The Teachers' Pension Plan is a defined benefit pension plan. Each time a member is paid their salary, both the member and employer contribute to the plan. These contributions are pooled and invested so that members receive a lifetime monthly pension when they retire.

Bridge benefit

Members who retire before age 65 may receive a temporary monthly payment called a bridge benefit. The bridge benefit is earned on pensionable service accumulated in the plan up to and including December 31, 2017.

This benefit is designed to bridge the gap between early retirement income and income after the member turns 65, which may also include Canada Pension Plan and old age security (OAS). The bridge benefit ends when the member turns 65 or dies, whichever happens first.

Pensionable service earned on or after January 1, 2018, does not add to a member's bridge benefit. Changes to the formula used to calculate pensions converted the bridge benefit to a lifetime pension benefit. This means members will receive a higher lifetime pension, since there is no bridge benefit that will stop at age 65.

Cost-of-living adjustments

Cost-of-living adjustments (COLAs) help retired members' pensions keep pace with increases in the cost of living.

COLAs are granted subject to available funds in the inflation adjustment account (IAA); they are not guaranteed.

Both member and employer contributions, and the investment income on those contributions, fund the IAA.

Once a COLA is granted to retired members, it becomes part of their lifetime pension.

The board is dedicated to ensuring COLAs are sustainable over the long term to equitably support all members—past, present and future.

Traditionally, COLAs have been granted for the full consumer price index (CPI) increase each year. However, the board may grant a COLA that is lower than the CPI increase.

COLAs add up over time. For example, if a member started receiving an annual pension of $25,000 in 2001, their annual pension in 2021 would be $35,654 because of COLAs approved by the board.

Access to post-retirement group benefits

The plan provides access to group coverage, including extended health and dental care. Coverage is not guaranteed. This means the board may change coverage at any time.

Temporary annuities

If a member retires before age 65, they may choose a temporary annuity to top up their pension. A temporary annuity increases a member's monthly payment until they reach age 65 or their death, whichever comes first. A temporary annuity reduces a member's lifetime pension after age 65.

There are a few reasons a member may choose a temporary annuity:

- Buying a temporary annuity may help members meet the initial expenses of retirement, such as paying off a mortgage.
- For those with significant taxable assets such as RRSPs, a temporary annuity can help lower income after age 65 and therefore reduce tax on income.

Members must remember:

- A temporary annuity reduces lifetime pensions. The younger the member is when they retire, the bigger the impact on their pension after age 65.
- A reduced lifetime pension might have a significant impact on a member's spouse or dependants.
- The temporary annuity amount is based on the maximum OAS benefit. Amounts may change from year to year to reflect fluctuations in the OAS, but payments will remain stable from the member's retirement date onwards.

Termination and refund benefits

A member who leaves the plan but has not yet reached the earliest retirement age may choose to do one of the following:

- Defer their pension. A member can keep their pension contributions with the plan until their earliest retirement age or later. With a deferred pension, members may receive inflation adjustments and access to group extended health care and dental coverage. Although these benefits are not guaranteed, members may be able to take advantage of them when they eventually apply for their pension.
- Transfer the commuted value of their pension to a locked-in retirement vehicle, such as a registered pension plan or a life income fund. The commuted value is the amount of money that would need to be set aside to pay for the member's future pension when they retire.

A member who leaves the plan and has reached the earliest retirement age may choose to take an immediate pension (which may be reduced) at any time. A member who leaves the plan with enough service to receive an unreduced pension will see no financial benefit to leaving their money with the plan.

Service purchases
Members may be able to increase their future pension by buying service—which means paying for periods of employment not already counted as service with the plan.

Examples include:

- Leaves of absence (such as maternity, parental, COVID-19-related and general leaves)
- Arrears contributions (occurring if a member was not enrolled properly or if their contributions were not deducted and remitted)
- Non-contributory service (employment service with a plan employer from before an employee became a member)

Depending on the type of service they choose to buy, members may be responsible for paying both the employee and employer portions, or just the employee portion. For more information on buying service, visit the plan website.

Services and communications

Plan website and My Account
The plan website provides the resources and tools that members need to better understand their plan and make informed decisions about their pension.

The most important part of a member's online experience is My Account: a secure online portal where members can review and update their personal pension information. My Account offers members personalized pension and purchase cost estimators to help with their planning, service and salary summaries, the ability to update their beneficiary information and the ability to apply for their pension online once they are ready to retire.

Members can update their personal information including address, telephone number and spousal information. Members also have access to Message Centre, allowing them to send secure messages to the pension plan.

Some recent service additions include giving member and non-members the ability to:

- **Report a death:** This new service allows anyone to report a death of a plan member by filling out and submitting an easy-to-use online form.
- **Submit an entitlement claim:** A former spouse of a plan member may want to claim their share of the pension and share the information about the pension with others, such as a lawyer. The plan's new digital service allows former spouses to do that by filling out and submitting an online form.
- **Apply for limited member status:** A former spouse of a plan member wanting to receive their share of the member's pension directly can now do that by filling out and submitting an online form.

Pension communications

In addition to communications through the website and My Account, active and retired members can choose to receive newsletters, reports and statements digitally or in print. Special ad hoc bulletins are distributed to active members through their employer.

Member services

When members need more personalized support, the plan has staff available by phone and through Message Centre to assist with issues like marital breakdowns, the death of a spouse, retirement planning questions, employment transfers and more.

Online courses and webinars

Online educational resources for plan members include the introductory course *Getting to Know Your Pension, Making the Most of Your Pension* and *Approaching Retirement. Making the Most of Your Pension* and *Approaching Retirement* are also offered as instructor-led webinars. Designed to help educate members at all career stages, these online courses and webinars make important information available to members at their convenience.

Employers

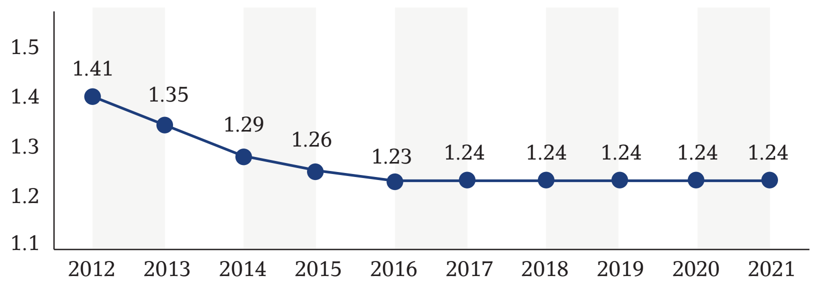
The following are the plan employers:

- School districts, including the Conseil scolaire francophone de la Colombie-Britannique
- BC Principals' and Vice-Principals' Association
- BC Public School Employers' Association
- BC School Superintendents Association
- BC Teachers' Federation
- Teacher Qualification Service (BC)

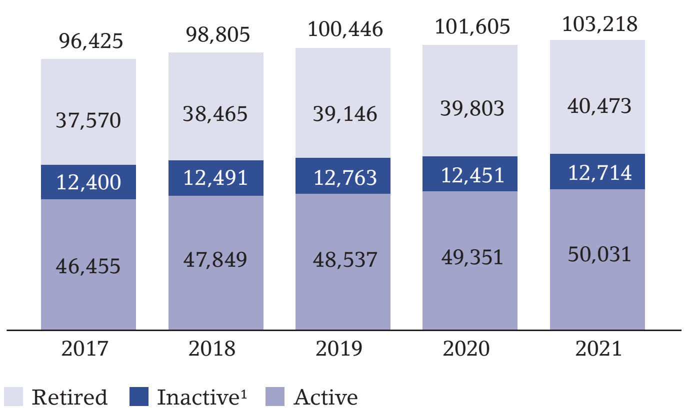
Retired member Jeannine Silvestrone

Tables, charts and graphs

Ratio of active to retired members
as at December 31

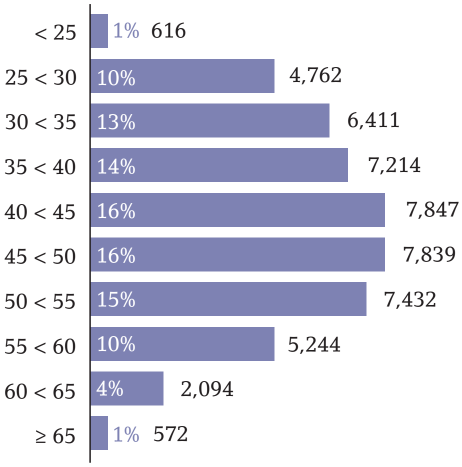


Number of members
as at December 31

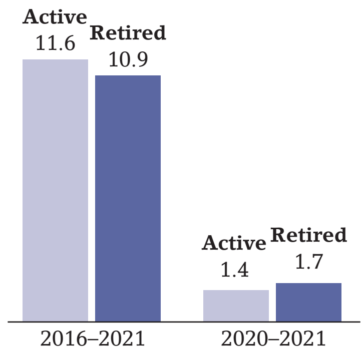


1 Members no longer employed with a plan employer but with money in the plan

Active members, by age
as at December 31, 2021

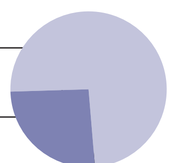


Membership growth, active versus retired (%)



Active members, by gender
as at December 31, 2021

Female	37,220	74%
Male	12,803	26%
X[1]	8	<1%
Total	**50,031**	

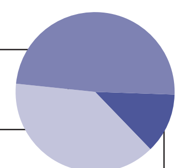


1 People who do not identify as female or male

Members who would like to identify as gender X should tell their employer who will pass this information on to the plan.

Membership profile
as at December 31, 2021

Active	50,031	49%
Retired	40,473	39%
Inactive[1]	12,714	12%
Total	**103,218**	



1 Members no longer employed by a plan employer but with money in the plan

Plan rule changes

Administrative changes and policy updates in 2020 and 2021

Removal of limited member application fee

Effective April 1, 2021

The fee to apply to be a limited member was removed. Limited members are the former spouses of plan members who are entitled to a portion of the plan member's pension.

New option for buying service

Effective May 1, 2020

The plan rules have been amended to allow members to make pension contributions during an approved leave of absence under the *Employment Standards Act* (ESA). Members can now either make pension contributions during their ESA leave or buy back service in a lump sum after the leave.

New leave types for COVID-19 and personal illness or injury reasons

Effective March 23, 2020

The ESA was amended on March 23, 2020, to allow leaves for personal illness or injury, and for COVID-19-related reasons. If members need to take leave for any of these reasons, they can now buy the service for that time.

Further amendments for leaves related to COVID-19 were made to the ESA in April and May 2021.

In addition, several administrative changes were made. Members and employers are not directly affected by these changes:

- A portion of member and employer **contributions have shifted from the inflation adjustment account to the rate stabilization account** (RSA). The plan uses funds in the RSA to help mitigate significant increases to contribution rates that may result from future valuations. There is no change to total contributions. This change was approved June 28, 2021, and made effective retroactive to January 1, 2020.
- Changes to the plan's **commuted value methodology** were approved June 15, 2021, effective retroactive to December 1, 2020.
- Administrative work was completed to reflect changes to the Income Tax Regulations **expanding member eligibility to purchase service** for periods of reduced pay for 2020 and 2021.

Financial statements

BC PENSION
CORPORATION

June 6, 2022

Re: Teachers' Pension Plan

Administrative agent's responsibility for financial reporting

The financial statements of the Teachers' Pension Plan were prepared by British Columbia Pension Corporation, the administrative agent for the Teachers' Pension Board of Trustees in accordance with Canadian accounting standards for pension plans. The Board is responsible for approving the Plan's financial statements. The Board is assisted by the Interplan Audit Committee, which is made up of representatives from the Public Service, Municipal, Teachers' and College pension boards of trustees. As part of its responsibility, the Committee reviews the financial statements, and performs steps and procedures, as necessary, prior to recommending them to the Board for approval.

Pension Corporation prepares the financial statements and is responsible for the integrity and fairness of the data presented, including significant accounting judgments and estimates. This responsibility includes selecting appropriate accounting policies consistent with Canadian accounting standards for pension plans. In discharging its responsibility, Pension Corporation maintains a system of internal controls designed to provide reasonable assurance that transactions are properly authorized, reliable financial records are maintained, and assets are adequately safeguarded, ensuring the fair presentation of the financial statements. Pension Corporation has assessed that the Plan will continue as a going concern, and ensured that other financial information contained in the Teachers' Pension Plan *Annual Report* is consistent with these financial statements.

The Board appointed KPMG LLP as the independent auditor to the Plan. The role of the auditor is to perform an independent audit of the financial statements of the Plan in accordance with Canadian generally accepted auditing standards. The resulting audit opinion is set out in the independent auditors' report attached to these financial statements.

Trevor Fedyna, CPA, CGA, C. Dir.	**Allan Chen, CPA, CA**
Vice-president, Strategy, Insights and Chief Financial Officer British Columbia Pension Corporation	Controller, Financial Services British Columbia Pension Corporation

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INDEPENDENT AUDITORS' REPORT

To the Members of the Teachers' Pension Plan

Opinion

We have audited the financial statements of the Teachers' Pension Plan (the "Plan"), which comprise:

- the statement of financial position as at December 31, 2021
- the statement of changes in net assets available for benefits for the year then ended
- the statement of changes in accrued pension obligations for the year then ended
- and notes to the financial statements, including a summary of significant accounting policies.

(hereinafter referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Plan as at December 31, 2021, and its changes in net assets available for benefits and its changes in accrued pension obligations 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. Our responsibilities under those standards are further described in the "***Auditors' Responsibilities for the Audit of the Financial Statements***" section of our auditors' report.

We are independent of the Plan 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.

Teachers' Pension Plan
Page 2

Other Information

Management is responsible for the other information. Other information comprises the information, other than the financial statements and the auditors' report thereon, included in the annual report.

Our opinion on the financial statements does not cover the other information and we do not and will 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 and remain alert for indications that the other information appears to be materially misstated.

We obtained the information, other than the financial statements and the auditors' report thereon, included in the annual report as at the date of this auditors' 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 the auditors' 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 the Plan's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Plan or to cease operations, or has no realistic alternative but to do so.

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

Auditors' 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 auditors' report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

Teachers' Pension Plan
Page 3

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

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

  The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

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

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

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Plan's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' 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 auditors' report. However, future events or conditions may cause the Plan 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.

- 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.

KPMG LLP

Chartered Professional Accountants

Vancouver, Canada
June 6, 2022

TEACHERS' PENSION PLAN

Statement of financial position

($ millions)

As at December 31	Note		2021		2020
Assets					
Investments	3a	$	**37,609**	$	34,091
Cash			**163**		-
Directly held derivatives	3b		**89**		213
Contributions receivable			**37**		30
Interest receivable			**2**		5
Total assets			**37,900**		34,339
Liabilities					
Directly held derivatives	3b		**110**		38
Taxes payable			**14**		14
Accounts payable and accrued expenses			**9**		5
Total liabilities			**133**		57
Net assets available for benefits		$	**37,767**	$	**34,282**
Accrued pension obligations					
Accrued basic pension obligations	4a	$	**23,058**	$	22,317
Non-guaranteed pension obligations	4b		**7,246**		6,486
Accrued pension obligations			**30,304**		28,803
Surplus					
Funding surplus	5a		**3,264**		1,863
Measurement differences between funding and accounting positions	5a		**4,199**		3,616
Surplus			**7,463**		5,479
Accrued pension obligations and surplus		$	**37,767**	$	**34,282**

All accompanying notes are an integral part of the financial statements including:
Commitments (note 14)

Approved by the Teachers' Pension Board of Trustees:

Reg Bawa, Chair
Teachers' Pension Board of Trustees

Rob Taylor, Vice-chair
Teachers' Pension Board of Trustees

Chris Skillings, Trustee
Teachers' Pension Board of Trustees

TEACHERS' PENSION PLAN

Statement of changes in net assets available for benefits

($ millions)

For the year ended December 31	Note	Basic account	Inflation adjustment account	Supplemental benefits account	Totals 2021	Totals 2020
Increase in assets						
Investment income	8	$ 3,289	$ 782	$ -	**$ 4,071**	$ 3,392
Contributions						
Member	9	331	70	-	**401**	384
Employer	9	330	73	1	**404**	387
		661	143	1	**805**	771
Transfers from other plans		8	2	-	**10**	11
Total increase in assets		3,958	927	1	**4,886**	4,174
Decrease in assets						
Benefits	10	1,309	8	1	**1,318**	1,293
Transfers to other plans		9	2	-	**11**	6
Investment and administration costs	11	61	11	-	**72**	95
Total decrease in assets		1,379	21	1	**1,401**	1,394
Increase in net assets before transfers		**2,579**	**906**	**-**	**3,485**	**2,780**
Account transfers	12	146	(146)	-	-	-
Increase in net assets		**2,725**	**760**	**-**	**3,485**	**2,780**
Net assets available for benefits at beginning of year		27,796	6,486	-	**34,282**	31,502
Net assets available for benefits at end of year		**$ 30,521**	**$ 7,246**	**$ -**	**$ 37,767**	**$ 34,282**

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

TEACHERS' PENSION PLAN

Statement of changes in accrued pension obligations

($ millions)

For the year ended December 31	Note	2021	2020
Increase in accrued pension obligations			
Interest on accrued pension obligations		$ **1,273**	$ 1,284
Benefits accrued		**625**	585
Change in actuarial assumptions		**118**	-
Account transfers		**66**	239
Total increase in accrued pension obligations		**2,082**	2,108
Decrease in accrued pension obligations			
Experience gains		**7**	-
Benefits paid		**1,334**	1,307
Total decrease in accrued pension obligations		**1,341**	1,307
Net increase in accrued pension obligations		**741**	801
Accrued basic pension obligations at beginning of year		**22,317**	21,516
Accrued basic pension obligations at end of year	4a	**23,058**	22,317
Increase in non-guaranteed pension obligations	4b	**760**	568
Non-guaranteed pension obligations at beginning of year		**6,486**	5,918
Non-guaranteed pension obligations at end of year	4b	**7,246**	6,486
Total accrued pension obligations		$ **30,304**	$ **28,803**

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

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

1. DESCRIPTION OF THE TEACHERS' PENSION PLAN

The following description of the Teachers' Pension Plan (Plan) is a summary provided for general information only. For more information, please refer to the Joint Trust Agreement (Agreement) and the Teachers' Pension Plan Rules (pension plan rules).

a) General

The Plan is a jointly trusteed pension plan continued under a joint trust agreement authorized by the *Public Sector Pension Plans Act*, SBC 1999, c. 44 (Act). The Act enabled the establishment of the Agreement. Joint trusteeship was established effective April 5, 2001. The partners to the Agreement are the Provincial Government and the B.C. Teachers' Federation (Partners). The Agreement describes the composition, appointment, powers, functions and duties of the Teachers' Pension Board of Trustees (Board) and provides the authority for the Board to make the pension plan rules.

The Plan is registered with the Superintendent of Pensions, who administers and enforces the *Pension Benefits Standards Act* (PBSA). The PBSA governs employment pension plans registered in British Columbia that have active, inactive and retired members.

Membership in the Plan is mandatory for all certified teachers (including teachers teaching on-call), principals, vice-principals, superintendents, assistant superintendents, directors of instruction, associated professionals and certified professionals who are appointed by a board of education in the British Columbia public school system.

b) Roles and responsibilities

Partners

The Partners representing the plan members and employers are responsible for appointing 10 trustees to the Board. The Partners have responsibility for resolving trustee disputes and, if certain conditions are met, may direct amendments to the pension plan rules.

Board

The Board is responsible for the management of the Plan, including the investment of assets and administration of the Plan. The Board may amend the pension plan rules as long as changes can be funded by the Plan's surpluses (subject to provisions on the use of surplus in the Agreement) or are cost-neutral to the Plan. Unless required to ensure compliance with regulatory enactments applicable to the Plan, only the Partners can initiate pension plan rule changes that result in contribution rate increases. The Chair and Vice-chair are appointed by the trustees.

British Columbia Pension Corporation (Pension Corporation)

Pension Corporation provides benefit administration services as an agent of the Board. The Board appoints two members to the eight-member board of directors of Pension Corporation.

British Columbia Investment Management Corporation (BCI)

BCI provides investment management services, including the valuation of investments, as an agent of the Board. The Board appoints one member to the seven-member board of directors of BCI.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

1. DESCRIPTION OF THE TEACHERS' PENSION PLAN (CONTINUED)

c) Funding

Contributions and investment earnings fund plan benefits. Contributions are made by active members and employers of the Plan. The determination of the value of the benefits and required contributions is based on triennial actuarial valuations for funding purposes.

The Board's funding policy is intended to secure the pension benefit obligation and achieve long-term stability in contribution rates for both employers and members.

d) Contributions

Basic Account

Members contributed 8.17% of salaries and employers contributed 8.17% of salaries, less amounts allocated to the Supplemental Benefits Account (SBA).

Inflation Adjustment Account

Members contributed 2.00% of salaries to the Inflation Adjustment Account (IAA). Employers contributed 2.13% of salaries to the IAA, less amounts allocated to the SBA. Effective January 1, 2020, the Agreement was amended to shift 1.00% of member and 1.00% of employer IAA contributions, from 3.00% and 3.13%, to the rate stabilization account (RSA).

Rate Stabilization Account

Effective January 1, 2020, members and employers each contributed 1.00% of salaries to the RSA. The RSA is held notionally within the Basic Account.

e) Pension benefits

All members are eligible for a pension benefit.

For service on or after January 1, 2018, the Plan provides a defined basic plan benefit of 1.85% of pensionable earnings for each year of pensionable service with no maximum. The defined basic plan benefit increased to 1.90% effective January 1, 2019. From January 1, 2018, onward, the increased rate applies to all service, but only for members who remain active on or after January 1, 2019.

Members are eligible for unreduced pension benefits

- at age 65;
- at age 61, with at least two years contributory service; or
- at age 55 or older, with at least 35 years of contributory service.

The early retirement reduction applicable for service accrued after 2017 is 4.5% for each year where members do not meet the unreduced pension benefit criteria above.

Future cost-of-living adjustments are not guaranteed. These adjustments are granted at the discretion of the Board and may not exceed the annual increase in the Canada consumer price index as at the previous September 30, subject to the availability of funds in the IAA. Any cost-of-living adjustment the Board grants is applied in January. The Board annually considers relevant factors to determine if an adjustment will be granted.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

1. DESCRIPTION OF THE TEACHERS' PENSION PLAN (CONTINUED)

f) Termination and portability benefits

Terminating members who have not yet reached the earliest retirement age may choose

- a deferred pension, or
- a transfer of the commuted value of the pension benefit (the minimum value is the member's contributions with interest) to a locked-in retirement vehicle or similar tax-sheltered plan.

Terminating members may also choose to leave their benefit on deposit in anticipation of future re-employment with a plan employer.

Where there are portability arrangements between the Plan and other pension plans, members may be able to transfer service to another pension plan.

g) Other benefits

Disability and survivor benefits are also available under the Plan. A disability benefit is available to a member under age 61 who has terminated employment, becomes totally and permanently disabled as defined by the Plan, has at least two years of contributory service, is not eligible to receive benefits from an approved long-term group disability plan and meets other eligibility requirements.

The disability benefit is calculated using a member's years of pensionable service to the date of termination of employment and highest average salary. Disability benefits continue for the member's lifetime unless the member is no longer totally and permanently disabled before age 61 (since January 1, 2018) or returns to work.

A death benefit may be available to a surviving spouse or designated beneficiary upon the death of an active member. Depending on eligibility requirements, the benefit may be paid in the form of a survivor pension or lump-sum payment.

Supplemental benefits are funded from the SBA.

h) Tax registration

The Plan is a Registered Pension Plan (RPP) as defined in the *Income Tax Act* (Canada) (registration number 0227462), except for any supplemental benefits, which are funded in addition to the RPP. The Plan is not subject to income tax but is subject to indirect taxes, including British Columbia provincial sales tax (PST) and Canadian federal goods and services tax (GST). The Plan receives a 33% rebate of GST paid.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

2. SIGNIFICANT ACCOUNTING POLICIES

a) Basis of presentation

These financial statements are prepared on the going-concern basis in accordance with Canadian accounting standards for pension plans, Part IV of the *Chartered Professional Accountants of Canada Handbook* (CPA Canada Handbook), and present the Plan as a separate financial reporting entity, independent of the Plan's contributing employers and members, and independent of any associated retired member group benefit plans.

Accounting standards for private enterprises in Part II of the CPA Canada Handbook have been chosen for accounting policies that do not relate to the Plan's investment portfolio or accrued pension obligations.

b) Investments

Investments are stated at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Investment purchases and sales are recorded on the trade date (the date upon which the substantial risks and rewards of ownership have been transferred).

c) Accrued pension obligations

Accrued pension obligations are determined based on an actuarial valuation prepared by an independent actuarial consulting firm. The Plan actuary is Eckler Ltd. The valuation of accrued pension obligations is based on data extrapolated to the financial statement date. The valuation uses the projected benefit method pro-rated on service that incorporates the independent actuary's estimate of various economic and demographic assumptions. These assumptions are the same as those used in the determination of the actuarial position of the Plan for funding purposes.

d) Investment income

Income from investments is recorded on the accrual basis and represents pooled investment portfolio income attributable to the Plan as a unit holder and income from directly held investments. The current period change in fair value includes realized and unrealized gains and losses that are included in investment income.

Within the pools, dividends are accrued on the ex-dividend date, and interest is recognized on an accrual basis. Gains and losses on derivative contracts are recognized concurrently with changes in their fair values.

e) Foreign currency translation

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

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

2. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

f) Use of estimates

The preparation of financial statements, in conformity with Canadian accounting standards for pension plans, requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of increases and decreases in assets and liabilities during the period. Significant areas requiring the use of management estimates relate to the valuation of investments based on unobservable inputs, as further described in note 7, and the calculation of the accrued pension obligations of the Basic Account for accounting and funding purposes as further described in notes 4 and 5. Actual results could differ materially from these estimates.

3. INVESTMENTS

a) Investments

Fair value of investment holdings	2021			2020		
	Basic account	Inflation adjustment account	Total	Basic account	Inflation adjustment account	Total
Short-term	$ 900	$ 203	$ 1,103	$ 621	$ 139	$ 760
Bonds	11,177	2,514	13,691	8,746	1,956	10,702
Repurchase agreements	(2,986)	(672)	(3,658)	(2,662)	(595)	(3,257)
	8,191	1,842	10,033	6,084	1,361	7,445
Canadian equities	982	221	1,203	1,129	252	1,381
Global equities	5,745	1,293	7,038	5,962	1,334	7,296
Emerging markets equities	1,672	376	2,048	2,209	495	2,704
Mortgages	874	197	1,071	921	206	1,127
Real estate	4,897	1,102	5,999	4,056	907	4,963
Private equity	4,234	953	5,187	3,733	835	4,568
IRR*	3,206	721	3,927	3,144	703	3,847
	$ 30,701	$ 6,908	$ 37,609	$ 27,859	$ 6,232	$ 34,091

* Infrastructure and renewable resources

Plan investments consist primarily of direct ownership in units of pooled investment portfolios. Each unit gives its holder a proportionate share in the value of the net assets of the pooled investment fund. The Basic and IAA accounts are combined for investment management purposes.

One or more pooled investment portfolios exist for different types of investments, such as short-term investments; bonds; Canadian, global and emerging markets equities; mortgages; real estate; private equity; and infrastructure and renewable resources. While the purpose of each fund is to invest in a particular type of investment, at any time, given the timing of trading activities, the fund may hold a certain amount of cash, short-term investments, accrued interest income and net accounts receivable or payable from outstanding sales and purchases of investments.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

3. INVESTMENTS (CONTINUED)

a) Investments (continued)

Short-term investments consist of Canadian and U.S. money market securities such as treasury bills with maturities of 15 months or less, and short-term bonds with one-year to five-year terms. Short-term investments are valued using current market yields.

Bonds consist of government bonds, investment grade and non-investment grade corporate bonds, repurchase agreements, and debentures. Bonds are valued based on current market yields and, in some cases, quoted market prices. Bonds include the use of repurchase agreements to borrow money to create leverage to purchase other bonds and enhance yields through a leverage bond fund strategy.

Equities consist primarily of publicly traded shares and are valued based on quoted market prices on the primary exchanges on which they are traded.

Mortgages consist mainly of Canadian construction, commercial and multi-family residential mortgages. The mortgages are secured by real estate and valued using current market yields.

Real estate investments consist mainly of diversified Canadian and U.S. income-producing properties. Real estate investments are valued quarterly by external investment managers and, at least once every 10 to 18 months, by accredited independent appraisers to establish current market values.

Private equity consists mainly of equity investments made outside the structure of public markets. Private equity investments are valued either quarterly or annually based on audited financial statements from external investment managers using a discounted cash flow approach or net asset value method.

Infrastructure and renewable resources consist of privately owned and managed infrastructure assets, as well as timber, agriculture and other renewable assets. Infrastructure and renewable resources investments are valued annually using a market-based approach or net asset value method.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

3. INVESTMENTS (CONTINUED)

b) Derivatives

Derivatives contracts are directly and indirectly held by the Plan. The details of these contracts are as follows:

Fair value of derivative contracts	2021		2020	
	Positive fair value	Negative fair value	Positive fair value	Negative fair value
Directly held				
Foreign currency forwards	$ 89	$ (110)	$ 213	$ (38)
Indirectly held in pooled investment portfolios				
Foreign currency forwards	$ 19	$ (37)	$ 50	$ (8)
Options	1	(1)	-	-
Interest rate swaps	9	(4)	-	(21)
Total return swaps	80	(41)	256	(56)
	$ 198	$ (193)	$ 519	$ (123)
Derivatives by investment asset classification				
Bonds	$ 22	$ (47)	$ 91	$ (9)
Canadian equities	7	(6)	3	(1)
Global equities	81	(33)	183	(49)
Emerging markets equities	5	(10)	79	(27)
Mortgages	1	(9)	17	-
Real estate	21	(28)	56	(14)
IRR*	61	(60)	90	(23)
	$ 198	$ (193)	$ 519	$ (123)

*Infrastructure and renewable resources

Derivative contracts consist of foreign currency forward contracts, options, futures, interest rate swaps and total return swaps held directly by the Plan or indirectly through various pooled investment portfolios. Directly held and indirectly held derivative contracts are reflected at fair value based on expected settlement amounts at the date of the Statement of Financial Position. Directly held derivatives are disclosed on the face of the Statement of Financial Position while indirectly held derivatives are included in investments.

A foreign currency forward contract is a privately negotiated contractual obligation to exchange one currency for another at a specified price for settlement on a predetermined date in the future. Foreign currency forward contracts are held by the Plan to manage exposure to foreign currency risk.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

3. INVESTMENTS (CONTINUED)

b) Derivatives (continued)

Options are contracts that give the buyer the right, but not the obligation, to buy or sell a certain security or index at an agreed-upon price on or before a specified date. Futures contracts are exchange-traded contractual obligations to take or make delivery of an asset at a predefined price and date in the future. Gains and losses on futures contracts are settled daily. Options and futures are held for synthetic indexing, a modern technique used to replicate the performance of a security or index without directly purchasing or selling the underlying assets and for risk control.

An interest rate swap is an agreement between two counterparties in which one stream of future interest payments is exchanged for another based on a specified principal amount. Interest rate swaps usually involve the exchange of a fixed interest rate for a floating interest rate, or vice versa, to reduce or increase exposure to fluctuations in interest rates or to obtain a marginally better interest rate than would have been possible without the swap.

A total return swap is a swap agreement in which one party makes payments based on a set rate, either fixed or variable, while the other party makes payments based on the return of an underlying asset, including both the income it generates and any capital gains. In total return swaps, the underlying asset (referred to as the reference asset) is usually an equity index or basket of equity securities. Interest rate swaps and total return swaps are held indirectly through various pooled investment portfolios for synthetic indexing purposes.

Derivative transactions are supported with collateral to mitigate counterparty credit risk. A single net fair value amount is used to determine the value of collateral with each counterparty. Collateral approximately equal to the positive fair value of each derivative contract has been provided by counterparties, and collateral approximately equal to the negative fair value of each derivative contract has been delivered to counterparties. Acceptable forms of collateral are Canadian federal or provincial bonds, and U.S. federal government treasury bills and bonds.

The notional value of derivatives is the total value of a position, how much value a position controls, or an agreed upon amount in a contract.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

3. INVESTMENTS (CONTINUED)

b) Derivatives (continued)

Notional value of derivatives							2021		2020
Terms to maturity		Within 1 year		1 to 5 years			Total		Total
Derivatives by type of contract									
Directly held									
Foreign currency forwards	$	12,691	$	-	$		12,691	$	7,079
Indirectly held in pooled investment portfolios									
Foreign currency forwards	$	2,932	$	-	$		2,932	$	-
Futures		-		-			-		92
Options		68		-			68		-
Interest rate swaps		2,659		173			2,832		1,938
Total return swaps		6,992		5			6,997		7,191
	$	25,342	$	178	$		25,520	$	16,300
Derivatives by investment asset classification									
Bonds	$	5,007	$	-	$		5,007	$	2,145
Canadian equities		1,132		26			1,158		164
Global equities		6,681		112			6,793		7,316
Emerging markets equities		1,390		40			1,430		2,005
Mortgages		578		-			578		547
Real estate		2,996		-			2,996		2,043
Private equity		-		-			-		1
IRR*		7,558		-			7,558		2,079
	$	25,342	$	178	$		25,520	$	16,300

* Infrastructure and renewable resources

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

3. INVESTMENTS (CONTINUED)

c) Repurchase agreements

The Plan has indirect exposure to repurchase agreements through its investment in the pooled investment portfolio underwritten on bond securities. Repurchase agreements are short-term agreements to sell securities in order to buy them back at a slightly higher price. The party selling the repurchase agreement is effectively borrowing, and the other party is lending, since the lender is credited the implicit interest in the difference in prices. Securities sold under repurchase agreements are accounted for as collateralized borrowing because they represent the sale of securities with a simultaneous agreement to buy them back at a specified future date. The securities sold under these agreements continue to be recognized on the statement of financial position with any changes in fair value recorded as net gain(loss) on investments and included in investment income. Interest incurred on repurchase agreements is included in borrowing costs within investment-related expenses.

Repurchase agreements are carried at the amount at which the securities were initially acquired or sold, which, together with accrued interest income or expense, approximates fair value due to the short-term nature of these agreements. The pooled investment portfolio holds $3,889 (2020: $3,484) in securities subject to repurchase agreements.

4. ACTUARIAL VALUATION OF THE BASIC ACCOUNT FOR ACCOUNTING PURPOSES

a) Basic Account

In accordance with the Agreement and PBSA, an actuarial valuation is performed at least every three years. Its primary objective is to assess the financial position and adequacy of funding for the Basic Account of the Plan as described in note 5a. As part of the actuarial valuation, the Plan actuary also calculates values, for accounting purposes, of the Basic Account assets as at, and pension liabilities accrued to, the financial statement date. For this purpose, contributions and benefits for future service are not included, in contrast to their inclusion in the valuation for funding purposes as described in note 5a. Also, for accounting purposes, the full impact of investment fair value changes is reflected in the financial statements as at the financial statement date compared with the deferral and amortization of fair value gains or losses in the valuation for funding purposes. The liability for accrued basic pension obligations at the valuation date is determined using the projected benefit method pro-rated on service.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

4. ACTUARIAL VALUATION OF THE BASIC ACCOUNT FOR ACCOUNTING PURPOSES (CONTINUED)

a) Basic Account (continued)

The latest full actuarial valuation for accounting purposes was prepared as at December 31, 2020, by Eckler Ltd. This valuation calculated the liability for accrued basic pension obligations for financial statement purposes to be $22,547 (2017: $20,032).

Between valuations, an estimate of the actuarial position is required. This estimate, an extrapolation, has been made to December 31, 2021, using the following long-term actuarial assumptions:

- Annual investment return 5.75% (2017: 6.00 %)
- Annual salary escalation rate 3.25% (2017: 3.25%)

The extrapolation calculated the liability for accrued basic pension obligations to be $23,058 (2020: $22,317).

In 2021 the extrapolation reflected assumption changes made during the 2020 valuation that resulted in an increase in the 2020 accrued basic pension obligations of $118. The most significant change in the assumptions was a decrease in the discount rate, which increased the accrued basic pension obligations, although this was largely offset by a reduction in assumed life expectancies. Further, the 2020 valuation accrued basic pension obligations reflected in the 2021 extrapolation were $7 lower than anticipated by the 2020 extrapolation, representing the net result of experience gains and losses (e.g. lower than expected salary increase, fewer terminations than assumed, net of rehires).

Extrapolations may not be reliable indicators of the next valuation results, nor do they necessarily reflect the overall trend of results. Between valuations, actual wage increases, investment earnings, and the incidence of retirements, withdrawals and changes in other factors may vary significantly from the long-term assumptions used in the extrapolation. In the event of a major change to the Plan, a new valuation or review of assumptions may be required.

The next full actuarial valuation will be carried out as at December 31, 2023, with the results included in the December 31, 2024, financial statements.

Actuarial liabilities are also affected by changes in the assumed investment return. Based on the actuarial valuation completed as at December 31, 2020, a reduction in the investment return assumption from 5.75% to 5.50% would have increased the December 31, 2021, liability for accrued basic pension obligations of $23,058 by $719 or 3.12%. Changes to assumptions included in the actuarial valuation are interrelated, and the cumulative impact of changed assumptions may be offsetting.

b) Inflation Adjustment Account (IAA), non-guaranteed pension obligations

No unfunded liability exists for the IAA, since the obligation for future cost-of-living adjustments is limited to the amount of the available assets in the account. There is no minimum level of inflation adjustment required to be paid under the pension plan rules, nor is there any Plan provision to fund the IAA to any minimum level of future potential inflation adjustments (note 5b). The non-guaranteed pension obligations is therefore equal to the net assets available for benefits in the IAA, 2021: $7,246 (2020: $6,486). The net increase of $760 (2020: $568) in the IAA balance consists of employee and employer contributions, investment income and net transfers reduced by payments out of the account. (See note 12 for details on amounts transferred.)

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

5. ACTUARIAL VALUATION OF THE BASIC ACCOUNT FOR FUNDING PURPOSES

a) Basic Account

The Basic Account is the account from which the defined basic benefits of the Plan are paid. In accordance with the Agreement and PBSA, an actuarial valuation of the Plan's assets and pension obligations is performed at least every three years by an independent actuary to determine an appropriate combined employer and member contribution rate to fund the Basic Account. For this purpose, the Plan's actuary values both accrued assets and accrued pension obligations to the financial statement date, and contributions and benefits for future service. The contribution requirements are calculated by the actuary using the entry-age normal cost method (entry-age method).

This method produces the long-term rate of member and employer contributions sufficient to provide benefits for the average future new entrants to the Plan. This rate may be adjusted for the amortization of any actuarial funding surplus, and it will be adjusted for the amortization of any unfunded actuarial liability. Future contribution rate determinations will exclude consideration of the assets in the Rate Stabilization Account (RSA); if contribution rate increases are considered, funds will be transferred from the RSA to keep the rate at its current level or to minimize the increase.

The Basic Account is also the account from which any cost-of-living adjustments granted to retired members are paid. Future cost-of-living adjustments are not guaranteed within the Plan provisions and are granted to retired members only to the extent that sufficient assets are available from the IAA to fund those benefits (note 5b). As cost-of-living adjustments are granted, the Basic Account receives from the IAA the present value funding necessary for the cost-of-living adjustments granted. Therefore, accrued basic pension obligations for valuation purposes include the liability for all cost-of-living adjustments granted to the date of the valuation, but not for as-yet-unknown future cost-of-living adjustments.

Actuarial valuation

An estimate of the actuarial position of the Plan for funding purposes has been made to December 31, 2021, using the following long-term actuarial assumptions:

- Annual investment return 5.75% (2017: 6.00%)
- Annual salary escalation rate 3.25% (2017: 3.25%)

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

5. ACTUARIAL VALUATION OF THE BASIC ACCOUNT FOR FUNDING PURPOSES (CONTINUED)

a) Basic Account (continued)

This estimate, an extrapolation, produced an estimated funding surplus of $3,264 as at December 31, 2021 (2020: $1,863 surplus), as follows:

Funding extrapolation	2021	2020
Net assets available for basic pension benefits	$ 30,521	$ 27,796
Actuarial asset value adjustment	(2,264)	(2,224)
Smoothed assets for basic pension benefits	28,257	25,572
Rate stabilization account	(1,081)	(821)
Smoothed assets excluding rate stabilization account	27,176	24,751
Present value of future contributions (entry-age method)	7,170	6,651
Net actuarial assets for basic pension benefits	34,346	31,402
Actuarial liability for accrued and future basic pension benefits	(31,082)	(29,539)
Entry-age method actuarial surplus	**$ 3,264**	**$ 1,863**

Changes in the extrapolated entry-age method funded status	2021	2020
Extrapolated entry-age method actuarial surplus, beginning of year	$ 1,863	$ 1,274
Adjustment to reflect the 2020 valuation	(279)	-
Extrapolated change in actuarial liability for accrued and future basic pension benefits	(1,126)	(1,165)
Extrapolated change in actuarial assets for basic pension benefits	2,806	1,754
Entry-age method actuarial surplus, end of year	**$ 3,264**	**$ 1,863**

Extrapolations may not be reliable indicators of the next valuation results, nor do they necessarily reflect the overall trend of results. Between valuations, various factors, including actual wage increases, investment earnings, and the incidence of retirements and withdrawals, may vary significantly from the long-term assumptions used in the extrapolation.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

5. ACTUARIAL VALUATION OF THE BASIC ACCOUNT FOR FUNDING PURPOSES (CONTINUED)

a) Basic Account (continued)

Measurement differences between funding and accounting positions

The primary components of the measurement differences between the extrapolated entry-age method funding surplus and the financial statement accounting surplus are as follows:

Measurement difference between funding and accounting positions		**2021**		**2021**
Entry-age method actuarial surplus	$	**3,264**	$	1,863
Actuarial asset value adjustment		**2,264**		2,224
Rate stabilization account		**1,081**		821
Difference in actuarial methods – present value of future contributions		**(7,170)**		(6,651)
Difference in actuarial methods – present value of future liabilities		**8,024**		7,222
Measurement differences between funding and accounting positions		**4,199**		3,616
Surplus for financial statement purposes	$	**7,463**	$	**5,479**

Actuarial asset value adjustment

To determine the entry-age method surplus for funding purposes, the actuarial value of net assets available for benefits is determined on an adjusted value basis that smooths the difference between the actual investment return and the expected return based on a long-term real return rate over a five-year period.

The funding policy requires that the value of the assets be smoothed within a certain corridor. In the 2020 valuation, the corridor required that the smoothed value be no more than 108% and no less than 92% of the market value of the assets. The smoothed value of the assets at December 31, 2021, was 92.6% (2020: unconstrained at 91.8% and adjusted to 92.0%).

The following schedule indicates the year the components of the actuarial asset value adjustment will be recognized in the entry-age method actuarial surplus. The amounts are based on that proportion of the total fund related to the Basic Account assets.

Actuarial asset value adjustment		**2021**		**2020**
Adjustment to 92% of market	$	**-**	$	(53)
2021		**-**		779
2022		**706**		516
2023		**849**		659
2024		**516**		323
2025		**193**		-
Total adjustment	$	**2,264**	$	**2,224**

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

5. ACTUARIAL VALUATION OF THE BASIC ACCOUNT FOR FUNDING PURPOSES (CONTINUED)

a) Basic Account (continued)

Rate Stabilization Account

The December 31, 2020 actuarial funding valuation concluded that 2% contributions of salaries (1% members and employers each) were not needed to support the IAA and accordingly could be paid to the RSA. In 2021, the Agreement was amended to shift 1% of member and 1% of employer IAA contributions to the RSA, effective January 1, 2020. The amount related to 2020 and 2021 contributions plus interest, totaling $156, was transferred to the RSA which is held notionally within the Basic Account.

Interest of $104 (2020: $61) was transferred from the Basic Account to the RSA based on the 2021 opening balance and a smoothed rate of return of 12.65% (2020: 8.10%).

Rate stabilization account		**2021**		**2020**
Opening balance	$	821	$	760
Interest applied to balance		104		61
IAA contributions and interest		156		-
Ending balance	$	**1,081**	$	**821**

Difference in actuarial methods

While the accrued pension benefit liability for financial statement purposes uses the projected benefit method pro-rated on service, the pension liability for funding purposes uses an entry-age funding method, where the present value of future normal cost contributions, basic pension benefits for future service and future amortization amounts are included in the determination of the funded status of the Plan.

If an actuarial valuation indicates that increased basic contribution rates are required, the increase must be shared equally by members and employers. The Agreement also describes the manner in which the Board can elect to apply surplus assets.

b) Inflation Adjustment Account (IAA)

No unfunded liability exists for the IAA, since the obligation for future cost-of-living adjustments is limited to the amount of the available assets in the account. As cost-of-living adjustments are granted to retired members, full funding for the granted cost-of-living adjustments, on a net present value basis, is transferred from the IAA to the Basic Account, from which the pensions are paid. There is no minimum level of cost-of-living adjustment required to be paid under the pension plan rules, nor is there any Plan provision to fund the IAA to any minimum level for future potential cost-of-living adjustments.

The Board annually considers all relevant factors and its IAA funding policy to determine if a cost-of-living adjustment will be granted on pensions in pay and the amount of the cost-of-living adjustment, if any.

($ millions except as otherwise noted)

6. FINANCIAL RISK MANAGEMENT

The Board approves the long-term asset mix policy for investment assets through its Statement of Investment Policies and Procedures (SIPP) and oversees the management of these assets through the Board's investment management agent, BCI. The SIPP requires diversification of investments among asset classes, sets guidelines on investment categories, and limits the exposure to individual investments and counterparties.

Significant risks are regularly monitored and managed by BCI, and actions are taken when appropriate, according to the Plan's SIPP. In addition, these risks are reviewed periodically with the Board. Such risks include liquidity risk, as well as other financial risks, which comprise currency risk, interest rate risk, other price risk and credit risk.

Financial risks are disclosed on a unit-of-account basis (note 6b), which represents the legal ownership of securities held, and at the underlying securities level (note 6c), which provides additional insight to other risks that may impact the financial instruments of the Plan. Both forms of disclosure provide valuable perspectives into the financial risks that may directly or indirectly impact the financial statements and the funded status of the Plan. These two forms of risk disclosure are not additive to each other.

a) Liquidity risk

Liquidity risk is the risk of not being able to meet the Plan's cash requirements in a timely and cost-effective manner. Expenditures relate primarily to pensions, termination and refund benefits, and investment and administration costs. The Plan's approach to mitigating liquidity risk is to forecast its cash requirements over the near and long term to determine whether sufficient funds are available.

The Plan's primary source of liquidity is income generated from the Plan's investments, and employer and employee contributions. Investments are primarily held in pooled funds, and the securities held are traded in active markets and can be readily sold, and where the pooled fund units can thereby be redeemed to fund cash requirements. Accounts payable of $9 (2020: $5) are generally due within one month. Derivatives payable of $110 (2020: $38) are due within the next fiscal year.

b) Financial risks on a unit-of-account basis

Plan investments consist primarily of direct ownership in units of pooled investment portfolios. Each unit gives its holder a proportionate interest in the value of the net assets of the respective pooled investment fund. The unit-of-account for the majority of the Plan's investments is the units of the pooled investment funds.

Investments by unit-of-account	**2021**	**%**	**2020**	**%**
Pooled investment fund units	$ **37,606**	**100.0**	$ 33,487	98.2
Directly held equity	**-**	**0.0**	411	1.2
Directly held debt	**3**	**0.0**	193	0.6
Investments	**$ 37,609**	**100.0**	**$ 34,091**	**100.0**

Market risk is the risk that the fair values of an investment will fluctuate as a result of changes in market conditions, whether those changes are caused by factors specific to the individual investment or factors affecting all securities traded in the market. Market risk consists of currency, interest rate and other price risks.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

6. FINANCIAL RISK MANAGEMENT (CONTINUED)

b) Financial risks on a unit-of-account basis (continued)

Currency risk

Currency risk is the risk that the value of financial instruments denominated in currencies other than the functional currency of the fund will fluctuate due to changes in foreign exchange rates. The Plan holds primarily Canadian dollar denominated investment pooled fund units and is exposed to currency risk through holdings of small amounts of foreign currency denominated debt investments (2020: private equity, agricultural, bond and debt investments). See note 6c for currency exposure related to underlying securities.

Foreign denominated investments held as a percentage of investments

		2021	%		2020	%
United States	$	**422**	**1.1**	$	702	2.1
Australia		**2**	**0.0**		88	0.3
	$	**424**	**1.1**	$	**790**	**2.4**

As at December 31, 2021, if the Canadian dollar strengthened or weakened by 10% in relation to all foreign currencies, with all other factors remaining constant, net assets available for benefits would have decreased or increased by approximately $42 (2020: $79).

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of plan investments will change as a result of future fluctuations in market interest rates. The majority of the Plan's investment assets are non-interest bearing and not subject to interest rate risk. See note 6c for interest rate risk related to underlying securities.

Other price risk

Other price risk is the risk that the fair value of a financial instrument will fluctuate because of changes in market prices (other than those arising from currency risk or interest rate risk), whether those changes are caused by factors specific to the individual financial instrument, its issuer, or factors affecting all similar financial instruments traded in the market. The Plan's investments are subject to other price risk through its public equity investments and private market investments, including equity in real estate companies, held directly and through pooled investment portfolios. This risk is managed by diversifying investments across asset classes based on criteria established in the SIPP.

As at December 31, 2021, if the pooled investment fund unit and directly held equity prices increased or decreased by 10%, with all other factors remaining constant, net assets available for benefits would have increased or decreased by approximately $3,761(2020: $3,390).

On March 11, 2020, the COVID-19 outbreak was declared a pandemic by the World Health Organization. The situation continues and remains dynamic with various cities and countries around the world responding in different ways to address the outbreak. As a result of the COVID-19 pandemic, global financial markets have experienced significant volatility. Given the extent of the crisis, it is difficult to estimate the ultimate impact or duration of the volatility on the Plan.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

6. FINANCIAL RISK MANAGEMENT (CONTINUED)

b) Financial risks on a unit-of-account basis (continued)

Credit risk

Credit risk is the risk that the counterparty to a financial instrument will fail to discharge an obligation or commitment it has entered into, resulting in a financial loss to the Plan. The majority of the Plan's investments are held in securities that are not subject to credit risk. See note 6c for credit risk related to underlying securities.

Credit exposure exists for members' and employers' contributions receivable directly held by the Plan totalling $37 (2020: $30), for the derivatives $89 (2020: $213) and interest receivable $2 (2020: $5).

c) Financial risks of underlying securities held through pooled investment funds

Pooled investment funds exist for different types of investments, such as short-term investments; bonds; Canadian, global and emerging markets equities; mortgages; real estate; private equity; and infrastructure and renewable resources. Examining the risks of the underlying securities contained in pooled investment funds provides additional disclosure to assess the overall financial risks of the Plan's investments. Viewing the financial risks of underlying securities is an alternative way of disclosing financial risks from the unit-of-account basis in note 6b. These risks are not considered additive to the financial risks already disclosed in note 6b.

Market risks are reduced through asset class diversification, diversification within each asset class and credit quality requirements on investments.

Currency risk

Currency exposure also arises from foreign currency denominated investments held directly and from underlying investments held indirectly in pooled investment funds. BCI has currency exposure management programs under which it enters into economic hedges of foreign currency exposure through the use of forward foreign currency contracts.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

6. FINANCIAL RISK MANAGEMENT (CONTINUED)

c) Financial risks of underlying securities held through pooled investment funds (continued)

Currency risk (continued)

The Plan's total currency exposure, the impact of economic hedging activities, and its net notional exposure as at December 31 are as follows:

Fair value of foreign denominated investment holdings

(Cdn dollar equivalent)	Total exposure	Economic hedging	Net exposure	% of total
			2021	
United States	$ 15,972	$ 8,776	$ 7,196	59%
Euro countries	2,965	507	2,458	20%
Asia-Pacific, excluding Japan	1,840	457	1,383	11%
Other	522	-	522	5%
Other Europe	318	-	318	3%
United Kingdom	983	704	279	2%
Japan	77	51	26	0%
	$ 22,677	$ 10,495	$ 12,182	100%
			2020	
United States	$ 11,094	$ 5,788	$ 5,306	54%
Asia-Pacific, excluding Japan	2,478	453	2,025	20%
Euro countries	1,885	288	1,597	16%
Other	518	-	518	5%
Other Europe	381	-	381	4%
Japan	167	102	65	1%
United Kingdom	471	448	23	0%
	$ 16,994	$ 7,079	$ 9,915	100%

The net foreign currency exposure of its underlying investments represents 32% (2020: 29%) of the Plan's total investments.

Interest rate risk

The Plan's pooled investment funds hold interest-bearing financial instruments in short-term investments, bonds and mortgages. The risk of adverse changes in interest rates is reduced within the underlying investment pools through management of duration in exposure to fixed income securities, the use of floating rate notes and interest rate swaps, and general diversification by security type and geographic region. The Plan participates in a leveraged bond strategy using repurchase agreements that is included in the terms to maturity table below.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

6. FINANCIAL RISK MANAGEMENT (CONTINUED)

c) Financial risks of underlying securities held through pooled investment funds (continued)

Interest rate risk (continued)

The terms to contractual maturity of interest-bearing financial instruments held directly and through pooled investment, portfolios, as at December 31, are as follows:

Terms to maturity of interest-bearing financial instruments

	Within 1 year	1 to 5 years	6 to 10 years	Over 10 years	Total	Effective yield to maturity
			2021			
Short-term	$ 1,103	$ -	$ -	$ -	$ 1,103	0.19%
Bonds	1,299	3,767	4,287	4,278	13,631	2.04%
Repurchase agreements	(3,658)	-	-	-	(3,658)	0.21%
Mortgages*	214	687	170	-	1,071	3.92%
Debt	-	-	3	-	3	4.80%
	$ (1,042)	$ 4,454	$ 4,460	$ 4,278	$ 12,150	
			2020			
Short-term	$ 752	$ 2	$ 6	$ -	$ 760	0.24%
Bonds	814	3,846	2,788	3,254	10,702	1.59%
Repurchase agreements	(3,257)	-	-	-	(3,257)	0.00%
Mortgages*	269	674	184	-	1,127	2.55%
Debt	-	-	193	-	193	5.71%
	$ (1,422)	$ 4,522	$ 3,171	$ 3,254	$ 9,525	

* Yield based on mortgages in the fixed term mortage fund. Other mortgage funds contain variable rate mortgages.

As at December 31, 2021, if the prevailing interest rates increased or decreased by 1%, assuming a parallel shift in the yield curve, with all other variables remaining constant, the fair value of interest-bearing financial instruments and net assets available for benefits would have decreased or increased by approximately $1,024 (2020: $519).

Other price risk

Other price risk associated with the underlying investments held in pooled investment funds is consistent with that described earlier in note 6b, which describes financial risks on a unit-of-account basis.

($ millions except as otherwise noted)

6. FINANCIAL RISK MANAGEMENT (CONTINUED)

c) Financial risks of underlying securities held through pooled investment funds (continued)

Credit risk

The Plan's underlying investment assets held in pooled investment funds attract credit risk. This is the risk that a loss may occur from the failure of another party to perform according to the terms of a contract. It's also the risk of losses when issuers and debtors are downgraded by credit rating agencies, usually leading to a fall in the market value of the debtors' obligations. Credit risk is managed by establishing specific investment criteria, such as minimum credit ratings for investees and counterparties, and maximum concentration limits with given counterparties.

Credit risk ratings on financial instruments (short-term investments, bonds, mortgages and debt) held directly and through pooled investment portfolios are as follows:

Credit rating of financial instruments	2021		2020	
AAA/AA	$ 5,274	44%	$ 5,100	54%
A	2,335	19%	238	2%
BBB	513	4%	941	10%
Non-investment grade	1,368	11%	760	8%
	9,490	78%	7,039	74%
Unrated	2,660	22%	2,486	26%
	$ 12,150	100%	$ 9,525	100%

The ratings used are defined by Standard & Poor's rating agency. Obligations rated AAA/AA have the highest rating assigned. The lender's capacity to meet its financial commitment on the obligation is very strong. Bonds rated A, BBB or non-investment grade are weaker, with the BBB rating denoting an obligation with adequate protection parameters and a non-investment grade rating denoting major ongoing uncertainties or exposure to adverse business, financial or economic conditions that could lead to the debtor's inadequate capacity to meet its financial commitment on the obligation. Unrated financial instruments consist mainly of mortgages secured by real estate, debt, and corporate bonds.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

7. FAIR VALUE OF FINANCIAL INSTRUMENTS

a) Fair value hierarchy

Fair value measurements of the investment assets and liabilities are based on inputs from one or more levels of a fair value hierarchy. Each level is based on the transparency of the inputs used to measure the fair values of assets and liabilities. The three levels of the fair value hierarchy are as follows:

Level 1

Inputs that are unadjusted quoted prices in active markets for identical assets or liabilities

Level 2

Inputs other than quoted prices that are observable for the asset or liability either directly or indirectly

Level 3

Inputs that are not based on observable market data

Plan investments are carried at fair value in the financial statements. The following table details the classification of the Plan's investments based on the fair value hierarchy as at December 31:

Fair value hierarchy	Level 1	Level 2	Level 3	Total
		2021		
Pooled fund units	$ 1,104	$ 22,106	$ 14,396	$ 37,606
Direct debt	-	-	3	3
Investments	**$ 1,104**	**$ 22,106**	**$ 14,399**	**$ 37,609**
Derivatives	**$ -**	**$ (21)**	**$ -**	**$ (21)**
		2020		
Pooled fund units	$ 787	$ 21,235	$ 11,465	$ 33,487
Direct equity	-	-	411	411
Direct debt	-	-	193	193
Investments	**$ 787**	**$ 21,235**	**$ 12,069**	**$ 34,091**
Derivatives	**$ -**	**$ 175**	**$ -**	**$ 175**

During 2021 and 2020, there were no significant transfers of investments between levels.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

7. FAIR VALUE OF FINANCIAL INSTRUMENTS (CONTINUED)

a) Fair value hierarchy (continued)

The following table reconciles the Plan's level 3 fair value measurements:

Level 3 fair value hierarchy	Pooled fund units	Direct equity	Direct debt	Total
		2021		
Balance, beginning of year	$ 11,465	$ 411	$ 193	$ 12,069
Gains (loss) included in investment income	1,690	7	-	1,697
Purchases	6,997	237	-	7,234
Sales	(5,756)	(655)	(190)	(6,601)
Balance, end of year	$ 14,396	$ -	$ 3	$ 14,399
Unrealized gain (loss) included in investment income	$ 471	$ (162)	$ (2)	$ 307
		2020		
Balance, beginning of year	$ 9,032	$ 477	$ 186	$ 9,695
Gains (loss) included in investment income	1,012	(16)	4	1,000
Purchases	12,534	1	3	12,538
Sales	(11,113)	(51)	-	(11,164)
Balance, end of year	$ 11,465	$ 411	$ 193	$ 12,069
Unrealized gain (loss) included in investment income	$ 1,025	$ (16)	$ 4	$ 1,013

b) Valuation models

The objective of valuation techniques is to arrive at a fair value measurement that reflects the price that would be received to sell the asset or paid to transfer the liability in an orderly transaction between market participants at the measurement date.

BCI uses widely recognized valuation methods for determining the fair value of common and less complex financial instruments such as investments in pooled funds, where fair value is based on the underlying net asset value of the respective pooled fund as determined by the underlying fund manager. Observable prices and model inputs are usually available in the market for listed equity and debt securities, simple derivatives such as forward or future currency contracts, and pooled funds.

The availability of observable market prices and model inputs reduces the need for management judgment and estimation, and reduces the uncertainty associated with the determination of fair values. The availability of observable market prices and inputs varies depending on the financial instrument and is subject to change based on specific events and general conditions in the financial markets.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

7. FAIR VALUE OF FINANCIAL INSTRUMENTS (CONTINUED)

b) Valuation models (continued)

For more complex financial instruments, such as direct private equity investments held by the Plan, BCI uses proprietary valuation models, which are usually developed from recognized valuation models. Some or all of the significant inputs into these models may not be observable in the market and are derived from market prices or rates, or estimated based on assumptions. Valuation models that employ significant unobservable inputs require a higher degree of judgment and estimation in the determination of fair value. BCI's judgment and estimation are usually required for the selection of the appropriate valuation model to be used, determination of expected future cash flows of the financial instrument being valued, determination of the probability of counterparty default and prepayments, and selection of appropriate discount rates.

Fair value estimates obtained from models are adjusted for any other factors, such as liquidity risk or model uncertainties, to the extent that BCI believes that a third-party market participant would take them into account in pricing a transaction. Fair values reflect the credit risk of the instrument and include adjustments to take account of the credit risk of the Plan and the counterparties where appropriate.

c) Valuation framework

BCI has an established framework with respect to the measurement of fair values of financial instruments. Where possible, for direct private equity investments held by the Plan, external independent valuation specialists are engaged annually to assist in the determination of fair value. In those circumstances where BCI relies on the third-party manager for the determination of fair value, BCI reviews the appropriateness of such valuations using audited financial statements of the underlying investments, where available, and other information from the underlying third-party manager or other sources.

In addition, BCI applies the following specific controls in relation to the determination of fair values:

- Verification of observable pricing inputs
- Appraisal of domestic real estate properties once every 10 to 18 months by accredited independent appraisers
- Analysis and investigation of significant valuation movements
- Review of unobservable inputs and valuation adjustments

When third-party information such as broker quotes or pricing services is used to measure fair value, BCI assesses and documents the evidence obtained from the third parties to support the conclusion that such valuations are appropriate. This includes:

- Verifying that the broker or pricing service is approved by BCI for use in pricing the relevant type of financial instrument
- Understanding how the fair value has been arrived at and the extent to which it represents actual market transactions
- Understanding how the fair value has been determined when a number of quotes for similar financial instruments have been obtained
- Understanding how prices for similar financial instruments used to measure fair value have been adjusted to reflect the characteristics of the financial instrument subject to measurement

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

7. FAIR VALUE OF FINANCIAL INSTRUMENTS (CONTINUED)

d) Significant unobservable inputs used in measuring fair value

The following table sets out information about significant unobservable inputs used at year-end in measuring financial instruments categorized as level 3 in the fair value hierarchy.

Significant unobservable inputs used in measuring fair value

Description	Fair value	Valuation technique	Unobservable input	Amount/ range	Sensitivity to change in significant unobservable input
			2021		
					The estimated fair value would increase if:
Pooled fund units	**$ 14,396**	**Net asset value**	**Net asset value**	**$ 14,396**	**The net asset value increased**
Direct debt	**$ 3**	**Discounted cash flow**	**Discount rate**	**4.8%**	**The discount rate decreased**
			2020		
					The estimated fair value would increase if:
Pooled fund units	$ 11,465	Net asset value	Net asset value	$ 11,465	The net asset value increased
Direct private equity	$ 330	Discounted cash flow	Discount rate	7.1%	The discount rate decreased
Direct private agriculture investments	$ 81	Net asset value	Net asset value	$ 81	The net asset value increased
Direct debt	$ 193	Discounted cash flow	Discount rate	4.8% -17.0%	The discount rate decreased

Net asset value

Net asset value is determined by BCI based on the fair value of assets less liabilities. Such investments are closed funds with significant restrictions on redemptions and, accordingly, BCI is unable to dispose of the pooled fund investment until the maturity or wind-up and liquidation of the respective pooled fund. In such cases, it is the Plan's policy to categorize the pooled fund investment as level 3 within the fair value hierarchy.

($ millions except as otherwise noted)

7. FAIR VALUE OF FINANCIAL INSTRUMENTS (CONTINUED)

d) Significant unobservable inputs used in measuring fair value (continued)

Discount rate

This represents the discount rate applied to the expected future cash flows of the direct private equity and direct debt investments. For the discount rates used, the underlying investment manager assesses both the risk premium and the appropriate risk-free rate based on the economic environment in which the investee entity operates. The discount rate is adjusted for such matters as liquidity differences, credit and market factors. The estimated future cash flows are then discounted using the discount rate determined. Cash flows used in the discounted cash flow model are based on projected cash flows or earnings of the respective investee entity.

e) Effects of unobservable input on fair value measurement

The use of different methodologies or assumptions could lead to different measurements of fair value. For fair value measurements in level 3, changing one or more of the assumptions used for a reasonable alternative assumption could have the following effects on net assets attributable to holders of redeemable units.

The pooled fund units, direct private agriculture investments and direct debt investments were valued based on information received from BCI, the manager of the respective investments. The fair value of these investments fluctuates in response to changes to specific assumptions for these particular investments, as determined by BCI. The favourable and unfavourable effects of reasonable alternative assumptions for the valuation of pooled fund units, direct private agriculture investments and direct debt investments have been calculated by adjusting the respective underlying net asset value by 10%.

Effects of unobservable input on level 3 fair value measurement

	2021		2020	
	Favourable	Unfavourable	Favourable	Unfavourable
Pooled fund units	$ 1,440	$ (1,440)	$ 1,147	$ (1,147)
Direct private equity	-	-	33	(33)
Direct private agriculture investments	-	-	8	(8)
Direct debt	-	-	19	(19)
	$ 1,440	**$ (1,440)**	**$ 1,207**	**$ (1,207)**

For direct private equity investments, BCI engages third-party independent valuators to estimate the fair market value. The valuators produce comprehensive reports for each applicable investment. The favourable and unfavourable effects of reasonable alternative assumptions for the valuation of direct investments have been calculated by recalibrating the model values using unobservable inputs based on the upper and lower threshold of the respective investment's range of possible estimates.

f) Financial instruments not measured at fair value

The carrying value of members' contributions receivable, employers' contributions receivable, accounts payable and accrued expenses and payable for purchase of investments approximate their fair value given their short-term nature. These financial instruments are classified as level 2 in the fair value hierarchy because, while prices are available, there is no active market for these instruments.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

8. INVESTMENT INCOME

	2021			2020		
	Income allocation	Change in fair value	Total	Income allocation	Change in fair value	Total
Short-term	$ 1	$ (3)	$ (2)	$ 9	$ (19)	$ (10)
Bonds	246	(335)	(89)	120	310	430
Canadian equities	35	278	313	35	31	66
Global equities	117	1,145	1,262	129	869	998
Emerging markets equities	57	(37)	20	56	637	693
Mortgages	30	20	50	35	(13)	22
Real estate	122	626	748	54	(77)	(23)
Private equity	774	551	1,325	24	852	876
IRR*	482	(72)	410	57	223	280
	1,864	2,173	4,037	519	2,813	3,332
Directly held derivatives	-	34	34	-	60	60
	$ 1,864	$ 2,207	$ 4,071	$ 519	$ 2,873	$ 3,392

* Infrastructure and renewable resources

Investment income represents realized and unrealized pooled investment portfolio income attributable to the Plan, as a unit holder, and income from directly held investments. Income allocation is composed of interest, dividends and other investment payments. Change in fair value is composed of realized gains and losses on the disposal of investments and derivatives, and unrealized gains and losses on investments and derivatives held at year-end. All income earned within a pooled investment portfolio is reinvested within the portfolio.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

9. CONTRIBUTIONS

	Basic account	Inflation adjustment account	Supplemental benefits account	Total
		2021		
Members' contributions				
Regular	$ 328	$ 69	$ -	$ 397
Past service purchases	3	1	-	4
	331	70	-	401
Employers' contributions				
Regular	328	72	1	401
Past service purchases	2	1	-	3
	330	73	1	404
	$ 661	$ 143	$ 1	$ 805
		2020		
Members' contributions				
Regular	$ 279	$ 102	$ -	$ 381
Past service purchases	2	1	-	3
	281	103	-	384
Employers' contributions				
Regular	278	107	1	386
Past service purchases	1	-	-	1
	279	107	1	387
	$ 560	$ 210	$ 1	$ 771

Member and employer contributions are as defined under the pension plan rules. Members' past service purchases are voluntary contributions.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

10. BENEFITS

	Basic account	Inflation adjustment account	Supplemental benefits account	Total
		2021		
Regular pension benefits	$ 1,038	$ -	$ 1	$ 1,039
Indexing – regular pension benefits	237	-	-	237
Termination and refund benefits	24	7	-	31
Death benefit payments	10	1	-	11
	$ 1,309	$ 8	$ 1	$ 1,318
		2020		
Regular pension benefits	$ 1,013	$ -	$ 1	$ 1,014
Indexing – regular pension benefits	240	-	-	240
Termination and refund benefits	24	4	-	28
Death benefit payments	10	1	-	11
	$ 1,287	$ 5	$ 1	$ 1,293

11. INVESTMENT AND ADMINISTRATION COSTS

	2021	2020
Investment management	$ 56.4	$ 80.4
Benefit administration	14.7	13.6
Board secretariat costs	0.3	0.3
Other professional services	0.5	0.3
Board remuneration and expenses	0.2	0.2
Audit and actuary expenses	0.3	0.1
	$ 72.4	$ 94.9

BCI and Pension Corporation are related parties to the Plan. The Board appoints members to each of the respective corporate boards. Investment management and benefit administration costs are approved by the Board.

Investment management costs represent amounts charged to recover internal and external management costs incurred by BCI, except those external management fees related to investments managed by an underlying external manager, where management fees are embedded in the net assets of the respective investment. Underlying external investment management fees of $52.2 (2020: $36.9) were netted against investment income.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

11. INVESTMENT AND ADMINISTRATION COSTS (CONTINUED)

Benefit administration costs represent amounts charged to recover benefit administration costs incurred by Pension Corporation. These transactions are in the normal course of operations and are measured at the exchange amount of consideration established and agreed to by the related parties.

Board secretariat costs represent amounts directly incurred by the Board for costs associated with supporting the Board.

Other professional services costs include insurance and legal fees incurred directly by the Plan.

Board remuneration and expenses represent amounts for trustee compensation and direct expenses.

12. ACCOUNT TRANSFERS

	2021		2020	
	Basic account	Inflation adjustment account	Basic account	Inflation adjustment account
Indexing supplements	$ 64	$ (64)	$ 237	$ (237)
Indexing of deferred pensions	2	(2)	2	(2)
Fiscal 2020 IAA transfer to RSA	80	(80)	-	-
	$ 146	$ (146)	$ 239	$ (239)

The IAA is a separate account maintained for funding current and future cost-of-living adjustments. The IAA is funded through a portion of ongoing contributions from employers and members, investment income earned and excess investment return earned in the Basic Account.

Cost-of-living adjusted pension payments are made from the Basic Account. Each year, if members' pension payments are adjusted for the current cost-of-living adjustment, monies are transferred from the IAA to the Basic Account to cover the present value of all future payments arising from the current cost-of-living adjustment. The Board considers all relevant factors and its IAA funding policy to determine if a cost-of-living adjustment will be granted on pensions in pay and the amount of the cost-of-living adjustment, if any. As at January 1, 2021, retired members received a cost-of-living adjustment of 0.50% (2020: 1.90%), and indexing supplements were transferred.

When a deferred pension commences, the present value of the cost-of-living adjustments during the deferral period is transferred from the IAA to the Basic Account. Approximately $29 (2020: $31) of the current IAA balance is for cost-of-living adjustments already granted for deferred pensions but not yet transferred to the Basic Account.

As the IAA to RSA contribution transfer was effective retroactively to January 1, 2020, the fiscal 2020 IAA contributions plus interest of $80 was moved in 2021 to the RSA, which is held notionally within the Basic Account.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

12. ACCOUNT TRANSFERS (CONTINUED)

Excess investment return is based on investment income earned on those assets in the Basic Account required for pensions currently being paid, approximately $13.5 billion of assets for 2021 (2020: $13.1 billion). The excess investment return rate is determined by taking the difference between the actual five-year annualized market rate of return (9.90%) and the rate of return used by the Plan actuary (5.75%) in valuing the Plan's liabilities. The calculated excess investment return rate for 2021 was 4.15% (2020: 2.7%), resulting in a positive excess investment return amount of $560 (2020: $354).

Plan rules allow the positive excess investment return transfer to occur at the discretion of the Board. Should the excess investment return in any year not be transferred to the IAA, it will be carried forward cumulatively with interest and if available, may be transferred to the IAA at the discretion of the Board in the future. If the balance is ever negative, it will be offset against future positive excess investment returns before transfers to the IAA will recommence. The excess investment interest is an amount determined by applying the five-year annualized market rate of return to the fiscal year opening balance.

Excess investment return	2021	2020
Cumulative excess investment return, beginning of year	$ **1,616**	$ 1,161
Interest applied to beginning of year amount	**160**	101
Excess investment return	**560**	354
Cumulative excess investment return, end of year	**$ 2,336**	**$ 1,616**

13. SUPPLEMENTAL BENEFITS ACCOUNT

The Supplemental Benefits Account funds certain supplemental benefits. For example, pension benefits that exceed *Income Tax Act* limits for registered pension plans are paid through this account.

14. COMMITMENTS

The Plan participates in private equity, international real estate, mortgages and infrastructure and renewable resource pools. As at December 31, 2021, the Plan's share of commitments for future investment contracts in these pools over the next several years is approximately $5,551 (2020: $4,864).

15. CAPITAL DISCLOSURES

Capital is defined as the funded status (surplus or deficit) of the Plan as determined by the actuary. The Plan's objective for managing capital is to ensure that the assets of the Plan are invested prudently and effectively, and with contributions adequate to meet the obligations of the Plan. Management of the Plan's funded status is achieved by adjusting member and employer contribution rates, through implementation of the SIPP, which affects the earnings of the Plan, and, in the case of the IAA, by changing the benefits paid. The Board has a funding policy that outlines the principles that provide guidance in managing this process. The investment performance of the Plan's assets is reviewed by the Board on a regular basis and compared to relevant industry benchmarks. Benefit entitlement is based on the provisions of the Agreement and the pension plan rules. Funding deficits must be funded over a period not to exceed 15 years.

TEACHERS' PENSION PLAN

Notes to the financial statements for the year ended December 31, 2021

($ millions except as otherwise noted)

15. CAPITAL DISCLOSURES (CONTINUED)

An actuarial valuation must be prepared at least once every three years. The latest actuarial valuation for funding purposes was prepared as at December 31, 2020, and has two components: the Basic Account non-indexed benefits and, by considering the valuation of the entire Plan, the non-guaranteed inflation adjustment account benefits. The next full actuarial valuation will be carried out as at December 31, 2023, with the results included in the December 31, 2024, financial statements.

The Act and the Board's funding policy require that contribution rates comply with the going-concern requirements of PBSA.

16. PRIOR YEAR COMPARATIVES

The prior year comparatives have been reclassified to conform to the current year presentation.

Teachers' Pension Plan

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MISSION STATEMENT
To provide retirement income to plan members by effectively and efficiently meeting the pension promise and fulfilling the joint trust placed on us by the Plan Partners.

COVER PHOTO
Member Jennifer Fox, Dawson Creek Secondary, SD59 (Peace River South)

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