

# Contents

- 1 ALBERTA TEACHERS' RETIREMENT FUND
- 2 2021-22 HIGHLIGHTS
- 6 BOARD CHAIR MESSAGE
- 7 CEO MESSAGE
- 8 ATRF GOVERNANCE AND STRATEGY
- 12 PLAN FUNDING
- 18 MEMBER SERVICE
- 27 INVESTMENTS
- 34 ATRF BOARD ATTENDANCE AND REMUNERATION
- 36 COMPENSATION DISCUSSION AND ANALYSIS
- 46 FINANCIAL STATEMENTS



Established in 1939, the Alberta Teachers' Retirement Fund (ATRF) is an independent corporation governed by Alberta's *Teachers' Pension Plans Act*. From our office in Edmonton, Alberta, we are the trustee, administrator, and custodian of the pension assets of the Teachers' Pension Plan as well as the Private School Teachers' Pension Plan. Our plan members are Alberta teachers employed in school jurisdictions and charter schools, and teachers employed by participating private schools.

Registered under the *Income Tax Act*, the plans are sponsored by the Government of Alberta (GoA) and the Alberta Teachers' Association (ATA), who are jointly responsible for changes to plan design, benefits, and funding arrangements.

Mission

Working in partnership to secure your pension income.

#### **Mandate**

ATRF's mandate is to:

- 1. Deliver the benefits established by the plan sponsors, and
- 2. Prudently invest the assets of the plan and set contribution rates to maintain full funding over the long term at a cost and risk level acceptable to the sponsors.

# Highights

# Charting a Course to Full Funding

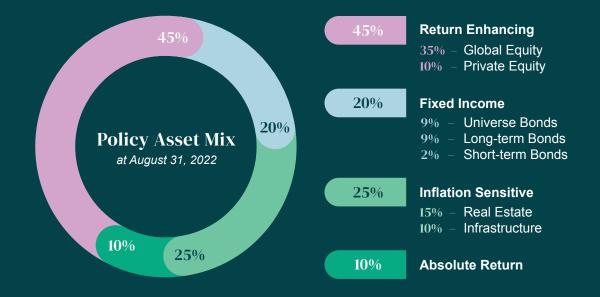


#### **Funding for Benefits**



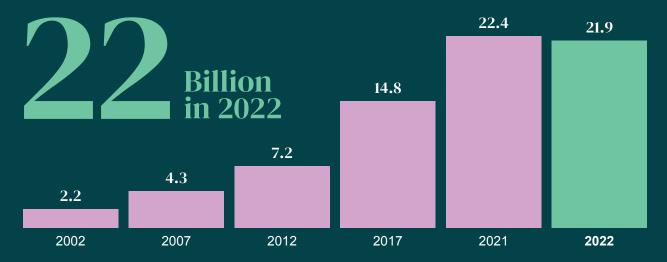
The pension benefits paid to members each year are financed from two sources: investment returns and contributions. Contributions are made by members (teachers) and employers. In the case of the Teachers' Pension Plan, employer contributions are made by the GoA.

Over the long term, approximately 75% of plan pension benefits are financed through investment returns, 13% from members' contributions and 12% from employers' contributions.



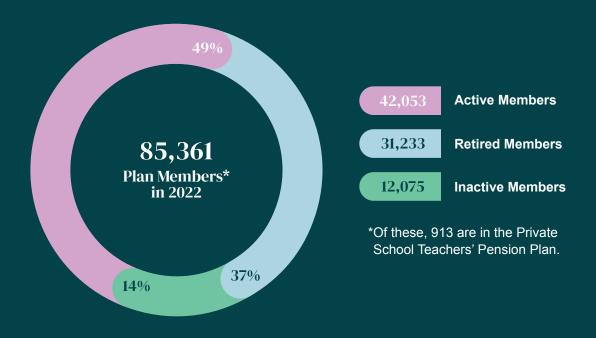


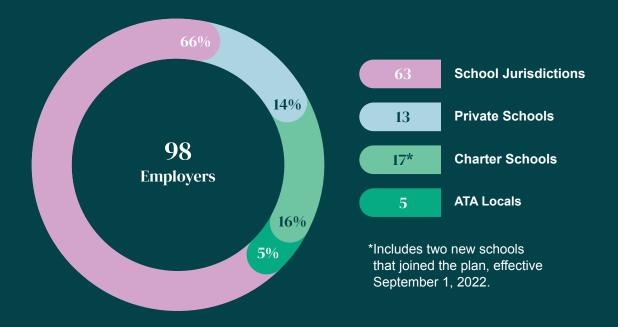




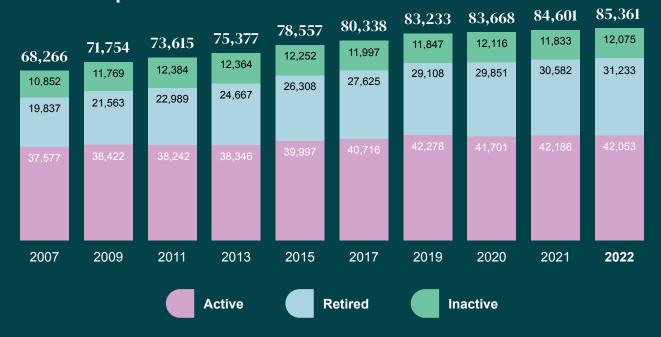
ATRF is now 18th (19th last year) on the top 100 listing of pension plans in Canada by asset size and **8th fastest growing fund.** 

# Our Members and Employers





#### **Membership Over the Years**



#### Average Age and Pensionable Service

|   | 2000 | 2005 | 2010 | 2015 | 2020 | 2021 | 2022 |
|---|------|------|------|------|------|------|------|
| Retired member average age                                      | 68   | 68   | 68   | 67.8 | 72.1 | 72.5 | 72.8 |
| New retired member average age                                  | 57.8 | 58   | 59   | 60   | 60.0 | 59.7 | 60.0 |
| Average pensionable service of new retired members              | 26.6 | 26.4 | 26.2 | 25.6 | 25.5 | 25.3 | 25.1 |
| Active and disabled member average age                          | 42.7 | 42.4 | 41.7 | 41.8 | 42.3 | 42.3 | 42.4 |
| Active and disabled member average years of pensionable service | 12.0 | 12.2 | 11.1 | 10.3 | 11.7 | 11.7 | 11.2 |

#### INTERESTING MEMBER FACTS

**40 Years** 

The oldest plan member is **104 years old**, and has been receiving a pension for **over 40 years**.

309

**309** retired members are **age 95** and older.

51

51 members are centenarians.



# Board Chair Message

SANDRA JOHNSTON



Last year, ATRF turned the corner on some significant challenges. The legislated transition of investment management to AIMCo is complete and in our rear-view mirror, and like everyone else, we're hoping we have passed the worst of the COVID-19 pandemic. I am very proud to report how our organization successfully navigated through these and other obstacles and mapped out a course that ensures teachers' pensions continue to be effectively managed and properly safeguarded.

Through it all, the ATRF Board worked closely with ATRF's management to ensure our organization remained focused on what matters most, namely the pension and pension fund management that continues to provide excellent value to members and sponsors.

The complex work of complying with the legislated change in investment management was completed last year. I am proud that strong governance and an experienced, expert team at ATRF enabled the transition to progress smoothly while maintaining our funds' value and keeping associated costs as low as possible.

Moving forward, ATRF will continue to develop the comprehensive investment policy and strategy that will drive the long-term success of the plans. This development is an essential function because, as a pension manager, ATRF takes a long-term, risk-aware approach to investing that is specifically suited to meet the needs of our plans and the plans' beneficiaries. Through our funding policy and the direction we provide to AIMCo, ATRF manages the risk factors inherent in our investment portfolio, which is central to achieving the long-term results needed to fund pensions.

We have provided our investment strategy to AIMCo and now look to them for effective day-to-day management. We will diligently oversee the work done by AIMCo to evaluate how well they implement our strategy and assess the results they achieve.

As a board, we have done a great deal of work in the past few years to ensure our organization's strategic direction is effective and refined to reflect our new investment management structure. Again, last year we looked closely at our strategy to ensure we continue to provide exceptional value for our members, employers, and sponsors. This also included working with management to confirm appropriate safeguards continue to be in place to minimize risk within the organization and that they are balanced appropriately with our desire to continue innovating and improving. As a result, I am very proud to say we remain right on course for continued success and long-term plan sustainability.

This long-term management approach is one of the factors that contributed to our plans' strong funded status. I am very pleased to report that, as a result of ATRF's sound, long-term strategy and prudent management, the Teacher's Pension Plan is 99% funded this year, and the Private School Teachers' Pension Plan is 108% funded.

Ensuring benefit security is our primary objective when monitoring the plans' funding and determining contribution rates. I am very pleased to announce the board is able to maintain contribution rates at current levels for both plans, even after several decreases over the past few years and following a year of lower investment returns. This also takes into consideration current financial markets and a higher inflation environment. The plans are in good financial health and on solid footing with adequate risk management levers.

In closing, I would like to thank my colleagues on the ATRF Board, the leadership team at ATRF, and our staff, who work so hard on behalf of our members. I would also like to express my sincere appreciation for the support our members continue to show for the work our organization does. We continue to be grateful for the opportunity to serve our members and sponsors.



# CEO Message

ROD MATHESON



I am very proud to highlight how the remarkable team at ATRF has expertly managed our pension plans and provided high-value services to our members and employers in 2021-22.

I am particularly proud of the way our service benchmarks demonstrated how our team goes above and beyond for our members and how we exceeded targets in this area. This comes as a direct result of the dedication and expertise of our staff, and you'll find more details about those measures later in this report.

Last year, we continued working to provide even more flexibility in the way we serve members so that we can help them where, when, and how it works best for them. That resulted in ongoing revisions to our online offerings, including introducing new webinars and improving our My*Pension* member portal. It also saw improvements to ATRF's online service offerings so we can continue serving members where and how it is convenient for them—and in this area, we are committed to improvement, so watch for even more to come this year.

In other parts of our organization, I am particularly pleased to be able to reassure members and sponsors about the continued stability of our pension plans—despite last year's extraordinary economic conditions. The long-term approach ATRF has always taken to pension management means that in times of market volatility, like those experienced last year, we are well-positioned to weather the storm.

That approach is also evident in our investment results last year, where despite extraordinarily challenging market conditions, our overall portfolio return was -1.80%, which exceeded the performance benchmark by 2.25%. Over a 10-year horizon, ATRF has delivered a total return of over 9% per annum and excess return over its benchmark of 1% per annum.

So, to all our members, I want to thank you again for your support last year and reassure you that we indeed do have our hands firmly on the wheel, and are ready, willing, and able to continue serving you for many years to come.

To the ATRF Board, I would like to say thank you for your support and guidance as we worked to position ATRF for continued success in the years ahead.

And to our ATRF staff, on behalf of our entire Executive Leadership Team, I would like to thank you for a job well done. We know how hard you all work to serve our members and support our plans. We know how much that means to Alberta teachers and our other stakeholders, and we genuinely appreciate your efforts.

#### **ATRF Executives**

As at August 31, 2022

ROD MATHESON Chief Executive Officer

#### TINA ANTONY

Vice President, General Counsel and Corporate Secretary

MARCIE CHISHOLM Vice President, People & Culture

#### ALWYN CHRISTIAN

Vice President, Information & Technology Services (Acting)

#### JULIE JOYAL

Vice President, Pension Services

#### MYLES NORTON

Vice President, Finance

#### **GARY SMITH**

Vice President, Fund Risk & Strategy





# ATRF Governance and Strategy



#### **ATRF Board Members**



SANDRA JOHNSTON, CHAIR Board Committee Membership: Investment Committee, Audit and Finance Committee



GREG FRANCIS
Board Committee
Membership: Investment
Committee, Governance
Committee (Vice-Chair),
Human Resources
and Compensation
Committee (Chair)



PAUL HAGGIS
Board Committee
Membership: Investment
Committee, Governance
Committee (Chair), Audit
and Finance Committee
(Vice-Chair)



MARIA HOLOWINSKY Board Committee Membership: Investment Committee (Chair), Audit and Finance Committee, Governance Committee



BRAD LANGDALE Board Committee Membership: Investment Committee, Human Resources and Compensation Committee (Vice-Chair)



ALEXANDRIA MATOS Board Committee Membership: Investment Committee, Governance Committee



RAFI
TAHMAZIAN
Board Committee
Membership: Investment
Committee (Vice-Chair),
Human Resources and
Compensation Committee



TIM WILES
Board Committee
Membership: Investment
Committee, Audit and
Finance Committee (Chair),
Human Resources and
Compensation Committee

#### Whistleblower Disclosures

In compliance with Whistleblower legislation, ATRF has an established policy and program which provides all employees with the ability to confidentially report any failure to comply with our Code of Conduct. In 2021-22, no disclosures were received.



#### **Strategy and Planning**

The ATRF 5-Year Strategic Plan is key to the organization's success in delivering on its mandate. The course we take during this journey needs to be reviewed and course corrections made as needed to ensure we are on the most efficient and effective route.

Last year, the ATRF Board and Executive Leadership Team performed a comprehensive review of the strategic plan, and reaffirmed that the core strategic imperatives that will best ensure we deliver effectively on our mandate are:

# 1. Excellence in investment and funding strategy:

Developing and maintaining effective funding and strategic investment management through appropriate investment and funding policy development, and investment management oversight.

## 2. Experiences that meet diverse member needs:

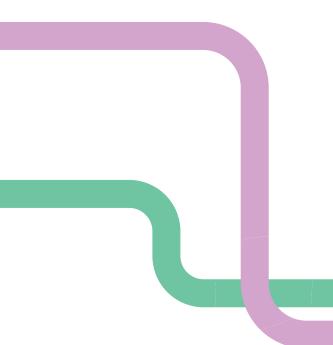
Embracing innovation presents opportunities to evolve and further optimize how we provide information and services to members. Our service strategy balances value drivers, diverse and evolving member expectations, and cost.

#### 3. Expertise that builds trust and credibility:

Positioned as an objective pension expert, we have an opportunity to inform the decision-making processes of our many stakeholders through proactive analysis, research, and information sharing.

# 4. Evolution to thrive in a changing environment:

As our organization continues to respond to significant changes in the strategic environment, we need to evolve and adapt how we operate, manage, and govern.



#### **Risk Management**

To deliver on ATRF's mission and mandate, we must effectively identify, assess, and manage various enterprise risks. The ATRF Board and Executive Leadership Team recognize the importance of risk management and its role in protecting the organization from avoidable losses while also capitalizing on opportunities for increased efficiencies.

At ATRF, we have established a strong and effective enterprise risk management program and related tools based on a robust risk culture and an accountable governance structure. We have integrated risk management into the annual strategic and business planning exercise by setting risk appetite statements, monitoring emerging risks, and developing an enterprise risk register and mitigation strategies.

Last year, ATRF's enterprise risk management included the following programs and processes:

- Annual Risk & Control Assessment Program
- · Fraud Risk Assessment
- · Business Continuity Management
- · Third-party Risk Management
- Project Risk Management Program

These comprehensive risk management programs and processes are supported by semi-annual internal control testing exercises, which provide assurance to the board and management that ATRF is effective at managing risks and has the necessary structures in place to support risk-informed decision-making going forward.

#### **ATRF Information Security**

ATRF is committed to protecting our information assets, including plan member information. As a result, we have implemented an information security framework and multiple layers of technologies that can predict, prevent, detect, and respond to information security events.

We established a solid information security program and made several improvements last year, including the implementation of 24x7 security incident detection and response capabilities, automation of security events handling, and enhancements to the technology suite protecting against modern threats. In addition, at ATRF we continually educate our staff on security matters and the latest threats to help ensure plan member information remains protected.

A solid suite of technology controls and a cyber-aware workforce helped ATRF protect its critical information in 2021-22. ATRF will continue to monitor and enhance its information security posture to combat emerging and advanced threats.





# Plan Funding

#### **Plan Sustainability Considerations**

The ATRF Board has established a funding policy focused on sustainability for both the Teachers' Pension Plan and the Private School Teachers' Pension Plan to ensure the plans will be able to pay the pensions earned by members, today and over the long term.

#### **ATRF Funding Objectives:**

- 1. Security of member benefits and affordability of contributions,
- 2. Keeping contribution rates stable, and
- 3. Inter-generational equity.

#### Plan Structure and Funding



The Teachers' Pension Plan and the Private School Teachers' Pension Plan have three unique funding arrangements and liability structures:

Teachers' Pension Plan pre-1992: In 2007, the Government of Alberta (GoA) and the ATA agreed that government would be responsible for liabilities associated with pensions for the period of service before September 1992.

Teachers' Pension Plan post-1992: The cost of pension benefits earned for service after August 1992 is shared between active plan members and the GoA. Funding deficiencies under the plan are amortized by additional contributions from active members and the GoA over a maximum 15-year period.

Private School Teachers' Pension Plan: In 1995, legislation established a separate plan for private school teachers. The funding of this plan mirrors the post-1992 portion of the Teachers' Pension Plan, except the cost is shared between teachers and employers (private schools) instead of the GoA.

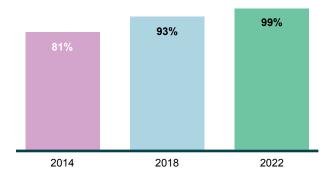
#### **Plan Funded Status**

ATRF regularly conducts actuarial funding studies to assess the value of the plans' liabilities compared to their assets and to ensure adequate funding. An actuarial valuation is a report on the health of the plans.

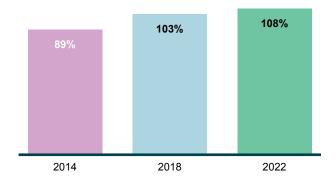
The plans' funding is calculated using actuarial assumptions and methods. The funding assumptions include margins (or cushions) to buffer against unfavourable results in the rate of returns or other factors affecting the plans. The margin is one of the important risk management tools to help achieve our funding objectives of contribution stability and benefits being fully funded. Both plans have healthy margins built in at this time.

The funding valuation uses another tool to achieve our funding objectives. It's an actuarially accepted practice of smoothing fund returns over a five-year period to even out the impact of the volatility of market returns on the plan's funded status and contribution rates. This practice produces a funding value of assets that can be higher or lower than the market value in any given year. The difference between the market value of assets and the funding value of assets is referred to as the fluctuation reserve. The asset smoothing helped dampen the impact of last year's lower investment returns, acting as a powerful risk management lever.

#### **Teachers' Pension Plan Funded Ratios**



# Private School Teachers' Pension Plan Funded Ratios



Actuarial valuation results as at August 31, 2022:

# **Teachers' Pension Plan Post-1992 Period** \$ *Millions*

| Market Value of Assets            | 21,829 |
|-----------------------------------|--------|
| Funding Value of Assets           | 22,203 |
| Fluctuation Reserve               | (374)  |
| Funding Liabilities               | 22,418 |
| Active and disabled members       | 10,190 |
| Inactive members                  | 856    |
| Retired members and beneficiaries | 11,372 |
| Funding Deficiency                | 215    |
| Funded Ratio                      | 99%    |

#### Private School Teachers' Pension Plan \$ Millions

| Market Value of Assets            | 114.4 |
|-----------------------------------|-------|
| Funding Value of Assets           | 116.5 |
| Fluctuation Reserve               | (2.1) |
| Funding Liabilities               | 108.2 |
| Active and disabled members       | 51.4  |
| Inactive members                  | 12.6  |
| Retired members and beneficiaries | 44.2  |
| Funding Surplus                   | 8.3   |
| Funded Ratio                      | 108%  |

#### Contribution Rates for TPP and PSTPP

The ATRF Board carefully reviews a number of factors when determining the plans' contribution rates. This year, after four rate reductions since 2016, the board determined the rates will remain unchanged at their current levels for both plans, effective September 1, 2023.

The decision was based on the August 31, 2022 actuarial valuations and considered the current volatile financial markets, and higher inflation environment, while continuing to:

- Prudently manage the plan's funding, maintain robust margins and reinforce the plans' long-term sustainability.
- Meet the plans' funding objectives of benefit security, contribution rate affordability and stability, and inter-generational equity.

The plans are in good financial health, on solid footing with adequate risk management levers.

# Teachers' Pension Plan Contribution Rates

% of pensionable salary

|                               | Current<br>Rates | Sept 1,<br>2023 |
|-------------------------------|------------------|-----------------|
| Total Teachers' Contribution  | 10.32            | 10.32           |
| Total Government Contribution | 9.89             | 9.89            |

# Private School Teachers' Pension Plan Contribution Rates

% of pensionable salary

|                              | Current<br>Rates | Sept 1,<br>2023 |
|------------------------------|------------------|-----------------|
| Total Teachers' Contribution | 9.95             | 9.95            |
| Total Employer Contribution  | 9.51             | 9.51            |

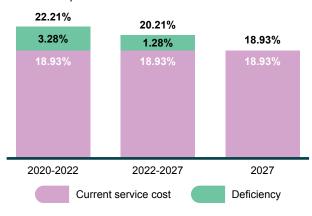
The total contribution rate for the TPP is 20.21% of teacher salaries, consisting of a current service cost of 18.93% of salaries and total deficiency contributions of 1.28% of salaries. The deficiency contributions are planned to decrease according to the bar graph, found on the right. The current service cost is the amount needed to fund one more year of pensionable service for teachers. The deficiency contributions are the amount needed to pay the funding deficiency (or the plan's deficit).

Of course, these projections assume that all assumptions remain unchanged, and will be realized as expected. Actual experience will vary, and the actual results recognized in future actuarial valuations can be better or worse than these projections.

The PSTPP total contribution rate of 19.46% of teacher salaries consists of only current service costs since this plan doesn't have a funding deficiency.

#### **Contribution Rates**

Effective September 1



Teachers' contributions are calculated using one rate for pensionable salary below the Year's Maximum Pensionable Earnings (YMPE), and a different rate for salary above YMPE, similar to how the pension formula is determined. The YMPE is determined by the federal government for the Canada Pension Plan, and for 2023 it will be \$66,600.

#### **Contribution Rates**

% of pensionable salary

|                                       | Teachers'<br>Pension Plan | Private<br>School<br>Teachers'<br>Pension Plan |
|---------------------------------------|---------------------------|--|
| Teacher Contribution Rates up to YMPE | 9.00                      | 8.50   |
| Teacher Contribution Rates Above YMPE | 12.86                     | 12.15  |

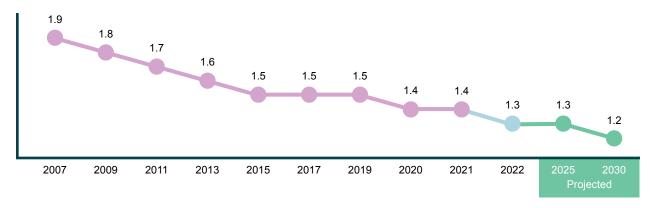
#### **Funding Challenges**

The ATRF Board carefully monitors several factors to ensure our plans are properly positioned for long-term sustainability and can navigate through or around any potential challenges that may arise. Some of the most significant actual and potential funding challenges include:



- Change in plan assumptions: Actuarial assumptions and methodologies are regularly reviewed to ensure they continue reflecting the plans' experience and are adequate and sound for the plans' sustainable funding.
- Plan maturity: In very general terms, a mature plan is one with a higher ratio of retired members receiving benefits compared to active members paying into the plan. Another measure of maturity is the proportion of retirees' liabilities to the total liabilities in the plan.

#### **Active to Retired Member Ratio**



 Plan members' increasing longevity: Increased life expectancy means pensions are paid for a longer period of time after retirement— and yet they still need to be funded with employer and employee contributions over a similar number of years in an average career.

A **one-year increase** in life expectancy for the entire membership would **increase the plans' liabilities by 3-4%.** 



7

Volatility of investment returns: A key
 assumption in funding pension plans is that the
 fund will earn an average net investment return
 each year at least equal to the discount rate
 used to determine future funding requirements.
 At ATRF, we've developed a strategy that
 carefully evaluates a number of factors to
 determine investment risk levels that are
 appropriate to fund our plans and to reduce
 the impact of volatile market returns.



#### Inflation Protection

The Alberta teachers' pension plans have a provision to provide retired members with partial indexation or cost-of-living adjustments (COLA) on their pension to help with the impact of inflation. This means that,

unlike some other pension plans, pensions for retired Alberta teachers are increased each year with COLA.

Like the other benefits paid under the teachers' pension plans, the COLA provision and formula are defined in the plan rules (legislation) set by the plan sponsors. The COLA factor for the teachers' plans is set at 60% of the Alberta Consumer Price Index (ACPI) for pensionable service prior to 1993 and 70% for pensionable service after 1992. That means pension payments increase each January 1 at 60% or 70% (or a combination based on pensionable service) of the annual rate that the ACPI increases. The cost

of benefits, including COLA, is funded through contributions. The 60% factor is shared equally by active teachers and employers; the extra 10% is the responsibility of active teachers, as agreed between the plan sponsors.

The COLA rates applicable for January 1, 2023, reflect the average increase in inflation for the period November 2021-October 2022 compared to November 2020-October 2021 as per the plan rules, which includes the higher inflation experienced over this period. The resulting ACPI rate is 6.20%, providing a January 1, 2023 COLA increase of 3.72% for pensionable service before January 1, 1993 and 4.34% for pensionable service after December 31, 1992. The last time COLA rates were this high was in 2004.

COLA is funded by contribution rates. The plans' funding valuation uses several actuarial assumptions, including inflation, to forecast future liabilities. If inflation is higher than what is assumed in the funding valuation, the plans' liabilities will increase and may create a funding deficiency. This is one scenario where the margin (or cushion) for adverse experience can be an effective and important tool to mitigate the impact of this risk, should the actual plan experience differ from the assumed experience. In addition, for this actuarial valuation cycle, the ATRF Board has prudently increased the short-term inflation assumption used for the COLA provision to recognize the currently higher inflation environment and ensure sufficient funds are set aside for these anticipated increases in liabilities.

#### **Financial Statements Valuation**

ATRF engages an independent actuary to perform two actuarial valuations of the plans: one for funding purposes, which is performed in compliance with the prescribed actuarial and regulatory standards; the second for accounting purposes, which is performed in compliance with the prescribed accounting standards, and which can be found in the Financial Statements. Both types of valuations have prescribed uses and are based on the same underlying plan member data, but the valuations differ as follows:

- The funding valuation uses the actuarial value of assets with market returns smoothed over a five-year period, whereas the accounting valuation uses the market value of assets.
- The funding valuation uses a margin for adverse deviation in the pension obligations and current service cost for increased security and stability, whereas the accounting valuation doesn't include a margin.

Accordingly, the asset and liability amounts in the Financial Statements, and related financial status (deficit or surplus), differ from those in the funding valuation.



# Member Service



# Message from VP, Pension Services

JULIE JOYAL

Traversing tough terrain while guiding the pension plan safely home is an apt metaphor for the journey we've taken in the past several years. Likewise, 2021-22 required agile and innovative solutions as we navigated the ongoing pandemic, re-opened our office to in-person services, proactively reached out to members, and provided answers to plan members' increasingly complex questions.

#### **In-Person and Online Services**

After two years of working remotely, ATRF welcomed members and the public back to our office in May 2022. This transition went very well. Our first priority was to ensure members remained safe through enhanced health and safety protocols. We also provided members with convenient access to book appointments through our new online tool MyAppointment. In addition, we continued to offer phone and virtual appointments, in conjunction with in-person, providing multiple options for members to connect with ATRF according to their preference.

We continued expanding other online service offerings this year, including additional webinar time slots to encourage plan members to attend at a time that was convenient for them. This year, we added to our webinar offerings, including one on purchasing and transferring service, one specifically for substitute teachers, and one for new members.

#### **Proactive Member Outreach**

I am also very proud of the work we did this year, providing proactive and targeted communications to plan members at different stages in their teaching careers. We reached out to members when they returned from leave with service purchase options. We also changed the way we welcomed new members by providing a welcome letter and a summary of important plan information, including a QR code for convenient access to our new website. We provided more information for inactive members about their plan options when we sent their annual statement last year.

#### **Enhanced Complexity**

While the volume of requests, applications, and retirements have remained fairly stable this year, we have begun seeing a trend of more complex questions and situations from plan members. This engagement from members is a positive sign of their interest in continued financial literacy, which may in part be prompted by current economic events. Regardless of the motivation, we will meet members where they are, providing what they need when they need it. We have an unyielding commitment to continuous improvement and ensuring plan members receive high-quality service, which we're hoping makes members' pension terrain easier to maneuver.

A warm, heartfelt thank you for another great year.

#### **MyPension**

**59%** 

**More than 59%** of plan members are registered for My*Pension*. This number has increased year over year, with only 37% of members registered in 2011.

**1,412 secure messages and documents** were sent to plan members from My*Pension*.

1,412

87,875

**87,875 pension estimates**, 6,679 termination benefit estimates, and 3,789 purchase estimates were completed using My*Pension*.

**64% of new retired members** applied for their pension online through My*Pension*.

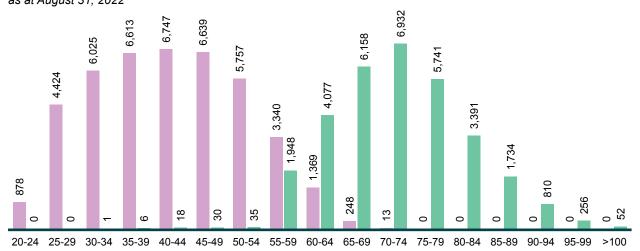
64%

85%

**85% of members** who booked appointments with pension counsellors did so online through MyAppointment, and 47% of members chose to meet their counsellor virtually.

#### **Demographic Profile**

# Age of Active and Retired Members as at August 31, 2022



42,053 Total

Age of Active Members

31,189 Total

Age of Retired Members and Survivors

#### **Employers**

ATRF worked with 96 employers in 2021-22. These employers are made up of a mix of ATA locals and school boards, whether that be private, charter or public schools. We are pleased to have welcomed two new charter schools in the plan effective September 1, 2022, making a total of 17 charter schools for the 2022-23 school year and 98 employers in total participating in the plans. employers

98 employers, in total, are participating in the plans.

#### **High Quality Member Service**

ATRF transitioned this year from primarily working remotely while maintaining a skeleton crew in the office to successfully and safely re-open the office to staff and the public and adapting to a hybrid workplace. Through this transition, ATRF staff

were dedicated to ensuring that plan members were supported without interruption. At the same time, we continued to meet and exceed highquality service benchmarks that are among the highest in the pension industry.

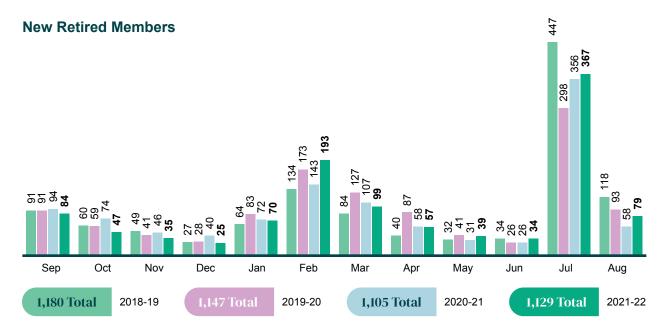
|                              | Benchmarks<br>for 2021-22                   | Average Elapsed<br>Time in 2021-22 | % That Met or<br>Exceeded Benchmark |
|------------------------------|---|------------------------------------|-------------------------------------|
| Ongoing pension payments     | On the third last business day of the month | All payments made on time          | 100%                                |
| Pension options package      | Within 5 days of application                | 4 days                             | 78%                                 |
| Pension estimate             | Within 5 days                               | 2 days                             | 87%                                 |
| Termination benefit package  | Within 7 days                               | 4 days                             | 88%                                 |
| Purchase of service estimate | Within 5 days                               | 3 days                             | 86%                                 |
| Termination benefit estimate | Within 5 days                               | 1 day                              | 97%                                 |
| Purchase of service package  | Within 10 days                              | 9 days                             | 70%                                 |
| Written inquiries            | Within 3 days                               | 1 day                              | 93%                                 |
| Telephone inquiries          | Within 1 day                                | 1 day                              | 100%                                |



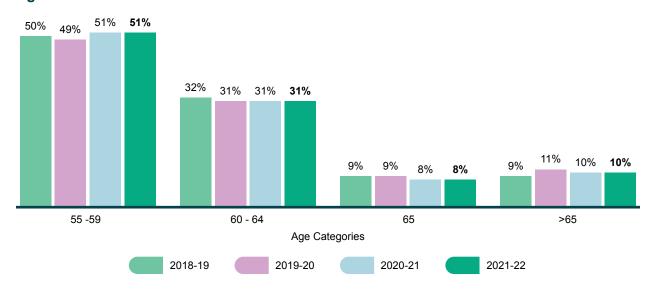
#### **Retirement Trends**

Changes in the patterns of ATRF's retiring members are always a source of interest to us. The choice to retire is a very personal decision based on many factors. Monitoring and understanding these trends is nonetheless useful for us to ensure that we can provide appropriate support throughout members' retirement journeys, and from an actuarial standpoint, for the fund calculation projections. This year, we

are seeing fairly stable trends, with a small spike in the number of retirements in February 2022. In terms of the numbers and age of retirees, that remains consistent, with most members choosing to retire before age 60, which is below the average age of most Canadian workers, according to Statistics Canada.



#### **Age at Retirement**



#### **New Retired Member Survey**

Every month we conduct a new retired member survey for those who have retired in the prior month. This year we had 1,129 plan members retire, and approximately 37% of those members provided us with their feedback on our services. Thank you to everyone who participated in the new retired member surveys. Your feedback assists us in enhancing our members' experience through the retirement process.

Thanks for all the support and patience during this life changing time!)

86%

86% of respondents rated the courteousness of our staff as excellent.

91% of respondents said they were able to find the retirement information they needed by going to atrf.com.

Staff were helpful and very informative. Helped make the transition easier. Thank you to the wonderful staff!

91% of respondents rated the timeliness of processing their pension as good or excellent.

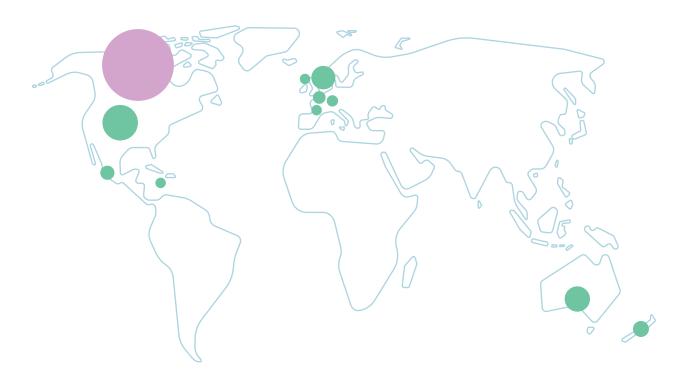
92% of new retired members said they were either satisfied or very satisfied with the retirement process satisfied or very satisfied with the retirement process.

My unexpected retirement was difficult, so I appreciate the guidance I received.

94% rated the overall service provided by ATRF as good or excellent.

#### **Retired Members Across the Globe**

ATRF continues to work diligently to provide members with quality service that is convenient for them, such as enabling retired members living abroad to access their pension payments electronically, so they are not reliant on paper cheques. While most of our retired members live in Canada (BC and Alberta, to be specific), we do have a small number who are living in countries across the world.



#### 30,416

#### Canada

- 26,766 Alberta
- 2,683 British Columbia
  - 338 Ontario
  - 185 Saskatchewan
  - 156 Nova Scotia
  - 92 Quebec
  - 76 Manitoba
  - 46 New Brunswick
  - 45 Newfoundland
  - 16 Prince Edward Island
  - 9 Yukon
  - 3 Northwest Territories
  - 1 Nunavut

# Top 1

# Top 10 Countries by Population (Outside Canada)

- 201 United States
- 30 Australia
- 25 United Kingdom
- 9 New Zealand
- 7 Mexico
- 5 Netherlands
- 4 Germany
- 3 Scotland
- 3 Jamaica
- 3 France

#### **Member Communication and Digital Tools**

Social Media

269 social media posts during the year on three different platforms.



**Digital** Newsletter

73,085 opens of the 2021-22 digital newsletters. 73,085 opens of the

Website

389,063 page views

New website looks very professional and is user friendly.

**Proactive** Communication

750 purchase packages prepared proactively for members that returned from a leave.

**Presentations and Webinars** 

9 pension presentations at the virtual Teachers' Conventions, with a total of 1,589 attendees.

The online webinars were excellent. I attended two of them. 36 presentations and webinars with a total of 871 attendees.

#### **ATRF's New Website Survey Results**

In September 2021, ATRF launched a new website that included modern features like an online glossary and responsive web design. Between December 12, 2021 and January 11, 2022, information was collected from website users via a pop-up survey on the ATRF website.

Some highlights from the survey are below.

- · The new site is meeting users' needs exceptionally well, with 85% of users reporting that the site meets their needs extremely or very well.
- 85% of users report that they can find information in the amount of time they expected or less.
- 87% of users say they trust the information on our site a great deal or a lot, and under 2% say they trust the information a little or not at all.

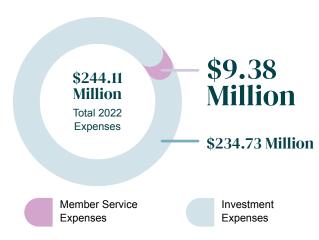
#### **Webinar and Presentation Survey Results**

This year, we expanded our webinar offerings to include additional time slots so plan members can more easily attend when it's convenient for them. We also introduced new webinars on purchasing and transferring service, one for substitute teachers, and one for new members. In total, ATRF put on 36 presentations and webinars with 871 members attending. Of those attendees, 28% provided feedback through a survey we sent to attendees after each presentation or webinar.

Some highlights from the survey are below.

- 95% of respondents rated the webinars as either excellent or good.
- 96% of respondents said that they would attend another webinar/presentation.

#### **Member Service Costs**



ATRF is a true pension manager, responsible for all aspects of the plans' operations, including services provided to members, retired members, and employers in communications, information management, benefit calculations and disbursements, member education, and support. ATRF continuously adapts, innovates, and streamlines its plan administration function to ensure we provide exceptional value for dollars spent while securing and supporting robust operations to manage risks, such as protecting member information. Along with internal expenditure controls, ATRF manages its costs with a focus on the value added to the plans and the stakeholders.

ATRF has historically provided services at a very low cost in comparison with similar organizations, and that trend continued last year.

#### **Cost per Member**



Cost per member is calculated using active and retired membership.

Our cost per member at \$128 remains one of the lowest in the peer group of Canadian public sector pension organizations which averages \$181.

Our operations continue to provide excellent value while evolving and innovating to meet changing member needs, as outlined above. Effective cost controls and cost management remain in place. However, our absolute costs did rise slightly last year as the organization evolved to respond to COVID-19 and made progress on Project Lantern.



As we progress through
Project Lantern, our multi-year
modernization initiative, we expect
to further invest in our operations
to ensure we continue to provide
secure, dependable delivery of
benefits and the level of service
our stakeholders expect. While

we anticipate some increase in costs, we are projecting most to be for a defined period only and that we will continue to have a cost profile lower than our industry benchmark.

#### **Governance Costs**

Delivering on our mandate and service commitments requires expending resources on oversight and governance activities as trustees of the plans, on asset and benefit administration, and on foundational strategic initiatives that will support the continued evolution of ATRF's services and governance activities. Governance of the pension-related aspects of the plans includes compliance and regulatory management, and management of funding and contribution, often in concert with actuarial consultants, to ensure the long-term health of the plans.

Governance also includes extensive financial planning and pension market research that best guides corporate strategy to serve the plans' members and stakeholders. Effective plan governance is a critical prerequisite to plan sustainability – the ultimate objective of ATRF and all stakeholders.



# Investments



# Message from VP, Fund Risk & Strategy

**GARY SMITH** 



Last year was a challenging one for financial markets, to say the least. A number of factors combined to create unusual and unpredictable volatility, and the markets declined significantly overall. I am pleased to report that ATRF investments continued to perform well considering these conditions, outperforming the markets and surpassing our benchmarks.

#### **Market Overview**

We begin with the bad news: financial market performance was dismal over the fiscal year. The table below provides the year's total returns for selected public equity and Canadian fixed income indexes.

# Total Returns for Select Public Equity and Fixed Income Benchmarks

#### **Public Equities**

| S&P/TSX Canada Composite       | -3.4%  |
|--------------------------------|--------|
| MSCI World in Canadian Dollars | -12.0% |

#### **Canadian Fixed Income**

| FTSE TMX Canada Universe Overall    | -11.3% |
|-------------------------------------|--------|
| FTSE TMX Canada All-Govt Long Bonds | -19.0% |

In addition to being ugly, the figures in the table are also very unusual. Such poor returns from fixed income markets are exceedingly rare. It is even more rare to have such poor fixed income returns at a time when equity markets are also falling fast. Typically, fixed income markets provide a welcome offset to negative equity markets. Indeed, that is a key reason they are in the portfolio in the first place.

Yet, the year in question was anything but typical. Instead, the dramatic fiscal and monetary stimulus put in place to battle the economic impact of the pandemic, combined with persistent supply chain issues, caused inflation to accelerate. Initially, central banks believed that such elevated price pressures were transitory and were less concerning than a renewal of COVID-19 difficulties. Thus, they were slow to withdraw stimulative policies.

And then, midway through the fiscal year, Russia invaded Ukraine. Supply chain issues were exacerbated, and commodity prices soared, pushing inflation to multi-decade highs. Inflation appeared to be much more persistent than initially thought. Central banks decided they needed to withdraw stimulus rapidly to get inflation under control. Around the globe, major central banks rushed to increase policy interest rates and to halt or reverse long-standing bond purchase programs. In their actions and rhetoric, central banks admitted they were playing catch-up, leaving markets guessing when the struggle to get inflation down will end.

Inflation spikes and scrambling central banks are bad for markets. Bond yields rise. Given how low yields were at the start of this surge of inflation, they have spiked, resulting in the worst bond market in decades. The cure for inflation—restrictive monetary policy—is now being administered liberally. This medicine can have nasty side effects. It works by slowing consumption and investment, which eases demand. When demand falters, corporate profitability becomes challenged, causing equity markets to struggle. The more rapidly the medicine is administered, the more likely a recession will occur. As the fiscal year was ending the question on many minds was, how far will central banks have to go to stop inflation, and how bad will those side effects be?

#### **ATRF Results**

Fortunately, the news is not all so grim. ATRF's portfolio includes significant exposures to private and absolute return assets that are not fully exposed to the forces described above. Indeed, ATRF's holdings of Absolute Return, Private Equity, Real Estate, and Infrastructure assets all delivered positive returns for the year. To be sure, the overall portfolio return was negative for the year (-1.8%), but this is much better than any of the numbers seen in the table above.

And there is more encouraging news. The total portfolio's relative performance was excellent over the year, with performance exceeding that of the benchmark by 2.25%. There was considerable variation across asset classes in relative performance, with Private Equity primarily responsible for the strong year on this score. While the old saying that one does not eat relative return is true, solid outperformance of the benchmark is welcome, especially in bad market years.

Finally, there is some genuinely excellent news to report. For a pension plan like this one, results over one year are interesting but not especially important, even in a difficult year. Even with this year's challenges, the long-term performance of the plans have been excellent. Over a 10-year horizon, ATRF has delivered a total return of over 9% per annum and excess return over its benchmark of 1% per annum. Because of such solid long-term returns, despite the difficult year, the plans remain in robust health.

#### **ATRF Asset Management Transition**

The year also saw the completion of the legislative requirement to transfer investment management activities to AIMCo. While all private asset class activity had been transferred in the prior fiscal year, the Global Equity, Fixed Income, and Absolute Return asset classes were transferred to AIMCo at the end of September 2021.

Since October 1, 2021, AIMCo has been responsible for all day-to-day decisions regarding ATRF's assets. However, ATRF remains responsible for setting the investment policy and for monitoring the portfolio to ensure that it is consistent with the policy.

I am pleased to say that ATRF has established a very productive and respectful working relationship

9%

Over a 10-year horizon, ATRF has delivered a **total return of over 9% per annum** and excess return over its benchmark of 1% per annum.

with AIMCo. AIMCo has been responsive to ATRF's comments and thoughts and has shown understanding and creativity in delivering ATRF investment exposures consistent with ATRF's risk appetite. AIMCo also regularly seeks ATRF's views on its investment products. While it is still the early days of the relationship between ATRF and AIMCo, the beginning has been encouraging.

There were, of course, financial impacts associated with the transfer of a \$22 billion portfolio. With the work complete, we have now been able to determine there was a \$30.4 million financial impact on ATRF and our plans. Of course, with a project this large and complex, it is not possible to identify exact amounts in many cases, but careful attention was paid to measuring financial implications to the extent possible.

Given the scale of this work, we are satisfied that the transition was completed effectively and efficiently and that ATRF took every possible measure to minimize these financial impacts.

At this stage, we have identified the costs that have been incurred for the transition, but it is too early to say what savings may be achieved in the fullness of time. Investment returns are generally far larger than investment costs, so we will evaluate any potential future savings in the context of net returns to ensure cost reductions don't result in lower returns and, therefore, an overall loss for ATRF, members, and sponsors.

When considering these past and future financial implications, it is vitally important to keep them in context. This means the returns our investments are achieving, after expenses, are central to the health of our plans and are where we will be focusing our attention and scrutiny moving forward.



#### **Investment Strategy**

ATRF's key investment strategy and risk responsibilities have not changed. The ATRF Board sets the Statement of Investment Policies and Goals (SIP&G), which includes determining the policy asset mix –

the most important driver of the plans' funding and investment success.

This strategy has been developed based on our many years of experience, and significant research done on leading pension practices to determine the best way to match the specific needs of our pension plans with the way we invest.

The ATRF Board also sets ATRF's Responsible Investing Policy. It is currently developing a

new framework suitable for our new investment management structure while ensuring our investments continue to meet ATRF's high standards.

An internal ATRF Investment Strategy and Risk team supports the ATRF Board in setting an investment policy that consistently delivers plan benefits and maintains affordable contribution rates that are relatively stable over time and achieves and maintains fully funded plans.

The Investment Strategy and Risk team also performs an important monitoring function; careful monitoring of the investment portfolio and its performance is vital to ensuring that ATRF's portfolio remains consistent with its investment policy, and that investments are performing as expected.

#### **Policy Asset Mix**

#### **Policy Asset Mix**

as at August 31, 2022

|                     | Policy at Aug 31, 2022 |
|---------------------|------------------------|
| TOTAL PLAN          | 100%                   |
| Return Enhancing    | 45%                    |
| Global Equity       | 35%                    |
| Private Equity      | 10%                    |
| Fixed Income        | 20%                    |
| Universe Bonds      | 9%                     |
| Long-term Bonds     | 9%                     |
| Short-term Bonds    | 2%                     |
| Inflation Sensitive | 25%                    |
| Real Estate         | 15%                    |
| Infrastructure      | 10%                    |
| Absolute Return     | 10%                    |

#### **Rates of Return**

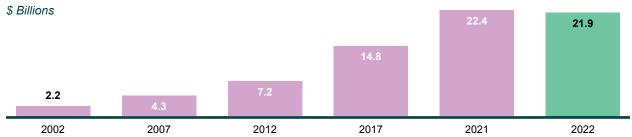
Net of fees, as at August 31, 2022

To evaluate the success of our investment strategies, we use a set of board-approved benchmarks as a comparison tool. The total fund benchmark return (-4.1% for 2022) is calculated by aggregating the benchmark returns of each individual asset class and weighting them according to the fund's policy benchmark.



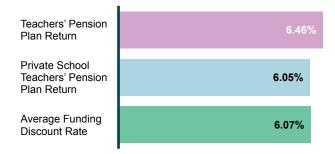
|                     | 1`     | Year (%)  | 4 Y   | ears (%)  | 10 `  | Years (%) |
|---------------------|--------|-----------|-------|-----------|-------|-----------|
| Asset Class         | ATRF   | Benchmark | ATRF  | Benchmark | ATRF  | Benchmark |
| Fixed Income        | -13.5% | -13.7%    | -0.1% | -0.3%     | 1.7%  | 1.7%      |
| Universe Bonds      | -11.1% | -11.3%    | 0.5%  | 0.3%      | 2.0%  | 1.8%      |
| Long-term Bonds     | -19.1% | -19.0%    | -1.3% | -1.3%     | 1.6%  | 1.7%      |
| Money Market        | 0.8%   | 0.6%      | 1.0%  | 0.9%      | 0.8%  | 0.8%      |
| Return Enhancing    | -4.3%  | -10.8%    | 8.4%  | 7.0%      | 12.3% | 11.4%     |
| Global Equity       | -11.4% | -10.7%    | 4.4%  | 6.0%      | 9.9%  | 10.6%     |
| Private Equity      | 15.4%  | -9.1%     | 21.0% | 8.8%      | 20.4% | 13.9%     |
| Inflation Sensitive | 13.5%  | 18.6%     | 10.8% | 8.9%      | 11.2% | 7.3%      |
| Real Estate         | 17.0%  | 23.7%     | 9.8%  | 9.6%      | 10.3% | 7.5%      |
| Infrastructure      | 8.9%   | 11.5%     | 13.3% | 7.9%      | 13.4% | 7.0%      |
| Absolute Return     | 3.9%   | 3.2%      | 4.4%  | 4.2%      | _     | _         |
| TOTAL PLAN          | -1.8%  | -4.1%     | 6.6%  | 5.6%      | 9.0%  | 8.1%      |

#### **Net Assets**

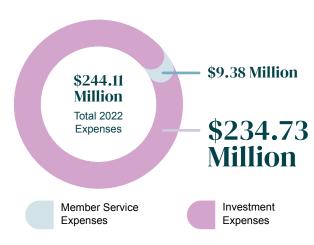


#### 15-Year Return vs. Long-Term Funding Objective

In order to remain well-funded and keep contribution rates affordable over the long-term, our investment returns must at least equal the funding discount rate used in the funding valuation of the plans. We look at this measure over 15-year time periods, in part so we can minimize changes to contribution rates based on shorter-term investment results.



#### **Investment Management Costs**



Pursuant to legislation, ATRF is required to engage AIMCo as its sole investment manager and this year, we completed the transition of asset management to AIMCo. The critical functions of strategic governance, development of investment strategy, and oversight of investment management remain at ATRF.

As such, 2021-22 was a transitional year where ATRF continued to directly manage assets for part of the year until the transition of asset management to AIMCo was completed in Q1. Costs for investment management, therefore, reflect small amounts for continued direct investment management but begin to more fully reflect the breakdown of costs with the new investment management framework through the balance of the year.

#### ATRF Investment Expenses \$ Millions

|                                     | 2022 | 2021  |
|-------------------------------------|------|-------|
| Investment management and oversight | 9.93 | 25.72 |
| Investment performance              | -    | 3.95  |
| Third-party external managers       | 2.65 | 95.07 |

ATRF is an active pension manager that adopts a customized approach to meet the unique investment needs of our plans. Investment expenses include all expenses ATRF considers attributable to strategy, oversight, and management of the plans' investment assets, including ATRF's internal costs and expenses paid to external managers.

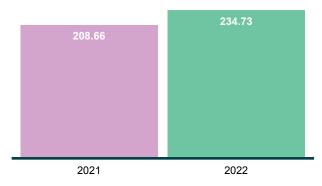
As trustee of the plans, ATRF incurs a variety of investment expenses related to the plans' assets, including costs relating to the governance of strategic investment matters, such as setting investment policy and risk tolerance, monitoring the risk and performance of the total portfolio and the various investment managers' performance, and overseeing all parties involved with the management of the plans' investment assets. Prior to completing the transition to AIMCo in Q1, ATRF also provided direct investment management services for directly held investments.

## AIMCo Investment Expenses \$ Millions

|   | 2022  | 2021  |
|---|-------|-------|
| Investment management                       | 22.69 | 7.83  |
| Investment performance                      | 6.67  | 1.43  |
| Third-party external managers - management  | 97.48 | 35.59 |
| Third-party external managers - performance | 95.31 | 39.07 |

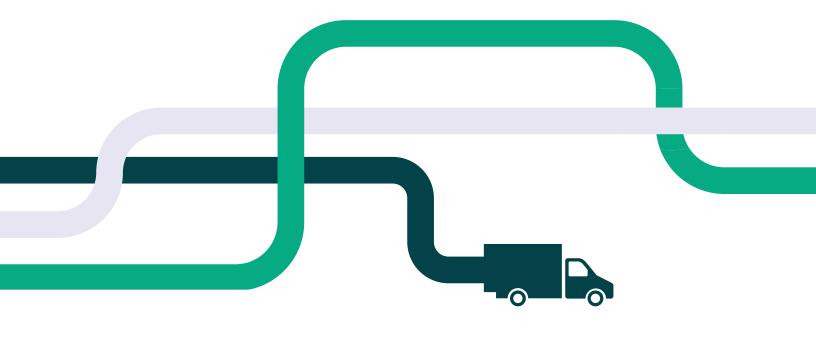
Investment expenses can be classified as management expenses or performance fees. Management expenses are incurred through the day-to-day provision of investment management and related support services. Performance fees are expenses incurred where returns delivered by the manager exceed the specified targets. The increase in performance fees is a result of the strong performance of investments through to the end of December 2021.

### **Total ATRF Investment Expenses** \$ *Millions*



#### Governance

The ATRF retained functions of risk management, investment oversight, and strategy-setting enable us, as trustees of the plans, to make the investment decisions that serve the best interests of our members and stakeholders. In addition, we continue to focus on adding value through cost-effective spending on all our internal operations and will strive to develop a similar focus in our new relationship with AIMCo.





# ATRF Board Attendance and Remuneration

ATRF pays board members an honorarium to compensate them for the experience, expertise, and time they commit to their work on behalf of our members and our sponsors.

Board members are also compensated for the extra work involved in chairing committees, and for their attendance at these important committees.

The *Teachers' Pension Plans Act* provides that remuneration cannot be paid to board members who work for an employer covered by the plans, the GoA, or the ATA. Employers are reimbursed for time spent by certain board members.

To ensure compensation is fair and appropriate, ATRF engages an external consultant periodically to review remuneration for board members and assist in establishing levels of remuneration. The review is based on a survey of the compensation being paid by other, similar Canadian public sector pension investment and administration organizations.

In the past year, board remuneration was paid according to the following schedule:

|   | 2021-22 (\$) |
|---|--------------|
| Board Chair Retainer                                      | 25,000       |
| Board Member Retainer                                     | 15,000       |
| Committee Chair Retainer                                  | 4,000        |
| Fee per Board or Committee Meeting (in excess of 4 hours) | 1,200        |
| Fee per Board or Committee Meeting (less than 4 hours)    | 800          |

Board members are also reimbursed for reasonable expenses, including travel, meals, and accommodation, as required to perform their duties.

# **ATRF Board Meeting Attendance and Remuneration**

Board members are compensated \$800 for meetings under four hours, and \$1200 for meetings over four hours. In addition, board and committee chairs are paid an annual retainer.

| Board Member   | Board<br>Meetings | Committee<br>Meetings | Other (orientation, education, other meetings) | 2021-22 Total<br>Remuneration<br>(includes ex-officio &<br>guest attendance) (\$) |
|--|-------------------|-----------------------|--|---|
| Sandra Johnston • Board Chair  | 6                 | 24                    | 8  | 65,000 <sup>2</sup>   |
| Greg Francis  • Human Resources & Compensation Committee Chair  • Governance Committee Chair | 6                 | 17                    | 7  | <b>59,800</b> <sup>3</sup>  |
| Paul Haggis • Governance Committee Chair   | 6                 | 13                    | 5  | 36,200  |
| Maria Holowinsky Investment Committee Chair  | 6                 | 15                    | 6  | 43,000  |
| Brad Langdale <sup>1</sup>   | 6                 | 9                     | 5  | _   |
| Alexandria Matos <sup>1</sup>  | 6                 | 11                    | 8  | _   |
| Rafi G. Tahmazian  | 3                 | 9                     | 1  | 26,600  |
| Tim Wiles • Audit and Finance Committee Chair  | 6                 | 19                    | 6  | 46,200  |
| Total  | 6                 | 24                    | 10   | 276,800   |

<sup>&</sup>lt;sup>1</sup> In accordance with legislation, no cash remuneration is paid to these members as they work for an employer or employer contributor. Employers are reimbursed for time spent by these board members. In 2021-22, the amount reimbursed was \$33,353 in total.

<sup>&</sup>lt;sup>2</sup> Pursuant to the ATRF Board remuneration policy, \$7,200 was paid for time spent as a member of the special committee that conducted individual board evaluations.

<sup>&</sup>lt;sup>3</sup> Pursuant to the ATRF Board remuneration policy, \$9,600 was paid for time spent as a member of the special committee that conducted individual board evaluations.



# Compensation Discussion and Analysis

# **Executive Compensation Program**

The Compensation Discussion & Analysis explains ATRF's approach to compensation, the impact of government compensation legislation and regulations, the various elements of our pay programs, and the remuneration paid to our executives.

# **Human Resources and Compensation Committee**

The Human Resources and Compensation Committee ("HRCC") assists the board in fulfilling its oversight responsibilities in relation to human resources and compensation matters.

The HRCC is made up of four board members and the Committee met nine times during the 2021-22 fiscal year. In-camera sessions are held at the beginning and end of each meeting, without management present.

In 2021-22 the HRCC's key responsibilities included:

- Recommending compensation of the Chief Executive Officer and executives to the board for approval;
- Reviewing human resource and compensation aspects of the business plan;
- Ensuring that the enterprise risk management framework appropriately considers human resource and compensation risks;
- Ensuring emergency succession plans are in place for the Chief Executive Officer and key executive positions;
- Evaluating the impact of the Reform of Agencies, Boards and Commissions Compensation Act Regulation (the "RABCCA Regulation") on ATRF's CEO compensation;
- Preparing for the wind-up of ATRF's previous incentive programs due to RABCCA and other legislated changes to the organization;
- Completing the review of ATRF Total Rewards within the context of the RABCCA Regulation;
- Refining the disclosure in the annual report related to compensation philosophy, incentive design and the alignment to corporate performance and risk management; and
- Overseeing ATRF's response to emerging changes to compensation regulations.

#### Implications of 2021-2022

In 2021-2022, the complex transition of asset management to AIMCo came to conclusion. ATRF's internal investment operation was wound down at the end of November 2021. The organization has moved into a period of post-transition stabilization.

On July 8, 2020, ATRF became subject to the RABCCA Regulation. The regulation took effect following a two-year transition period, or immediately for new recruits or those employees with position changes after July 8, 2020. The RABCCA Regulation prohibits incentive pay for all employees and sets out specific compensation limits for ATRF's designated officer, the CEO.

In March of 2022, the Deputy Minister of Treasury Board and Finance advised the ATRF Board that the Government of Alberta was reviewing the longer-term policy considerations regarding the future of RABCCA.

The information provided to ATRF and other agencies regarding the new compensation governance framework contemplated a more high-level, enabling model that would support agencies in providing competitive pay, rather than the current restrictive aspects of RABCCA.

As a result of this new information, the ATRF Board requested an exemption from the full application of RABCCA until such time as a decision on new legislation was complete. ATRF was subsequently granted an exemption that permits a higher level of total compensation for the ATRF CEO than is allowed under RABCCA, and also permits ATRF to provide short-term incentive pay to staff. The remaining provisions of RABCCA continue to apply to ATRF.

During 2021-2022, with support from management, the HRCC completed a review of Total Rewards within the context of the RABCCA Regulation, guided ATRF's participation in the consultation process on public agency compensation governance, and led ATRF's request for exemption from RABCCA. The HRCC also oversaw ATRF's management of people risks created by the shift in government policy, and determined the changes required to compensation disclosure as a result of winding up ATRF's internal investment management operation.

#### **Future Focus**

ATRF will need to focus on the following HR and compensation-related items during 2022-2023:

- · Continuing consultation with the Provincial Bargaining Coordination Office to understand how and when new compensation legislation will apply to ATRF;
- · Responding to the exemption that was granted by the Minister and the new compensation legislation; and
- Succession planning and talent management of critical staff, including those required to lead the organization and manage the investment strategy and risk function remaining at ATRF.

#### ATRF's Total Rewards Philosophy

ATRF's HRCC and board oversaw the development of an updated approach to total rewards in 2021-2022. This included an updated Total Rewards Philosophy that complies with the regulatory framework, aligns to the new strategic plan, and serves to attract, retain, and engage the skilled employees required to deliver pension benefits, ensure the highest level of service and value to plan members and sponsors, and to ensure maximized returns on the plan assets in a sound, sustainable, and secure manner.

ATRF's reward programs are designed and delivered to:

Foster a culture of performance, engagement and continuous growth

ATRF values a culture of performance, engagement and continuous growth because we know that excellence and expertise allow us to build trust and credibility with our members and other stakeholders. We provide total rewards that foster this culture, including rewarding employees for performance.

ATRF recognizes our diverse workforce, and that one size does not fit all. We also know that our business will continue to change, and we need to evolve to thrive in our changing environment. Therefore, we design total rewards programs that are innovative and flexible to adapt to our changing environment and meet the needs of our diverse workforce.

#### Align with the market within defined parameters

ATRF is committed to providing total rewards that are aligned with our talent markets and that allow the organization to be financially sustainable. We differentiate ourselves from the market with our comprehensive approach to flexibility, innovation and growth opportunities, and the ability to contribute meaningfully to the achievement of our mandate.

#### Support employee wellbeing

ATRF believes in supporting employee wellbeing, and that in doing so, we can add value to the business. We do this by providing comprehensive benefit programs and learning and development opportunities and ensuring employee wellbeing is a priority in total reward program design and delivery.

#### **Enable transparency and communication**

ATRF values the trust that our employees place in us and shows this by designing total rewards programs that enable transparency, so everyone understands how total rewards decisions are made. To create an inclusive culture, we periodically check in with our employees to ensure that total rewards programs provide value to everyone.

As ATRF has prepared for the wind-up of its previous incentive programs, during the RABCCA transition period, our approach to current executive compensation has remained consistent with our long-established program objectives, to:

- Reward executives in a competitive market context so as to attract and retain high-quality professionals.
- Focus the Executive Leadership Team on achieving critical goals in the strategic plan.
- Align interests of the Executive Leadership Team with the best interests of the plans by encouraging and rewarding long-term

- performance. This is supported by promoting a pay for performance culture that seeks to preserve and protect beneficiaries' benefits.
- Reward the Executive Leadership Team for superior performance.
- Total compensation reflects the shared efforts of the Executive Leadership Team by rewarding for a culture of teamwork and collegiality throughout the organization. These efforts are reflected through performance assessments conducted by the board, as well as the CEO's performance assessments of his direct reports on an annual basis.

#### **Good Governance**

A number of attributes in our executive compensation program to-date are intended to ensure good governance:

- Compensation at risk A significant percentage of Total Direct Compensation is in the form of short- and long-term incentives.
- Long-term time horizon A significant portion of executive compensation is linked to longerterm performance. We use a four-year horizon in our LTIP.
- Pay for performance Variable executive compensation is linked to achieving performance goals. Performance goals are challenging, but achievable, and include both quantitative and qualitative measures of success.
- Maximum payout caps STIP and LTIP payouts are capped at 200% and 300% of target respectively to ensure affordability and reasonableness.
- Threshold performance levels Performance must meet or exceed a threshold before shortor long-term incentives are paid.

- Oversight of peer group, compensation levels, and design With regular oversight, the HRCC ensures continued alignment with our peer group, compensation levels, our business strategy, and competitive market practices.
- Benefits and perquisites Benefits and perquisites are set at competitive levels, but are not intended to make up a significant portion of compensation.
- Review of compensation risk The HRCC monitors risk inherent within our compensation program to discourage excessive risk-taking and align compensation with ATRF's business strategies.
- Competitive but cost-effective ATRF's compensation program is designed to pay competitively while supporting ATRF's objectives of securing the pensions of plan members through the cost-effective and efficient use of resources.

# **Managing Risk**

We consider the implications of the risks associated with our compensation policies and practices, to ensure our current compensation program does not incent management behaviours outside ATRF's risk appetite. Compensation risk is managed by:

- Ensuring HRCC's independence from management, and retaining an external compensation advisor;
- Working within an enterprise-wide risk management framework, and a robust code of conduct;

- Establishing appropriate performance measures that align to the business strategy;
- Setting individual and team accountabilities for achieving objectives;
- Setting threshold levels of performance for all incentive plans and paying incentives only when threshold performance is achieved;
- Using appropriate payout curves and capping incentive pay; and
- Aligning with legislated compensation parameters.

# Comparator Groups Used to Set Competitive Pay

In 2021-2022, as a result of the wind up of internal investment management at ATRF, the HRCC recommended and the board approved revised comparator groups for benchmarking pay. This ensures that ATRF achieves its overall objective to provide competitive compensation compared to organizations we compete with

for talent. For the roles where compensation is disclosed, compensation is benchmarked against other Canadian pension funds with assets under management below \$60B and a focus on external management where possible, and a blend of public and private sector organizations.

# **Compensation Process and Compensation Consultants**

ATRF's total rewards philosophy and structure are regularly reviewed. Each year, the HRCC reviews and approves the comparator groups and total rewards for executives. Market data is provided to the HRCC by external sources. The HRCC uses the following decision-making process when setting executive compensation:

- 1. Establish total rewards philosophy, principles, and objectives
- 2. Design total rewards to align with total rewards philosophy and competitive market and applicable compensation regulations
- 3. Establish and calibrate performance objectives
- 4. Evaluate results

# **Compensation Elements**

Below is a summary of the type, nature, and purpose of each element of our current compensation program.

# **Base Salary**

Base salaries are intended to be competitive with the market and are typically reviewed by the HRCC annually at the end of each fiscal year.

Salaries are set based on an individual's primary duties and responsibilities, with consideration given to ATRF's market comparators.

# **Short-Term Incentive Plan (STIP)**

Plan as described below terminated effective August 31, 2022. ATRF's STIP program will be reviewed in 2022-23.

The STIP was designed to attract, retain, and motivate high-quality people, and to provide competitive, performance-based opportunities based on market practices and ATRF's business strategy. Performance measures, targets, and weightings are approved annually by the HRCC. Corporate, team, and individual objectives are

established at the beginning of the year, and actual performance is evaluated at the end of the year.

Each participant's target incentive payment is calculated based on a percentage of salary. Based on actual performance against pre-approved objectives, payouts could range from zero to two times the target incentive amount.

## **Long-Term Incentive Plan (LTIP)**

Terminated effective August 31, 2022

The LTIP was designed to encourage and reward long-term performance, and to attract, retain, and motivate participants by providing additional compensation if investment performance goals were achieved. It also served to align participant interests with pension plan interests. The LTIP had a four-year vesting period before a first payment was awarded to a plan participant. Until February 28, 2021, the performance measure was relative value-added performance above the benchmark portfolio, net of investment operating costs and was further modified by absolute fund performance. The threshold, target, and maximum value-add hurdles were calibrated to account for ATRF's investment strategy and portfolio mix, which inherently accounts for ATRF's risk profile. Effective March 1, 2021, to support the windup of the LTIP, the board approved a change in

performance measure to the ATRF Scorecard for the remainder of the program.

All roles disclosed were participants in ATRF's Long-Term Incentive Plan, which was terminated at the end of the fiscal year. Participants received a notional grant at the beginning of a four-year performance period. The grant was equal to the target award opportunity, and could increase or decrease based on performance results. The multiplier was capped at three times the value of the target award.

The plan was terminated as a result of RABCCA. Upon termination of the plan, outstanding unvested grants vested, were prorated to August 31, 2022, and were paid out to participants upon approval from the board.

#### **Pension and Benefits**

ATRF provides a competitive benefits program that includes pension benefits, health and dental benefits, life insurance, illness and long-term disability coverage, and professional development support and memberships.

All ATRF staff participate in the Local Authorities Pension Plan (LAPP). This is a defined benefit pension plan, and provides for a pension of 1.4% for each year of pensionable service based on the average salary of the highest five consecutive years up to the Year's Maximum Pensionable Earnings under the Canada Pension Plan and

2.0% on the excess. Benefits under this plan are capped by pensionable salary reached at the maximum pension benefit limit allowed under the federal *Income Tax Act*.

Where earnings are in excess of this capped pensionable salary, an unregistered, unfunded Supplementary Employee Pension Plan (SEPP) provides for a pension equal to the pension formula under the LAPP, with no cap applied to pensionable salary, less the initial pension provided under the LAPP. Participation in the SEPP is limited to the CEO and Vice Presidents.

# 2021-22 Performance and its Impact on Compensation Levels

For the 2021-22 year, incentive plan compensation was paid in relation to the achievement of critical corporate strategic and team operational objectives.

The overall ATRF Scorecard results were 127.7% or 1.277x target.

ATRF's Scorecard included corporate objectives for 2021-22 and reflected strategic directions for the organization. The objectives included:

 Developing and maintaining effective funding and strategic investment management through appropriate investment and funding policy development and investment management oversight.

The average funded ratio over the past four years, relative to expectations while remaining within the contribution rate limits defined in our funding policy is 97.59%, an increase from last year's result of 96.21%. Contributing to that outcome, our total portfolio's relative performance over the year was excellent, with performance exceeding that of the benchmark by 2.25%, despite poor financial market performance over the fiscal year that limited the funded position.

With the successful completion of investment management transition to AIMCo early in the fiscal year, a complex undertaking with billions in assets located across the world, ATRF shifted focus to developing a productive and respectful working relationship with AIMCo, with encouraging results.

 Embracing innovation to capture significant opportunities to evolve and further optimize how we provide information and services to our members.

ATRF exceeded all targets for member satisfaction, cost-per-member, and service levels, while making meaningful progress on Project Lantern, which is a critical review and modernization of benefit administration and delivery systems and processes.

 Positioning ATRF to inform the decisionmaking processes of our many stakeholders through proactive analysis, research, and information sharing.

ATRF's stakeholders have varying interests and needs with respect to information and expert advice on strategic investment and pension management topics. ATRF made intentional enhancements this year to

stakeholder touchpoints and communications, and optimized opportunities to connect with industry peers to share information, collaborate on mutual priorities, and provide input on important issues.

 Enabling ATRF to respond to significant changes in the strategic environment by evolving how the organization operates, and is managed and governed.

ATRF's organization was changed by the transition of asset management, and the

workplace was redefined for the organization of today. This included a return to the office in conjunction with the lifting of public health measures and the opportunity to meet with members in-person again. As ATRF made other important updates to our talent strategy, enterprise risk management program, and our cybersecurity platforms, we prioritized enhancing technology to support staff in providing services and support to members wherever they are located.

# **Compensation of the Chief Executive Officer**

ATRF's HRCC worked with the CEO to create a set of goals and key deliverables for the CEO during the 2021-22 fiscal year. The ATRF Board measured the CEO's performance against

those goals and deliverables, and assessed his performance as exceeding expectations.

ATRF's CEO had the following payouts related to his performance:

\$ dollars, audited

|                             | 202    | 1-22 |         | 202    | 0-21 |         |
|-----------------------------|--------|------|---------|--------|------|---------|
| Performance Measure         | Weight |      | Payout  | Weight |      | Payout  |
| Total Fund Value Add Return | _      |      | -       | 35%    | \$   | 90,740  |
| ATRF Scorecard Objectives   | 50%    | \$   | 134,085 | 30%    |      | 102,470 |
| Individual Objectives       | 50%    |      | 168,000 | 35%    |      | 139,650 |
| TOTAL PAYOUT                |        | \$   | 302,085 |        | \$   | 332,860 |

### Compensation

\$ dollars, audited

| Compensation Element      | 2021-22 Compensati | on 2020-     | 21 Compensation |
|---------------------------|--------------------|--------------|-----------------|
| Base Salary               | \$ 350,0           | 00 \$        | 350,000         |
| Short-term Incentive      | 302,0              | 85           | 332,860         |
| Long-term Incentive       | 462,8              | 75           | 486,153         |
| TOTAL DIRECT COMPENSATION | \$ 1,114,90        | <b>50</b> \$ | 1,169,013       |

# **Total Compensation Summary**

In previous years, ATRF disclosed total compensation for the most highly compensated senior investment professionals. The majority of those positions were abolished due to the legislated transfer of asset management to AIMCo. As a result, ATRF has amended its list of disclosed positions to include the CEO and all members of the Executive Leadership Team.

The table below represents disclosure of salary, incentive payments, and all other compensation earned for the years ended August 31, 2022 and 2021 by ATRF's Executive Leadership Team members.

#### \$ dollars, audited

| Name and Position   | Salary <sup>1</sup> | Short-<br>Term<br>Incentive<br>Plan<br>(STIP) | Long-<br>Term<br>Incentive<br>Plan<br>(LTIP) <sup>2</sup> | All Other<br>Compensation <sup>3</sup> | Total<br>Compensation<br>2022 | Total<br>Compensation<br>2021 |
|---|---------------------|---|---|--|-------------------------------|-------------------------------|
| Rod Matheson<br>Chief Executive<br>Officer                        | \$350,000           | \$ 302,085                                    | \$ 462,875  | \$ 786,783                             | \$ 1,901,743                  | \$ 1,287,647                  |
| Tina Antony Vice President, General Counsel & Corporate Secretary | 250,000             | 64,598  | 110,208   | 230,701                                | 655,507                       | 526,152                       |
| Marcie Chisholm<br>Vice President,<br>People & Culture            | 196,625             | 58,474  | 85,963  | 166,417                                | 507,479                       | 306,766                       |
| Julie Joyal<br>Vice President,<br>Pension Services                | 191,583             | 56,975  | 83,758  | 163,888                                | 496,204                       | 376,205                       |
| Myles Norton<br>Vice President,<br>Finance                        | 235,000             | 68,242  | 89,831  | 209,851                                | 602,924                       | 472,694                       |
| Gary Smith Vice President, Fund Risk & Strategy                   | 270,000             | 183,188                                       | 207,192   | 414,255                                | 1,074,635                     | 767,012                       |

<sup>&</sup>lt;sup>1</sup> Salary paid during the fiscal year.

<sup>&</sup>lt;sup>2</sup> Amounts shown represent LTIP awards incorporating business performance for the fiscal year. Incentive compensation is remunerated at the end of the four-year vesting period, and is paid in the following year it was earned.

<sup>&</sup>lt;sup>3</sup> All other compensation consists of ATRF's share of all employee benefits, contributions or payments made on behalf of employees, supplemental pension plan current service accrual, health plan coverage, statutory contributions, and payout of all outstanding long-term incentive grants.
Outstanding unvested LTIP grants vested and were prorated as of August 31, 2022 and were paid as directed by the board.

# **External Consultants**

The HRCC is supported by independent, external human resources and compensation consultants that are retained by, and report directly to, the HRCC.

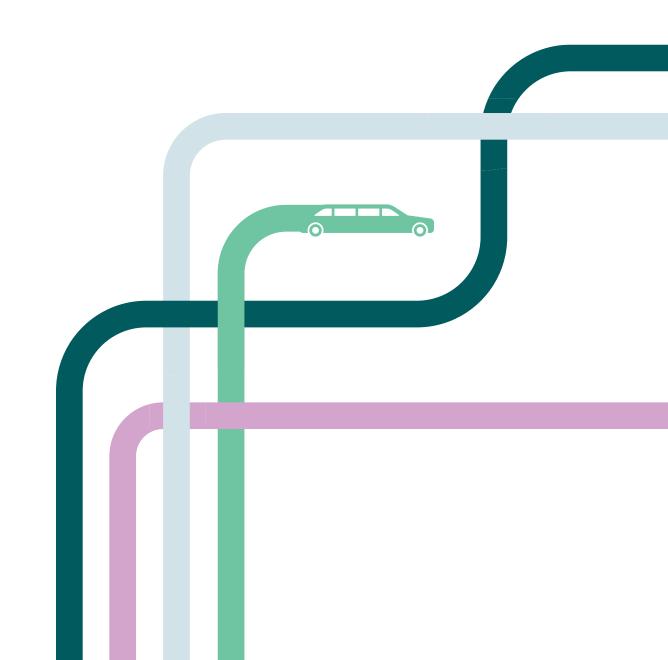
During the 2021-22 fiscal year, Hugessen Consulting was the HRCC's independent advisor.

The HRCC reviews all fees, and the terms of consulting services provided by Hugessen; and, when making decisions, takes an independent view of all factors taking into consideration more than the information and recommendations provided by its compensation consultant or management.

The following table outlines the fees paid to Hugessen for the periods noted:

# **Executive Compensation-Related Fees** \$ dollars, audited

| Advisor             | 2021-22  | 2020-21   |
|---------------------|----------|-----------|
| Hugessen Consulting | \$37,229 | \$118,944 |





# Financial Statements

# Contents

- 48 MANAGEMENT RESPONSIBILITY
- 49 INTERNAL CONTROLS OVER FINANCIAL REPORTING
- 50 INDEPENDENT AUDITOR'S REPORT
- 53 ACTUARIES' OPINION
- 54 STATEMENT OF FINANCIAL POSITION
- 55 STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
- 56 STATEMENT OF CHANGES IN PENSION OBLIGATIONS
- 57 NOTES TO THE FINANCIAL STATEMENTS
- 83 10-YEAR FINANCIAL AND STATISTICAL REVIEW

# **Management Responsibility**

The financial statements of the Alberta Teachers' Retirement Fund Board and all information in the Annual Report are the responsibility of management and have been approved by the board. The financial statements have been prepared in accordance with Canadian accounting standards for pension plans. Where necessary, management has made informed judgments and estimates of the outcome of events and transactions, with due consideration to materiality. Financial and operating data presented in the Annual Report, where applicable, is consistent with the financial statements.

For the integrity of financial information included in this Annual Report, management relies on the organization's system of internal controls and supporting procedures. This system has been established to ensure within reasonable limits that assets are safeguarded, transactions are executed in accordance with management's authorization, and accounting records are properly maintained. Controls include high-quality standards for hiring and training employees, an organizational structure that provides a well-defined division of responsibilities and accountability for performance, and the communication of policies and guidelines throughout the organization.

Ultimate responsibility for the financial statements rests with the board, which is assisted in its responsibilities by the staff and the Audit and Finance Committee. The Alberta Teachers' Retirement Fund Board's external auditor, the Auditor General, has conducted an independent examination of the financial statements in accordance with Canadian generally accepted auditing standards, performing such tests and other procedures as he considers necessary to express the opinion in his report. The Auditor General has full, unrestricted access to discuss the audit and related findings regarding the integrity of financial reporting, and the adequacy of internal control systems.

Rod Matheson, CPA, CMA, CFA, ICD.D

Chief Executive Officer

Myles Norton, CPA, CMA, CFA

Vice President, Finance

MN

# **Internal Controls over Financial Reporting**

ATRF business plans include action plans to enhance governance and management of internal control processes and systems. This is aimed to provide an appropriate level of due diligence and assurance in our internal controls, financial operations, reporting, and information systems.

ATRF is not required by law or regulation to perform this annual evaluation. We have chosen to perform this evaluation and meet these standards as a part of our commitment to strong corporate governance and accountability.

The Chief Executive Officer and the Vice President, Finance are responsible for the design and maintenance of Internal Controls over Financial Reporting, to provide reasonable assurance that it is reliable and that the preparation of the financial statements conforms with Canadian Accounting Standards for pension plans. They are also responsible for the design and maintenance of disclosure controls and procedures to provide reasonable assurance that all material information is gathered and reported to management on a timely basis.

We have completed the 2021-22 fiscal year evaluation of the effectiveness of our internal control over financial reporting and disclosure controls and procedures. Based upon the results of the evaluation, the Chief Executive Officer and Vice President, Finance have concluded that internal control over financial reporting and disclosure controls and procedures are properly designed and operated effectively throughout the year.

There were no significant changes made in internal controls over financial reporting during the year ended August 31, 2022, that materially affected, or are reasonably likely to materially affect, internal control over financial reporting.



#### Independent Auditor's Report

To the Alberta Teachers' Retirement Fund Board

#### **Report on the Financial Statements**

#### **Opinion**

I have audited the financial statements of Alberta Teachers' Retirement Fund Board, which comprise the statement of financial position as at August 31, 2022, and the statements of changes in net assets available for benefits, and changes in pension obligations for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In my opinion, the accompanying financial statements present fairly, in all material respects, the financial position of Alberta Teachers' Retirement Fund Board as at August 31, 2022, and the changes in net assets available for benefits, and changes in its pension obligations for the year then ended in accordance with Canadian accounting standards for pension plans.

#### **Basis for opinion**

I conducted my audit in accordance with Canadian generally accepted auditing standards. My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report. I am independent of Alberta Teachers' Retirement Fund Board in accordance with the ethical requirements that are relevant to my audit of the financial statements in Canada, and I have fulfilled my other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

#### Other information

Management is responsible for the other information. The other information comprises the information included in the *Annual Report*, but does not include the financial statements and my auditor's report thereon. The *Annual Report* is expected to be made available to me after the date of this auditor's report.

My opinion on the financial statements does not cover the other information and I do not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, my 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 my knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work I will perform on this other information, I conclude that there is a material misstatement of this other information, I am required to communicate the matter to those charged with governance.

# 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 the financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing Alberta Teachers' Retirement Fund Board'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 an intention exists to liquidate or to cease operations, or there is no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Alberta Teachers' Retirement Fund Board's financial reporting process.

#### Auditor's responsibilities for the audit of the financial statements

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, I exercise professional judgment and maintain professional skepticism throughout the audit. I 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 my 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 Alberta Teachers' Retirement Fund Board'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 Alberta Teachers' Retirement Fund Board's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause Alberta Teachers' Retirement Fund Board 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.

I 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 I identify during my audit.

[Original signed by W. Doug Wylie FCPA, FCMA, ICD.D]

**Auditor General** 

December 6, 2022 Edmonton, Alberta

# 2022 ANNUAL REPORT

# **Actuaries' Opinion**



Aon has been engaged by the Alberta Teachers' Retirement Fund Board ("ATRF") to prepare actuarial valuations for the Teachers' Pension Plan and the Private School Teachers' Pension Plan (the "Plans") as at August 31, 2022. The purpose of these valuations is to determine the necessary actuarial information for financial statement reporting for the Plans in accordance with Section 4600 of the CPA Canada Handbook ("Section 4600").

Our valuations have been prepared based on:

- · membership data provided by ATRF as at the most recent reported date by the respective employers, projected to August 31, 2022 and adjusted to reflect anticipated new hires as at September 1, 2022;
- asset data provided by ATRF as at August 31, 2022;
- assumptions that we understand have been adopted as ATRF management's best estimates; and
- actuarial cost methods and asset valuation methods that are in with accordance Section 4600.

Based on the work we have performed, including conducting reasonability tests on the membership and asset data, we have concluded that, in our opinion:

- the data is sufficient and reliable for the purpose of the valuations;
- the assumptions adopted as best estimate by ATRF's management are appropriate for the purpose of the valuations;
- the actuarial cost methods and the asset valuation methods employed are appropriate for the purpose of the valuations; and
- · the valuations conform with the requirements of Section 4600.

While the actuarial assumptions used to estimate the Plans' liabilities represent ATRF management's best estimate of future events and market conditions at August 31, 2022, the Plans' future experience will differ from the actuarial assumptions. Emerging experience differing from the assumptions will result in gains or losses that will be revealed in future valuations and will affect the financial position of the Plans.

Our opinions have been given, and our valuations have been performed, in accordance with accepted actuarial practice in Canada.

**Brenda Prysko** 

Fellow, Canadian Institute of Actuaries Fellow, Society of Actuaries

Brenda Tayiko

Fellow, Society of Actuaries

**Steve Windsor** Fellow, Canadian Institute of Actuaries

December 7, 2022

# **Statement of Financial Position**

| As at August 31 (\$ Thousands)                    | 2022          | 2021          |
|---|---------------|---------------|
| ASSETS  |               |               |
| Investments (Note 3)                              | \$ 22,082,138 | \$ 22,571,078 |
| Corporate cash                                    | 43,639        | 6,057         |
| Contributions receivable                          | 17,932        | 16,165        |
| Other assets                                      | 8,358         | 8,472         |
|   | 22,152,067    | 22,601,772    |
|   |               |               |
| LIABILITIES                                       |               |               |
| Investment related liabilities (Note 3)           | 181,204       | 210,331       |
| Accounts payable and accrued liabilities (Note 4) | 25,728        | 47,571        |
| Other liabilities                                 | 2,071         | 2,210         |
|   | 209,003       | 260,112       |
|   |               |               |
| NET ASSETS AVAILABLE FOR BENEFITS (Note 5)        | 21,943,064    | 22,341,660    |
|   |               |               |
| ACCRUED PENSION OBLIGATIONS (Note 5)              | 17,907,738    | 17,022,325    |
|   |               |               |
| ACCOUNTING SURPLUS (Note 5)                       | \$ 4,035,326  | \$ 5,319,335  |

The accompanying notes are part of these financial statements.

Approved by the ATRF Board

Sandra Johnston, ICD.D

Chair

Tim Wiles, FCPA, FCA

Chair, Audit & Finance Committee

# Statement of Changes in Net Assets Available for Benefits

| For the Year Ended August 31 (\$ Thousands)              | 2022          | 2021          |
|--|---------------|---------------|
| Net assets available for benefits, beginning of year     | \$ 22,341,660 | \$ 19,298,232 |
| Investments  |               |               |
| Investment income (Note 6)                               | 477,980       | 405,945       |
| Investment expenses (Note 7)                             | (234,728)     | (208,658)     |
| Change in fair value of investments (Note 6)             | (662,747)     | 2,802,398     |
| Net investment operations                                | (419,495)     | 2,999,685     |
| Member services  |               |               |
| Contributions (Note 8)                                   |               |               |
| Teachers   | 396,970       | 403,406       |
| The Province   | 383,160       | 381,680       |
| Transfers from other plans                               | 16,274        | 11,098        |
| Private School Boards                                    | 2,813         | 2,709         |
|  | 799,217       | 798,893       |
| Member service expenses (Note 7)                         | (9,376)       | (8,294)       |
| Benefits paid (Note 9)                                   | (768,942)     | (746,856)     |
| Net member service operations                            | 20,899        | 43,743        |
|  |               |               |
| (Decrease) increase in net assets available for benefits | (398,596)     | 3,043,428     |
| Net assets available for benefits, end of year           | \$ 21,943,064 | \$ 22,341,660 |

The accompanying notes are part of these financial statements.

# **Statement of Changes in Pension Obligations**

| For the Year Ended August 31 (\$ Thousands)        | 2022          | 2021          |
|--|---------------|---------------|
| Accrued pension obligations, beginning of year     | \$ 17,022,325 | \$ 16,216,064 |
| Increase (decrease) in accrued pension obligations |               |               |
| Interest on accrued benefits (Note 5)              | 1,057,594     | 1,024,071     |
| Benefits accrued (Note 5)                          | 567,296       | 568,913       |
| Changes in actuarial assumptions (Note 5)          | 163,721       | 175,877       |
| Experience gains (Note 5)                          | (134,256)     | (215,744)     |
| Benefits paid (Notes 5 and 9)                      | (768,942)     | (746,856)     |
|  | 885,413       | 806,261       |
| Accrued pension obligations, end of year (Note 5)  | \$ 17,907,738 | \$ 17,022,325 |

The accompanying notes are part of these financial statements.

August 31, 2022

#### NOTE 1 DESCRIPTION OF ATRF AND THE PLANS

#### a) ATRF-Nature of operations

The Alberta Teachers' Retirement Fund Board ("ATRF"), established in 1939, a corporation under the authority of the *Teachers' Pension Plans Act*, Chapter T-1, RSA 2000, is the trustee and administrator of the Teachers' Pension Plan and the Private School Teachers' Pension Plan (the "Plans").

ATRF is responsible for establishing the Plans' funding policy and setting contribution rates, establishing the Statement of Investment Policies & Goals ("SIP&G") for the Plans' assets, and providing pension benefit administration services to the plan members and other stakeholders. The SIP&G describes policies that govern how ATRF's assets are to be invested. It defines the strategic asset allocation, including well-defined asset categories, their performance benchmarks and risk profiles, and the long-term target proportion of total assets to be invested in each. The SIP&G also defines ATRF's tolerance for both total investment risk and for AIMCo's latitude in implementing these policies.

ATRF is governed by a Board of Directors. One-half of the board members are nominated by the Finance Minister of the Government of Alberta and one-half by the Alberta Teachers' Association.

The Reform of Agencies, Boards and Commissions and Government Enterprises Act, 2019 ("Bill 22") came into force on November 22, 2019, requiring ATRF to engage Alberta Investment Management Corporation ("AIMCo") as the exclusive provider of investment management services to ATRF in respect of the Plans' assets, to enter into an investment management agreement with AIMCo by June 30, 2020, and to transition management of all assets to AIMCo by December 31, 2021. The transition of management of the Plan's assets to AIMCo, along with the transition of other operational resources and responsibilities began during the year ended August 31, 2021. Effective October 1, 2021, ATRF transitioned the responsibility for the investment management of the Plans' remaining assets to AIMCo.

#### b) The Plans-General description

The Plans are contributory defined benefit pension plans for all Alberta teachers employed in school jurisdictions and charter schools, as well as teachers employed by participating private schools. The Plans are sponsored by the Government of Alberta and the Alberta Teachers' Association, as representatives of the plan members. These plan sponsors are responsible for plan design, benefits and funding arrangements, and share in plan gains and losses. Design of the Plans' benefits are established by *The Teachers' and Private School Teachers' Pension Plan Regulation 203/1995, as amended* (the "Regulation").

The following descriptions of the Plans and their key attributes are a summary only. Refer to the Regulation and the Plans' text documents for a complete description of the Plans' benefits and obligations. Unless otherwise stated, all terms not defined below have the meaning ascribed to them in the Plans' documents.

August 31, 2022

#### NOTE 1 DESCRIPTION OF ATRF AND THE PLANS (CONTINUED)

#### c) Obligations relating to the period before September 1992

The Teachers' Pension Plan's assets and obligations related to pensionable service after August 31, 1992 (the "post-1992 period"), have been accounted for separately from the assets and obligations related to pensionable service prior to September 1, 1992 (the "pre-1992 period"), and, accordingly, these financial statements and notes include only post-1992 period transactions of the Teachers' Pension Plan and transactions of the Private School Teachers' Pension Plan.

Effective September 1, 2009, the Province of Alberta (the "Province") assumed full responsibility for obligations related to the Teachers' Pension Plan pre-1992 period pensionable service and provides the required amounts to ATRF to pay the obligations on a monthly basis (Note 9).

#### d) Contributions

The determination of the value of the benefits and the required contributions for the Plans is made on the basis of periodic actuarial valuations.

All teachers under contract with school jurisdictions and charter schools in Alberta are required to contribute to the Teachers' Pension Plan. Current service costs and related deficiencies are funded by equal contributions from the Province and the teachers. A component of the post-1992 contributions includes a cost-of-living adjustment ("COLA"), equating to 70% of the increase to the Alberta Consumer Price Index ("ACPI"). Teachers and the Province equally contribute to fund the COLA of 60% of the ACPI, with the additional COLA of 10% of the ACPI fully funded by the teachers.

Certain other designated organizations in Alberta also participate in the Teachers' Pension Plan under the same funding arrangements, except these organizations make the employer contributions rather than the Province.

Certain private schools participate in the Private School Teachers' Pension Plan. The structure for plan costs and related deficiencies are funded in equal contributions from the employers and the teachers. Similar to the Teachers' Pension Plan above, the teachers and the Province equally contribute to fund the COLA of 60% of the ACPI, with the additional COLA of 10% of the ACPI fully funded by the teachers.

August 31, 2022

#### NOTE 1 DESCRIPTION OF ATRF AND THE PLANS (CONTINUED)

The contribution rates for fiscal years ended August 31 are as follows:

|  | Teachers'<br>Pension Plan |        | Private<br>Teachers<br>Pla |        |
|--|---------------------------|--------|----------------------------|--------|
|  | 2022                      | 2021   | 2022                       | 2021   |
| Up to YMPE <sup>1</sup>                | 9.76%                     | 9.76%  | 8.50%                      | 8.50%  |
| Above YMPE                             | 13.94%                    | 13.94% | 12.15%                     | 12.15% |
| Total Teachers' Contribution           | 11.34%                    | 11.34% | 9.95%                      | 9.95%  |
| Total Government/Employer Contribution | 10.87%                    | 10.87% | 9.51%                      | 9.51%  |

<sup>&</sup>lt;sup>1</sup> YMPE: Year's Maximum Pensionable Earnings used by the Canada Pension Plan (2022: \$64,900; 2021: \$61,600)

#### e) Retirement pensions

Retirement pensions are based on the number of years of pensionable service and the average salary of the highest five consecutive years. Pensions are payable to teachers who retire after completion of at least five years of pensionable service, with certain restrictions, and who have attained age 65. Unreduced pensions are also payable to teachers who have reached at least age 55 and the sum of their age and service equals at least 85. With certain restrictions, reduced pensions are payable to teachers who retire at or after age 55 with a minimum of five years of pensionable service.

#### f) Disability benefits

Teachers who are disabled after August 31, 1992, are credited with pensionable service while disabled. Teachers do not contribute to the Plans while disabled.

#### g) Termination benefits

Refunds or commuted value transfers are available when a teacher ceases employment, subject to certain restrictions. Inactive members with a minimum of five years of pensionable service, subject to certain restrictions, have the option to defer their entitlement in the Plans and receive a pension when they retire.

#### h) Death benefits

Death benefits are available upon the death of a teacher and may be available upon the death of a retired member, depending on the pension option selected by the retired member at the time of retirement. The benefit may take the form of a lump sum payment or a survivor pension.

#### i) Service purchases and transfers

Purchase of past service, such as substitute teaching service, employer-approved leaves, and reinstatement of refunded service is allowed on a basis that is cost neutral to the Plans.

August 31, 2022

#### NOTE 1 DESCRIPTION OF ATRF AND THE PLANS (CONTINUED)

The Plans have Reciprocal Transfer Agreements with all other provincial teachers' pension plans, the Alberta public sector pension plans, and the Government of Canada Public Service Pension Plan. These agreements authorize the transfer of pensionable service, related obligations, and assets in accordance with the terms of the reciprocal transfer agreement between the participating organizations.

#### j) COLA

Deferred pensions and pensions payable for the portion of pension earned after 1992 are increased each year by a COLA equal to 70% of the increase in the ACPI.

#### k) Income taxes

The Plans are registered pension plans as defined in the *Income Tax Act* (registration number 0359125) and are not subject to income taxes in Canada. The Plans may be subject to taxes in other jurisdictions where full tax exemptions are not available.

#### NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### a) Basis of presentation

The statements present the aggregate financial position of the Plans. These financial statements are prepared in accordance with Canadian accounting standards for pension plans. Section 4600 – Pension Plans, of the CPA Canada Handbook, prescribes accounting policies specific to investments and pension obligations. For accounting policies which do not relate to either investments or pension obligations, International Financial Reporting Standards ("IFRS") are applied. To the extent that IFRS are inconsistent with Section 4600, Section 4600 takes precedence.

All of the entities that ATRF has an ownership interest in, regardless of whether ATRF can control or exercise significant influence, are considered to be investment assets and are presented on a non-consolidated basis.

#### b) Valuation of investments

Investments, investment-related receivables, and investment-related liabilities are recognized on a trade date basis and are stated at fair value.

Fair value is the price at which an investment asset would be sold or investment liability transferred through an orderly transaction between market participants at the measurement date under current market conditions.

August 31, 2022

# NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Fair values of investments, as described in Note 3, are determined as follows:

| BASIS OF VALUATION   |
|--|
| Cost plus accrued interest approximates fair value due to the short-term nature of these securities.   |
| Closing quoted market price. Where quoted prices are not available, estimated values are calculated using discounted cash flows based on current market yields for comparable securities.  |
| Closing quoted market price. Where a market price is not available, market value is determined using appropriate valuation methods.  |
| Private equity/Infrastructure investments are held through limited partnerships, investment funds and/or other appropriate legal structures alongside our investment managers. Fair value is determined based on carrying values and other relevant information reported by the investment managers using accepted valuation methods and adjusted for any transactions during the interim period up to the reporting date of these financial statements. |
| Absolute return funds are recorded at fair value, as reported by the investment managers.  |
| Real estate investments are held directly, through limited partnerships, investment funds and/or other appropriate legal structures alongside our investment managers. Fair value for direct investments is determined using independent appraisals conducted every year. Investments held through funds are valued using carrying values reported by the investment managers with similar accepted industry valuation methods.                          |
| Bonds sold under repurchase agreement are recorded at cost plus accrued interest, which approximates fair value.   |
| Market prices are used for exchange-traded derivatives. Where quoted market prices are not readily available, in the case of over-the-counter ("OTC") derivatives, appropriate valuation techniques are used to determine fair value.  |
|  |

August 31, 2022

#### NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

As disclosed in Note 3, the Plans' investments consist of direct ownership in both segregated and pooled investment funds ("the pools"). Participants in the pools are not a party to the contracts and have no control over the management of the pool and the selection of securities in the pool. The Plans' investment manager controls the creation of the pools and the management and administration of the pools, including security selection. The Plans hold units in the pooled investment fund. Accordingly, the Plans do not report the financial instruments of the pools on its statement of financial position, but rather the value of the units.

The fair value of units held by the Plans is derived from the fair value of the underlying financial instruments held by the pools as determined by the investment manager. Investments in units are recorded in the Plans' accounts. The underlying financial instruments are recorded in the accounts of the pools on a trade-date basis. The pools have a market-based unit value that is used to distribute income to the pool participants and to value purchases and sales of the pool units. The pools include various financial instruments such as bonds, equities, real estate, derivatives, investment receivables, and payable trade-date.

The Plans become exposed to the financial risks and rewards associated with the underlying financial instruments in a pool when the Plans purchase units issued and lose exposure to those financial risks and rewards when it sells its units. The Plans report its share of the investment risks in Note 10.

All purchases and sales of the pool units are in Canadian dollars.

#### i) FAIR VALUE HIERARCHY

All financial instruments measured at fair value are categorized into one of the following three hierarchy levels. Each level reflects the availability of observable inputs, which are used to determine fair values based on financial information significant to the valuation measurement.

- Level 1: Fair value is based on unadjusted quoted prices in active markets for identical
  assets or liabilities. For multi-client pools, securities held in pools with quoted
  price in active markets are classified as level 2 as the pool units themselves are
  not listed in an active market, and therefore, cannot be classified as level 1.
- Level 2: Fair value is based on market data other than quoted prices included in Level 1
  that are observable either directly or indirectly. This level includes units of multiclient pools holding public equity, debt securities, and derivative contracts that
  would otherwise be classified as Level 1.
- Level 3: Fair value is based on inputs other than observable market data. This level
  includes units of multi-client pools holding investments that would not be
  classified as Level 1 and Level 2.

August 31, 2022

#### NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### c) Investment income

Income is recognized as follows:

| CATEGORY  | BASIS OF RECOGNITION   |
|---|--|
| Interest income   | Accrual basis  |
| Dividend income   | Accrual basis on the ex-dividend date  |
| Income from real estate, private equity, and infrastructure | Income includes distributions recognized as interest income, dividend income or other income, as appropriate |
| Realized gains and losses on investments                    | Difference between proceeds on disposal and the average cost   |
| Unrealized gains and losses on investments                  | Change in the difference between estimated fair value and the average cost                                   |

Income distributions from pooled funds are based on the Plans' pro-rata share of total units issued by the pools. Changes in fair value of units, including realized gains and losses on disposal of units, and unrealized gains and losses on units are determined on an average cost basis.

#### d) Investment expenses

Investment expenses, including those relating to portfolio transaction costs (incremental costs attributable to the acquisition and disposition of investment assets or liabilities), investment personnel and operations, oversight, and governance, are accrued and expensed in the fiscal period as incurred.

In addition, investment expenses are charged by AIMCo on a cost-recovery basis. Amounts charged to the Plan by AIMCo for investment costs include external management fees, external administration costs, employee salaries, incentive benefits, and overhead costs. Please refer to the AIMCo financial statements for a more detailed breakdown of the types of expenses.

External investment performance fees are earned by AIMCo and other external investment managers for earning returns in excess of pre-determined thresholds. Fees earned by AIMCo and external managers in the fiscal period are expensed.

August 31, 2022

#### NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### e) Foreign currency translation

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

#### f) Contributions

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

#### g) Benefits

Pension benefits, termination benefits, and transfers to other plans are recorded in the period in which they are paid. Any benefit payment accruals not paid are reflected in accrued pension benefits.

#### h) Accrued pension obligations

The value of accrued pension obligations and changes therein during the year are based on an actuarial valuation prepared by an independent firm of actuaries annually as at August 31. The valuation uses the projected benefit method, pro-rated on service, and includes management's best estimate of various future events, as at the valuation date (Note 5).

#### i) Corporate cash

Corporate cash comprises of cash on hand and demand deposits. Cash is held for the purpose of meeting short-term commitments rather than for investment purposes.

#### j) Capital assets

Capital assets are recorded at cost and amortized over their estimated useful lives. Costs net of accumulated amortization are included with 'Other assets' on the Statement of Financial Position.

#### k) Use of estimates

The preparation of financial statements, in conformity with Canadian accounting standards for pension plans, requires management to make estimates and assumptions in circumstances where the actual values are unknown. Uncertainty in determination of the amount that is reported in the financial statements is known as measurement uncertainty.

August 31, 2022

#### NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Measurement uncertainty exists in the calculation of the Plans' actuarial value of accrued benefits. Uncertainty arises because the Plans' actual experience may differ significantly from assumptions used in the calculation of the Plans' accrued benefits.

The value of financial instruments can be impacted by global events; therefore measurement uncertainty exists in the values of the Plans' assets.

Significant estimates and assumptions are made in measuring the Plans' private investments. The values may differ significantly from the values that would have been used had a ready market existed for these investments.

#### I) Salaries and benefits

Details of executives' compensation are presented in the Compensation Discussion and Analysis section of the Annual Report.

ATRF participates in the Local Authorities Pension Plan, a defined benefit public sector pension plan, which meets the accounting requirements for treatment as a defined contribution plan. Therefore, the employer contributions are recorded as an expense.

ATRF provides a Supplementary Employee Pension Plan (SEPP) to executives and certain eligible managers whose earnings exceed the pension benefit limit under the *Income Tax Act* regulations. Benefits are paid to these members as the benefits come due. No assets are earmarked, set aside, or placed into trust by ATRF for SEPP benefit payments. The pension benefit is recorded as an expense and as a liability.

#### m) Accounting surplus

For financial statement reporting purposes, the Plans' surplus or deficiency is based on the difference between the fair value of the Plans' net assets available for benefits and the accrued pension obligation.

August 31, 2022

#### NOTE 3 INVESTMENTS

Pursuant to Bill 22, ATRF completed transition of the responsibility for investment management of the Plans' assets to AIMCo during the fiscal year.

The assets transitioned to AIMCo's management are administered by AIMCo in separate accounts for administrative and custodial purposes. These accounts include segregated and multi-client investment pool structures that other AIMCo-managed assets are invested in. Additional capital invested in these asset classes post-transition may be invested in the same segregated accounts if they are related to transitioned assets, or may be invested in appropriate multi-client investment pool structures.

The following schedule summarizes the fair value of the Plans' investments before allocating the market exposure related to derivative financial instruments. Investments assets and liabilities are presented within the fair value hierarchy as defined in Note 2 b).

August 31, 2022

NOTE 3 INVESTMENTS (CONTINUED)

| (\$ Thousands)                     | Fai     | r Value |              |         |            |    | 2022       | 2021      |      |
|------------------------------------|---------|---------|--------------|---------|------------|----|------------|-----------|------|
|                                    | Level 1 |         | Level 2      |         | Level 3    |    | Total      | Total     |      |
| Fixed Income                       |         |         |              |         |            |    |            |           |      |
| Investment Cash                    | \$      | 632,835 | \$ -         | \$      | -          | \$ | 632,835    | \$ 185    | ,969 |
| Money-market securities            |         | -       | 46,353       | ,       | -          |    | 46,353     | 94        | ,153 |
| Bonds and debentures               |         | -       | 3,865,840    | )       | -          |    | 3,865,840  | 4,128     | ,848 |
|                                    |         | 632,835 | 3,912,193    | ,       | -          |    | 4,545,028  | 4,408     | ,970 |
| Equity                             |         |         |              |         |            |    |            |           |      |
| Public                             | 6,      | 572,616 | -            |         | -          |    | 6,572,616  | 8,463     | ,268 |
| Private                            |         |         | -            |         | 3,456,241  |    | 3,456,241  | 2,732     | ,983 |
|                                    | 6,      | 572,616 | -            |         | 3,456,241  |    | 10,028,857 | 11,196    | ,251 |
|                                    |         |         |              |         |            |    |            |           |      |
| Absolute return                    |         | -       | -            |         | 2,245,736  |    | 2,245,736  | 2,150     | ,158 |
|                                    |         |         |              |         |            |    |            |           |      |
| Real estate                        |         | -       | -            |         | 3,027,955  |    | 3,027,955  | 2,708     | ,722 |
| Infrastructure                     |         | -       | -            |         | 2,108,229  |    | 2,108,229  | 1,872     | ,208 |
|                                    |         | -       | -            |         | 5,136,184  |    | 5,136,184  | 4,580     | ,930 |
| Investment related assets          |         |         |              |         |            |    |            |           |      |
| Due from brokers                   |         | 33,413  | -            |         | -          |    | 33,413     | 129       | ,150 |
| Accrued income                     |         | 168     | -            |         | -          |    | 168        | 18        | ,002 |
| Unrealized gains and amounts       |         |         |              |         |            |    |            |           |      |
| receivable on derivative contracts |         | -       | 92,752       |         | -          |    | 92,752     | 87        | ,617 |
|                                    |         | 33,581  | 92,752       |         | -          |    | 126,333    | 234       | ,769 |
| INVESTMENT ASSETS                  | 7,      | 239,032 | 4,004,945    | i       | 10,838,161 |    | 22,082,138 | 22,571    | ,078 |
|                                    |         |         |              |         |            |    |            |           |      |
| Investment related liabilities     |         |         |              |         |            |    |            |           |      |
| Due to brokers                     |         | 49,240  | -            |         | -          |    | 49,240     | 80        | ,022 |
| Bond repurchase agreements         |         | -       | -            |         | -          |    | -          | 33        | ,313 |
| Unrealized losses and amounts      |         |         |              |         |            |    |            |           |      |
| payable on derivative contracts    |         | -       | 131,964      |         | -          |    | 131,964    | 96        | ,996 |
| INVESTMENT LIABILITIES             |         | 49,240  | 131,964      | 131,964 |            |    | 181,204    | 210       | ,331 |
|                                    |         |         |              |         |            |    |            |           |      |
| NET INVESTMENTS                    | \$ 7,   | 189,792 | \$ 3,872,981 | \$      | 10,838,161 | \$ | 21,900,934 | \$ 22,360 | ,747 |

August 31, 2022

NOTE 3 INVESTMENTS (CONTINUED)

| (\$ Thousands)                     | Fair Value   |              | 2021         |               |
|------------------------------------|--------------|--------------|--------------|---------------|
|                                    | Level 1      | Level 2      | Total        |               |
| Fixed income                       |              |              |              |               |
| Cash                               | \$ 185,969   | \$ -         | \$ -         | \$ 185,969    |
| Money-market securities            |              | 94,153       | -            | 94,153        |
| Bonds and debentures               | -            | 4,036,342    | 92,506       | 4,128,848     |
|                                    | 185,969      | 4,130,495    | 92,506       | 4,408,970     |
| Equity                             |              |              |              |               |
| Public                             | 8,463,268    | -            | -            | 8,463,268     |
| Private                            | -            | -            | 2,732,983    | 2,732,983     |
|                                    | 8,463,268    | -            | 2,732,983    | 11,196,251    |
| Absolute return                    | -            | -            | 2,150,158    | 2,150,158     |
| Real estate                        | 10,023       | -            | 2,698,699    | 2,708,722     |
| Infrastructure                     | -            | -            | 1,872,208    | 1,872,208     |
|                                    | 10,023       | -            | 4,570,907    | 4,580,930     |
| Investment related assets          |              |              |              |               |
| Due from brokers                   | 129,150      | -            | -            | 129,150       |
| Accrued income                     | 18,002       | -            | -            | 18,002        |
| Unrealized gains and amounts       |              |              |              |               |
| receivable on derivative contracts | 33,306       | 54,311       | -            | 87,617        |
|                                    | 180,458      | 54,311       | -            | 234,769       |
| INVESTMENT ASSETS                  | 8,839,718    | 4,184,806    | 9,546,554    | 22,571,078    |
| Investment related liabilities     |              |              |              |               |
| Due to brokers                     | 80,022       | -            | -            | 80,022        |
| Bond repurchase agreements         | -            | 33,313       | -            | 33,313        |
| Unrealized losses and amounts      |              |              |              |               |
| payable on derivative contracts    | 8,436        | 88,560       | -            | 96,996        |
| INVESTMENT LIABILITIES             | 88,458       | 121,873      | -            | 210,331       |
| NET INVESTMENTS                    | \$ 8,751,260 | \$ 4,062,933 | \$ 9,546,554 | \$ 22,360,747 |

August 31, 2022

#### NOTE 3 INVESTMENTS (CONTINUED)

The following table represents a reconciliation of financial instruments included in Level 3 of the fair value hierarchy for the year ended August 31, 2022:

| (\$ Thousands)       | air Value,<br>ugust 31,<br>2021 | Purchases   | Sales             | Tr | ansfer in | Realized<br>Gain/(Loss) | U  | Inrealized<br>Gain | Fair Value,<br>gust 31, 2022 |
|----------------------|---------------------------------|-------------|-------------------|----|-----------|-------------------------|----|--------------------|------------------------------|
| Bonds and debentures | \$<br>92,506                    | \$ -        | \$<br>(91,882)    | \$ | -         | \$<br>(1,838)           | \$ | 1,214              | \$<br>-                      |
| Private equity       | 2,732,983                       | 786,595     | (572,300)         |    | (581)     | 473,570                 |    | 35,974             | 3,456,241                    |
| Absolute return      | 2,150,158                       | 57,878      | (83,846)          |    | -         | (36,345)                |    | 157,891            | 2,245,736                    |
| Real estate          | 2,698,699                       | 531,337     | (579,693)         |    | 13,879    | 329,443                 |    | 34,290             | 3,027,955                    |
| Infrastructure       | 1,872,208                       | 268,383     | (101,630)         |    | (3)       | 30,037                  |    | 39,234             | 2,108,229                    |
| _                    | \$<br>9,546,554                 | \$1,644,193 | \$<br>(1,429,351) | \$ | 13,295    | \$<br>794,867           | \$ | 268,603            | \$<br>10,838,161             |

#### NOTE 4 ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

| (\$ Thousands)                        | 2  | 022    | 2021 |        |  |
|---------------------------------------|----|--------|------|--------|--|
| Tax withholdings                      | \$ | 14,839 | \$   | 13,872 |  |
| Incentive plans payable               |    | 4,311  |      | 7,071  |  |
| Supplementary Employee Pension Plan   |    | 4,179  |      | 5,542  |  |
| Accounts payable                      |    | 2,399  |      | 15,507 |  |
| Contributions due to the Province     |    | -      |      | 2,696  |  |
| Long-Term Incentive Plan <sup>1</sup> |    | -      |      | 2,883  |  |
|                                       | \$ | 25,728 | \$   | 47,571 |  |

<sup>&</sup>lt;sup>1</sup> ATRF's Long-Term Incentive Plan was terminated in 2022. Amounts payable in fiscal 2021-22 are included in Incentive plans payable.

#### NOTE 5 ACCRUED PENSION OBLIGATIONS

Pension obligations represent the value of accrued pension benefits payable in the future to members, and are based on an actuarial valuation by an independent firm of actuaries. Separate valuations are performed for accounting purposes and for funding purposes. The accrued pension obligation for funding purposes was determined using the valuation methodology described in Note 5 d).

For accounting purposes, actuarial valuations of the Plans were performed as at August 31, 2022 (and as at August 31, 2021). The accrued pension obligation reflected in the Statement of Financial Position represents the present value of the accrued pension obligations of \$17,908 million (2021: \$17,022 million), which was determined using the projected accrued benefit actuarial cost method prorated on service.

August 31, 2022

#### NOTE 5 ACCRUED PENSION OBLIGATIONS (CONTINUED)

#### a) Best-estimate valuations and assumptions

The assumptions used in the valuations are based on past experience, as analyzed by the Plans' actuary, and management's best estimate of future events, and involve rates of demographic change, such as rates of mortality, termination of membership, and retirement, as well as economic parameters, such as rates of inflation, discount rates, and salary escalation rates.

The discount rate is equivalent to the long-term expected rate of return on invested assets.

The major long-term economic assumptions used in the best-estimate valuations are:

|   | 2022  | 2021  |
|---|-------|-------|
| Rate of return on invested assets (discount rate) | 6.25% | 6.25% |
| Rate of inflation                                 | 2.00% | 2.00% |
| Real wage increases                               | 0.75% | 0.75% |

#### b) Sensitivity of changes in major assumptions on best-estimate valuations

For illustrative purposes, the table below shows the impact of changes in major assumptions, holding all other assumptions constant:

|   | Teach<br>Pension  |  | Private School<br>Pension                                   |  |  |
|---|---|--|---|--|--|
|   | 0.5% decrease<br>in rate of return<br>on invested<br>assets | 0.5% increase<br>in rate of<br>inflation | 0.5% decrease<br>in rate of return<br>on invested<br>assets | 0.5% increase<br>in rate of<br>inflation |  |
| Increase in current service costs (% of total teacher salaries) | 1.8%  | 1.5%                                     | 1.9%  | 1.5%                                     |  |
| Increase in accrued pension obligations                         | \$1,402 million   | \$1,073 million                          | \$7 million   | \$5 million                              |  |

For accounting purposes, and using best-estimate financial statement valuation assumptions, as at August 31, 2022, the current service cost (excluding 0.2% for administrative expenses) as a percent of total teacher salaries for the Teachers' Pension Plan is 15.0% and for the Private School Teachers' Pension Plan is 15.4%. The financial statement valuation's current service cost may differ from the current service cost calculated using the funding valuation assumptions for funding purposes.

August 31, 2022

## NOTE 5 ACCRUED PENSION OBLIGATIONS (CONTINUED)

#### c) Results based on valuations

For accounting purposes, the excess of net assets available for benefits against pension obligations results in the Plans having an accounting surplus of \$4,007 million for the post-1992 period of the Teachers' Pension Plan and an accounting surplus of \$28 million for the Private School Teachers' Pension Plan as at August 31, 2022.

| (\$ Thousands)                                   |                           | 2022                         |               | 2021                      |                              |               |  |
|--|---------------------------|------------------------------|---------------|---------------------------|------------------------------|---------------|--|
|  | Teachers'<br>Pension Plan | Private<br>Teachers'<br>Plan | Total         | Teachers'<br>Pension Plan | Private<br>Teachers'<br>Plan | Total         |  |
| Net assets at beginning of year                  | \$ 22,227,145             | \$ 114,515                   | \$ 22,341,660 | \$ 19,199,969             | \$ 98,263                    | \$ 19,298,232 |  |
| Contributions                                    | 793,637                   | 5,580                        | 799,217       | 793,520                   | 5,373                        | 798,893       |  |
| Benefits   | (765,452)                 | (3,490)                      | (768,942)     | (742,504)                 | (4,352)                      | (746,856)     |  |
| Investment earnings                              | (183,819)                 | (948)                        | (184,767)     | 3,192,007                 | 16,336                       | 3,208,343     |  |
| Investment and member service expenses           | (242,854)                 | (1,250)                      | (244,104)     | (215,847)                 | (1,105)                      | (216,952)     |  |
| Net assets at end of year                        | 21,828,657                | 114,407                      | 21,943,064    | 22,227,145                | 114,515                      | 22,341,660    |  |
| Accrued pension obligations at beginning of year | 16,942,376                | 79,949                       | 17,022,325    | 16,140,937                | 75,127                       | 16,216,064    |  |
| Interest on accrued benefits                     | 1,052,562                 | 5,032                        | 1,057,594     | 1,019,297                 | 4,774                        | 1,024,071     |  |
| Benefits accrued                                 | 562,696                   | 4,600                        | 567,296       | 564,463                   | 4,450                        | 568,913       |  |
| Changes in actuarial assumptions                 | 162,862                   | 859                          | 163,721       | 175,104                   | 773                          | 175,877       |  |
| Experience gains                                 | (133,825)                 | (431)                        | (134,256)     | (214,921)                 | (823)                        | (215,744)     |  |
| Benefits paid                                    | (765,452)                 | (3,490)                      | (768,942)     | (742,504)                 | (4,352)                      | (746,856)     |  |
| Actuarial value of accrued pension obligations   | 17,821,219                | 86,519                       | 17,907,738    | 16,942,376                | 79,949                       | 17,022,325    |  |
| Accounting surplus                               | \$ 4,007,438              | \$ 27,888                    | \$ 4,035,326  | \$ 5,284,769              | \$ 34,566                    | \$ 5,319,335  |  |

The change in pension obligations is comprised of five components:

#### i) INTEREST ON ACCRUED BENEFITS

Pension obligations increase with interest as the present value of the valuation is evaluated one year later. The interest on accrued benefits is calculated using the rate of return on invested assets.

#### ii) BENEFITS ACCRUED

Pension obligations increase with new service credited and additional benefits accumulated by plan members during the fiscal year.

August 31, 2022

## NOTE 5 ACCRUED PENSION OBLIGATIONS (CONTINUED)

#### iii) EXPERIENCE GAINS

Experience gains of \$134 million (2021: Experience gains of \$216 million) on accrued benefits are the result of actual experience from one valuation to the next being different than implied by the assumptions from the previous valuation. As the experience is more favorable than anticipated in the assumptions, this results in an experience gain. Experience gains decrease the pension obligations.

The following table provides details on the net gains on accrued benefits.

| (\$ Thousands)        | TPP          | PSTPP    | Total        |
|-----------------------|--------------|----------|--------------|
| Salary                | \$ (241,918) | \$ (206) | \$ (242,124) |
| COLA                  | 37,778       | 167      | 37,945       |
| Demographic           | 79,614       | (510)    | 79,104       |
| Other plan experience | (9,299)      | 118      | (9,181)      |
| Experience gains      | \$ (133,825) | \$ (431) | \$ (134,256) |

#### iv) CHANGES IN ACTUARIAL ASSUMPTIONS

Pension obligations can increase or decrease if there are changes in actuarial assumptions used to evaluate the present value of benefits.

The assumption changes from August 31, 2021, to August 31, 2022, include changes to economic assumptions. The impact of the assumption changes on the accrued benefits is shown in the following table.

| (\$ Thousands)                        | TPP         | PSTPP    | Total       |
|---------------------------------------|-------------|----------|-------------|
| Lump sum CV interest & inflation rate | \$ (92,417) | \$ (533) | \$ (92,950) |
| Short term salary increases           | (127,231)   | (287)    | (127,518)   |
| Short term COLA increases             | 382,510     | 1,679    | 384,189     |
| Total assumption changes              | \$ 162,862  | \$ 859   | \$ 163,721  |

#### v) BENEFITS PAID

The pension obligations decrease with benefits paid from the Plans during the fiscal year, as the funds are no longer required to be set aside to pay for those benefits.

#### d) Valuation methodologies

ATRF engages an independent actuary to perform two different actuarial valuations of the Plans, one for accounting purposes which is performed in compliance with the prescribed accounting standards, and the second for funding purposes, which is performed in compliance with the prescribed professional and regulatory standards, as discussed in the funding section of the Annual Report.

August 31, 2022

## NOTE 5 ACCRUED PENSION OBLIGATIONS (CONTINUED)

The Plans' accounting surplus or deficiency includes the determination of assets on a fair value basis. However, for actuarial funding valuation purposes, asset values are adjusted for fluctuations in fair values to moderate the effect of market volatility on the Plans' funded status. The funding valuation is calculated in accordance with actuarial standards on a going-concern basis and is used to determine changes to contribution rates for future service in order to manage the Plans' funding status. Both types of valuations have prescribed uses and are based on the same underlying plan member data, but the funding valuation differs by smoothing market returns over a five-year period, and incorporating a margin for adverse deviation in the pension obligations and current service costs.

In accordance with the *Teachers' Pension Plans Act*, an actuarial funding valuation is required to be performed, at a minimum, every three years. The objective is to ensure that the Plans are fully funded over the long term through the management of investments and contribution rates. Investments are based on an asset mix that is designed to enable the Plans to meet their long-term funding requirement within an acceptable level of risk, consistent with the Plans' investment and funding policies, which are approved by the board. The actuarial deficiencies, as determined by actuarial funding valuations, are expected to be funded by August 31, 2027. For further information, refer to the funding section of the Annual Report.

August 31, 2022

## NOTE 6 INVESTMENT EARNINGS

The following is a summary of investment earnings by asset class:

| (\$ Thousands)        |   |         | 2022            |                      |           |                                   |         |       | 2021      |                 |
|-----------------------|---|---------|-----------------|----------------------|-----------|-----------------------------------|---------|-------|-----------|-----------------|
|                       | Investment Change in Income Fair Value <sup>1</sup> |         | Total           | Investment<br>Income |           | Change in Fair Value <sup>2</sup> |         | Total |           |                 |
| Fixed income          |   |         |                 |                      |           |                                   |         |       |           |                 |
| Cash and money-market | \$  | 2,719   | \$<br>(4,220)   | \$                   | (1,501)   | \$                                | 4,712   | \$    | 30        | \$<br>4,742     |
| securities            |   |         |                 |                      |           |                                   |         |       |           |                 |
| Bonds and debentures  |   | 112,351 | (737,307)       |                      | (624,956) |                                   | 85,454  |       | (175,086) | (89,632)        |
| Equity                |   |         |                 |                      |           |                                   |         |       |           |                 |
| Public                |   | 126,379 | (833,511)       |                      | (707,132) |                                   | 141,679 | 1     | ,655,160  | 1,796,839       |
| Private               |   | 31,011  | 509,544         |                      | 540,555   |                                   | 88,567  |       | 841,582   | 930,149         |
| Absolute return       |   | 21,374  | 121,546         |                      | 142,920   |                                   | -       |       | 118,839   | 118,839         |
| Real estate           |   | 111,546 | 363,733         |                      | 475,279   |                                   | 53,054  |       | 125,661   | 178,715         |
| Infrastructure        |   | 72,600  | 69,271          |                      | 141,871   |                                   | 32,479  |       | 120,239   | 152,718         |
| Derivatives           |   | -       | (151,803)       |                      | (151,803) |                                   | -       |       | 115,973   | 115,973         |
|                       | \$  | 477,980 | \$<br>(662,747) | \$                   | (184,767) | \$                                | 405,945 | \$2   | ,802,398  | \$<br>3,208,343 |

<sup>&</sup>lt;sup>1</sup> 2022 change in fair value includes a realized net gain of \$1,208,908 and an unrealized net loss of \$(1,871,656).

 $<sup>^2</sup>$  2021 change in fair value includes a realized net gain of \$1,415,708 and an unrealized net gain of \$1,386,690.

August 31, 2022

#### NOTE 7 INVESTMENT AND MEMBER SERVICE EXPENSES

#### a) Investment expenses

| (\$ Thousands)                             | 2022       | 2021       |
|--|------------|------------|
| ATRF                                       |            |            |
| Investment management and oversight        | \$ 9,929   | \$ 25,721  |
| Investment performance                     | -          | 3,947      |
|  | 9,929      | 29,668     |
| AIMCo <sup>1</sup>                         |            |            |
| Investment management                      | 22,692     | 7,834      |
| Investment performance                     | 6,667      | 1,429      |
|  | 29,359     | 9,263      |
| Third-party external managers <sup>2</sup> |            |            |
| ATRF managed accounts                      |            |            |
| Investment management fees                 | 2,646      | 71,593     |
| Investment performance fees                | -          | 23,477     |
|  | 2,646      | 95,070     |
| AIMCo managed accounts cost recoveries     |            |            |
| Investment management fees                 | 97,482     | 35,592     |
| Investment performance fees                | 95,312     | 39,065     |
|  | 192,794    | 74,657     |
| Total third-party costs                    | 195,440    | 169,727    |
| Total investment expenses                  | \$ 234,728 | \$ 208,658 |

<sup>&</sup>lt;sup>1</sup> AIMCo charges investment expenses to ATRF on a cost-recovery basis. Amounts recovered include external administration costs, employee salaries, incentive and performance-related benefits, and overhead costs.

#### b) Member service expenses

| (\$ Thousands)                                     | 2022        | 2021        |
|--|-------------|-------------|
| ATRF internal benefit administration and oversight | \$<br>9,376 | \$<br>8,294 |

Member service expenses include ATRF's direct costs for pension services such as salaries and benefits of pension team members, plan administration, actuarial services, and shared services such as technology, governance, and oversight costs. It also includes indirect costs for operations such as premises and other corporate operations.

<sup>&</sup>lt;sup>2</sup> ATRF engaged external managers for several public and private asset mandates. When investment management was transitioned to AIMCo, the associated external manager arrangements also transitioned to AIMCo.

August 31, 2022

## NOTE 8 CONTRIBUTIONS

| (\$ Thousands)                         | 2022          | 2021          |
|--|---------------|---------------|
| Teachers                               |               |               |
| Current service                        | \$<br>321,891 | \$<br>326,792 |
| Current service additional 10% of COLA | 12,852        | 13,046        |
| Past service                           | 4,100         | 4,529         |
| Deficiency                             | 58,127        | 59,039        |
|  | 396,970       | 403,406       |
| The Province                           |               |               |
| Current service                        | 325,444       | 323,806       |
| Past service                           | 1,956         | 2,394         |
| Deficiency                             | 55,760        | 55,480        |
|  | 383,160       | 381,680       |
| Private School Boards                  |               |               |
| Current service                        | 2,803         | 2,699         |
| Deficiency                             | 10            | 10            |
|  | 2,813         | 2,709         |
| Transfers from other plans             | 16,274        | 11,098        |
|  | \$<br>799,217 | \$<br>798,893 |

## NOTE 9 BENEFITS PAID

| (\$ Thousands)           | 2022          | 2021          |
|--------------------------|---------------|---------------|
| Pension benefits         | \$<br>605,081 | \$<br>564,012 |
| Termination benefits     | 142,844       | 169,039       |
| Transfers to other plans | 21,017        | 13,805        |
|                          | \$<br>768,942 | \$<br>746,856 |

During the year \$490 million (2021: \$494 million) was received from the Province and was distributed as benefits paid relating to the pre-1992 period.

August 31, 2022

## NOTE 10 INVESTMENT RISK MANAGEMENT

The Plans are exposed to certain financial risks as a result of investment activities, in segregated and multi-client pools. These risks include market risk, credit risk, and liquidity risk. ATRF manages financial risk through the SIP&G, which is approved by the board and reviewed at least once every fiscal year, and other related investment management policies. These policies contain risk limits and risk management provisions that govern investment decisions and have been designed to achieve the mandate of ATRF, which is to prudently invest the assets of the plans and set contribution rates with the objective of maintaining full funding over the long term at a cost and risk level acceptable to the sponsors.

#### a) Market risk

Market risk is the risk that the fair value or future cash flows of an investment asset or investment liability will fluctuate because of changes in market factors such as foreign exchange rates, interest rates, equity, and commodity prices. ATRF mitigates market risk through diversification of investments across asset types, geography, and time horizons. Market risk is comprised of the following:

#### i) CURRENCY RISK

Currency risk is the risk that the value of foreign investments will be affected by changes in foreign currency exchange rates for Canadian dollars. The Plans are exposed to currency risk through holdings of investment assets or liabilities in foreign currencies. The relative Canadian value or future cash flows of investments denominated in foreign currencies will change with a change in the price of the Canadian dollar against other currencies.

Foreign investments in absolute return, real estate, and infrastructure are hedged with the aim of minimizing foreign currency exposure. ATRF permits portfolio managers to hedge foreign currency holdings to limit the Plans' foreign currency exposure.

The Plans' foreign currency exposure is as follows:

| (\$ Thousands)         |                                 | 2022                    |                                     |               | 2021                            |                         |                                     |               |
|------------------------|---------------------------------|-------------------------|-------------------------------------|---------------|---------------------------------|-------------------------|-------------------------------------|---------------|
| Currency               | Foreign<br>Currency<br>Exposure | Currency<br>Derivatives | Net Foreign<br>Currency<br>Exposure | % of<br>Total | Foreign<br>Currency<br>Exposure | Currency<br>Derivatives | Net Foreign<br>Currency<br>Exposure | % of<br>Total |
| United States Dollar   | \$ 9,344,472                    | \$ (4,692,514)          | \$ 4,651,958                        | 60 %          | \$ 7,360,670                    | \$ (3,781,679)          | \$3,578,991                         | 50 %          |
| Euro                   | 1,751,446                       | (656,253)               | 1,095,193                           | 14            | 1,636,952                       | (848,521)               | 788,431                             | 11            |
| Hong Kong Dollar       | 402,036                         | 4,477                   | 406,513                             | 5             | 465,177                         | (49)                    | 465,128                             | 7             |
| British Pound Sterling | 511,439                         | (196,132)               | 315,307                             | 4             | 752,204                         | (356, 130)              | 396,074                             | 6             |
| Indian Rupee           | 186,463                         | (3,917)                 | 182,546                             | 2             | 264,670                         | -                       | 264,670                             | 4             |
| Japanese Yen           | 138,812                         | 26,296                  | 165,107                             | 2             | 262,352                         | 298,804                 | 561,156                             | 8             |
| Other                  | 1,065,031                       | (108,791)               | 956,240                             | 13            | 1,146,401                       | (77,497)                | 1,068,904                           | 14            |
|                        | \$ 13,399,698                   | \$ (5,626,833)          | \$ 7,772,865                        | 100 %         | \$ 11,888,426                   | \$ (4,765,072)          | \$7,123,354                         | 100 %         |

The net foreign currency exposure of its underlying investments represents 35% (2021: 32%) of the Plans' net investments.

August 31, 2022

### NOTE 10 INVESTMENT RISK MANAGEMENT (CONTINUED)

After considering the effect of currency hedges, a 5% increase/decrease in the value of the Canadian dollar against all currencies, with all other variables held constant, would result in an approximate decrease/increase in the value of net foreign investments of \$389 million as at August 31, 2022 (2021: \$356 million).

#### ii) INTEREST RATE RISK

Interest rate risk is the risk that the fair value or future cash flows of an investment will fluctuate as a result of changes in market interest rates. The Plans are exposed to interest rate risk through fixed-rate and floating-rate securities. There are also certain alternative investments which may have interest rate components exposing them to interest rate risk. Changes in interest rates affect fair values of fixed-rate securities and the cash flows of floating-rate securities. Increases in interest rates will generally decrease the fair value of fixed-rate securities and increase cash flow from floating-rate notes.

ATRF manages interest rate risk for investments by establishing a target asset mix that provides an appropriate mix between interest-sensitive investments and those subject to other risks. A portion of the interest-sensitive portfolio is actively managed, allowing managers to anticipate interest rate movements to mitigate or take advantage of interest rate changes.

#### Interest rate risk sensitivity

The interest rate sensitive assets represent 18% (2021: 19%) of the Plans' net investments.

The following table presents the approximate increase/decrease in market value for the Plans' interest rate sensitive investments, assuming a parallel 1% decrease/increase in interest rates, with all other variables held constant:

| (\$ Thousands)        |    |            | )22 |          | 2021     |    |             |    |          |          |   |
|-----------------------|----|------------|-----|----------|----------|----|-------------|----|----------|----------|---|
|                       |    |            | CI  | nange in | Market   |    |             | С  | hange in | Market   |   |
| Term to Maturity      | Ma | rket Value |     | Market   | Value %  | Ma | arket Value |    | Market   | Value %  |   |
|                       |    |            |     | Value    | of Total |    |             |    | Value    | of Total |   |
| Less than 1 year      | \$ | 79,275     | \$  | 386      | 2 %      | \$ | 149,179     | \$ | 175      | 4 %      | D |
| 1-3 years             |    | 487,868    |     | 7,757    | 13       |    | 311,488     |    | 6,410    | 7        |   |
| 3-5 years             |    | 445,556    |     | 15,379   | 11       |    | 429,175     |    | 16,303   | 10       |   |
| 5-10 years            |    | 612,683    |     | 34,436   | 16       |    | 620,680     |    | 43,478   | 15       |   |
| Greater than 10 years |    | 2,516,395  |     | 341,959  | 64       |    | 2,619,954   |    | 421,091  | 62       |   |
| Other <sup>1,2</sup>  |    | (229,584)  |     | -        | (6)      |    | 92,525      |    | -        | 2        |   |
|                       | \$ | 3,912,193  | \$  | 399,917  | 100 %    | \$ | 4,223,001   | \$ | 487,457  | 100 %    | Ď |

<sup>&</sup>lt;sup>1</sup> 2022: Includes Cash, Repos, Margin Accounts, and Derivatives held in multi-client Fixed Income pools for which term to maturity information is not available or modified duration could not be calculated.

<sup>&</sup>lt;sup>2</sup> 2021: Includes externally managed private debt investments and holdings for which term to maturity information is not available or modified duration could not be calculated.

August 31, 2022

## NOTE 10 INVESTMENT RISK MANAGEMENT (CONTINUED)

#### iii) EQUITY PRICE RISK

Equity price risk is the risk that the fair value of an investment will fluctuate as a result of changes in equity market prices (other than those arising from interest-rate risk or currency risk), whether those changes are caused by factors specific to the individual investment or factors affecting all securities traded in the market.

The Plans use geographic, sector and entity specific analyses, and strategies, such as diversification and derivative instruments to mitigate the overall impact of price risk.

A 10% increase/decrease in the value of the overall public equity market, with all other variables held constant, would result in an approximate increase/decrease in the value of public-market exposure of \$661 million (2021: \$880 million).

#### b) Credit risk

Credit risk is the potential of loss should a counterparty fail to meet its contractual obligations, or a reduction in the value of assets due to deteriorated credit quality of the counterparty, guarantor or the collateral supporting the credit exposure. The Plans are exposed to credit risk through investment in fixed income investments, securities lending, and balances receivable from sponsors and counterparties.

To mitigate this risk, investment restrictions within the Plans have been set to limit the credit exposure to security issuers. Short-term investments require a rating of "R-1" or equivalent. Credit exposure to any single counterparty is limited to maximum amounts and minimum ratings as specified in the relevant product descriptions.

As at August 31, 2022, fixed-income investments exposed to credit risk, by credit rating, are as follows:

| (\$ Thousands)  |    | 2022                |            | 2021                  |            |  |
|---|----|---------------------|------------|-----------------------|------------|--|
|   | Ма | rket Value          | % of Total | Market Value          | % of Total |  |
| Investment grade (AAA to BBB-) Speculative grade (BB+ or lower) | \$ | 4,124,674<br>13,162 | 106 %<br>0 | \$ 4,120,342<br>2,482 | 98 %<br>0  |  |
| Unrated <sup>1,2</sup>  |    | (225,643)           | (6)        | 100,177               | 2          |  |
|   | \$ | 3,912,193           | 100 %      | \$ 4,223,001          | 100 %      |  |

<sup>&</sup>lt;sup>1</sup> 2022: Includes Bonds, Cash, Repos, Margin Accounts, and Derivatives held in multi-client Fixed Income pools for which credit rating is not assigned or not applicable; amount does not present a credit risk to ATRF for 2022.

<sup>&</sup>lt;sup>2</sup> 2021: Includes externally managed private debt investments and holdings for which credit rating is not assigned.

August 31, 2022

## NOTE 10 INVESTMENT RISK MANAGEMENT (CONTINUED)

As at August 31, 2022, the Plans have significant concentration of credit risk within fixed-income investments with the following issuers:

| (\$ Thousands)       | 2022         |            | 2021         |            |  |
|----------------------|--------------|------------|--------------|------------|--|
|                      | Market Value | % of Total | Market Value | % of Total |  |
| Province of Ontario  | \$ 789,312   | 20 %       | \$ 850,212   | 20 %       |  |
| Government of Canada | 573,105      | 15         | 604,496      | 14         |  |
| Province of Quebec   | 542,212      | 14         | 583,398      | 14         |  |

The Plans are also exposed to risk through over-the-counter ("OTC") derivative transactions, arising from a default or insolvency of a counterparty.

The Plans have exposure to OTC derivatives as follows:

| (\$ Thousands) | 2022         | 2021         |
|----------------|--------------|--------------|
| Forwards       | \$<br>89,325 | \$<br>53,578 |
| Options        | 3,427        | 241          |
| Swaps          | -            | 492          |
|                | \$<br>92,752 | \$<br>54,311 |

#### c) Liquidity risk

Liquidity risk is the risk of the Plans being unable to generate sufficient cash in a timely and cost-effective manner to meet commitments and expenses as they become due. Consideration is given to the Plans' financial liabilities, which include investment-related liabilities (Note 3), accrued pension obligations (Note 5), and contracts that give rise to commitments for future payments (Note 11).

Liquidity requirements of the Plans are met through income generated from investments, employee and employer contributions which substantially exceed benefits payable, and by holding publicly traded liquid assets in active markets that are easily sold and converted to cash. ATRF also maintains cash holdings with major Canadian Financial Institutions to manage short-term corporate liquidity needs.

August 31, 2022

## NOTE 10 INVESTMENT RISK MANAGEMENT (CONTINUED)

The investment-related liabilities are due within one year as follows:

| (\$ Thousands)              | 2022          | 2021 |         |  |
|-----------------------------|---------------|------|---------|--|
| Due to brokers              | \$<br>49,240  | \$   | 80,022  |  |
| Derivative instruments      | 131,964       |      | 96,996  |  |
| Bonds repurchase agreements | -             |      | 33,313  |  |
|                             | \$<br>181,204 | \$   | 210,331 |  |

The following table presents the liquid investment assets at the year ended August 31:

| (\$ Thousands)          | 2022         | 2021             |
|-------------------------|--------------|------------------|
| Investment cash         | \$ 632,835   | \$<br>185,969    |
| Money-market securities | 46,353       | 94,153           |
| Bonds and debentures    | 3,865,840    | 4,036,342        |
| Public equities         | 6,572,616    | 8,463,268        |
|                         | \$11,117,644 | \$<br>12,779,732 |

ATRF aims to ensure sufficient liquidity to meet the Plans' obligations while maintaining the agility for suitable investment opportunities and/or rebalancing the investment portfolios to target levels.

#### NOTE 11 COMMITMENTS

The Plans have committed to fund certain private investments over the next several years. These commitments are generally payable on demand based on the funding needs of the investment subject to the terms and conditions of each commitment. As at August 31, 2022, the sum of these commitments equalled \$1,307 million (2021: \$1,706 million).

August 31, 2022

# NOTE 12 NET INVESTMENT RETURNS AND RELATED BENCHMARK RETURNS

Net investment returns and related benchmark returns for the Plans for the years ended August 31, are as follows:

|                       | 2022  | 2021  |
|-----------------------|-------|-------|
| Net Investment Return | -1.8% | 15.6% |
| Benchmark Return      | -4.1% | 13.8% |

Investment return has been calculated using a time-weighted rate of return methodology in accordance with industry standard methods. Net investment return is net of investment costs and excludes plan member service costs of \$9.4 million or 0.04% (2021: \$8.3 million or 0.04%).

The Plans' benchmark return is a composite benchmark produced by aggregating returns from each policy asset class benchmark, using the Plans' asset mix policy weights.

#### NOTE 13 RECLASSIFICATION

Certain prior year figures have been reclassified for current year's presentation.

#### NOTE 14 APPROVAL OF FINANCIAL STATEMENTS

These financial statements were approved by the ATRF Board on December 6, 2022.

#### **10-Year Financial and Statistical Review**

(UNAUDITED)

| Financial Position as at August 31  | 2022   | 2021  | 2020  | 2019   | 2018   | 2017   | 2016  | 2015  | 2014   | 2013  |
|---|--|---|---|--|--|--|---|---|--|---|
| (\$ millions)   |  |   |   |  |  |  |   |   |  |   |
| Investments   | 4 5 45   | 4 400   | 4 700   | 4 704  | 4 277  | 2.640  | 2.040   | 2 2 4 0   | 2.004  | 2.620   |
| Fixed Income  | 4,545  | 4,409   | 4,790   | 4,701  | 4,277  | 3,640  | 3,040   | 3,249   | 2,981  | 2,629   |
| Public equity   | 6,573  | 8,463   | 6,805   | 6,358  | 6,140  | 5,609  | 5,350   | 4,873   | 4,860  | 4,627   |
| Private equity  | 3,456  | 2,733   | 2,100   | 1,883  | 1,538  | 1,398  | 1,196   | 1,146   | 855  | 592   |
| Absolute Return   | 2,246  | 2,150   | 1,873   | 1,672  | 1,511  | 1,340  | 1,280   | 1,298   | 865  | -   |
| Real Estate   | 3,028  | 2,709   | 2,665   | 2,737  | 2,389  | 1,940  | 1,518   | 1,090   | 726  | 446   |
| Infrastructure  | 2,108  | 1,872   | 1,545   | 1,260  | 1,076  | 952  | 947   | 544   | 405  | 278   |
| Other Investment Assets/(Liabilities)   | (55)   | 25  | (467)   | (467)  | (368)  | (114)  | 30  | (119)   | 30   | 15  |
| Net Investments   | 21,901   | 22,361  | 19,311  | 18,144   | 16,563   | 14,765   | 13,361  | 12,081  | 10,722   | 8,587   |
| Contributions Receivable  | 18   | 16  | 17  | 26   | 20   | 26   | 26  | 19  | 21   | 20  |
| Other Assets and Liabilities  | 24   | (35)  | (30)  | (34)   | (32)   | (23)   | (30)  | (31)  | (26)   | (26)  |
| Net Assets Available for Benefits   | 21,943   | 22,342  | 19,298  | 18,136   | 16,551   | 14,768   | 13,357  | 12,069  | 10,717   | 8,581   |
| Actuarial Value of Accrued  |  |   |   |  |  |  |   |   |  |   |
| Pension Obligations   | 17,908   | 17,022  | 16,216  | 14,688   | 13,854   | 12,863   | 12,118  | 11,281  | 10,191   | 9,406   |
| Surplus / (Deficiency)  | 4,035  | 5,320   | 3,082   | 3,448  | 2,697  | 1,905  | 1,239   | 788   | 526  | (825)   |
| Activity during year ended August 31 (\$ millions)  |  |   |   |  |  |  |   |   |  |   |
| Benefit and Investment Operations   |  |   |   |  |  |  |   |   |  |   |
| Investment earnings   | (185)  | 3,208   | 1,146   | 1,471  | 1,569  | 1,154  | 920   | 969   | 1,717  | 1,025   |
| Net contributions   | 799  | 799   | 829   | 844  | 871  | 849  | 882   | 843   | 824  | 692   |
| Benefits paid   | (769)  | (747)   | (658)   | (558)  | (509)  | (459)  | (421)   | (378)   | (337)  | (291)   |
| Investment & member service expenses  | (244)  | (217)   | (155)   | (172)  | (147)  | (134)  | (94)  | (81)  | (68)   | (39)  |
| Increase in Net Assets  | (399)  | 3,043   | 1,162   | 1,585  | 1,784  | 1,410  | 1,287   | 1,353   | 2,136  | 1,387   |
|   |  |   | 1.102   |  |  |  |   |   |  |   |
|   |  | -   | •   | -  | 992  | 744  |   |   |  | •   |
| Increase in Accrued Pension Obligations   | 885  | 806   | 1,528   | 834  | -  | -  | 837<br><b>450</b>   | 1,091   | 784  | 298   |
|   |  | -   | •   | -  | 992  | 744  | 837   | 1,091   |  | •   |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  | 885  | 806   | 1,528   | 834  | 992  | 744  | 837   | 1,091   | 784  | 298   |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus Funding:   | 885  | 806   | 1,528   | 834  | 992  | 744  | 837   | 1,091   | 784  | 298   |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  | 885  | 806   | 1,528   | 834  | 992  | 744  | 837   | 1,091   | 784  | 298   |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus Funding: Discount Rate Post-1992 TPP*  | 885<br>(1,284)<br>4.80%  | 806<br><b>2,237</b><br>4.90%  | 1,528<br>(366)<br>5.15%   | 834<br><b>751</b><br>5.15%   | 992<br><b>792</b><br>5.20%   | 744<br><b>666</b><br>5.40%   | 837<br><b>450</b><br>6.00%  | 1,091<br><b>262</b><br>6.00%  | 784<br><b>1,352</b><br>6.25%   | 298<br>1,089<br>6.25%   |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding: Discount Rate Post-1992 TPP* Private School TPP*   | 885<br>(1,284)   | 806<br><b>2,237</b>   | 1,528<br>(366)  | 834<br><b>751</b>  | 992<br><b>792</b>  | 744<br>666   | 837<br><b>450</b>   | 1,091<br><b>262</b>   | 784<br><b>1,352</b>  | 298<br><b>1,089</b>   |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding: Discount Rate Post-1992 TPP* Private School TPP* Funding Shortfall/(Surplus) (\$ millions)   | 4.80%<br>4.90%   | 806<br>2,237<br>4.90%<br>4.90%  | 1,528<br>(366)<br>5.15%<br>5.00%  | 834<br><b>751</b><br>5.15%<br>5.10%  | 992<br><b>792</b><br>5.20%<br>5.30%  | 744<br>666<br>5.40%  | 837<br><b>450</b><br>6.00%<br>6.00%   | 1,091<br>262<br>6.00%<br>6.00%  | 784<br><b>1,352</b><br>6.25%<br>6.25%  | 298<br>1,089<br>6.25%<br>6.25%  |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding: Discount Rate Post-1992 TPP* Private School TPP* Funding Shortfall/(Surplus) (\$ millions) Post-1992 TPP*  | 4.80%<br>4.90%   | 806<br>2,237<br>4.90%<br>4.90%<br>322   | 1,528<br>(366)<br>5.15%<br>5.00%  | 5.15%<br>5.10%   | 992<br><b>792</b><br>5.20%<br>5.30%<br>1,186   | 744<br>666<br>5.40%<br>5.40%   | 837<br>450<br>6.00%<br>6.00%<br>1,950   | 1,091<br>262<br>6.00%<br>6.00%<br>2,364   | 784<br>1,352<br>6.25%<br>6.25%<br>2,289  | 298<br>1,089<br>6.25%<br>6.25%<br>2,859   |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding: Discount Rate Post-1992 TPP* Private School TPP* Funding Shortfall/(Surplus) (\$ millions)   | 4.80%<br>4.90%<br>215<br>(8)   | 4.90%<br>4.90%<br>4.90%   | 1,528<br>(366)<br>5.15%<br>5.00%<br>711<br>(2)  | 5.15%<br>5.10%<br>863<br>(2)   | 992<br><b>792</b><br>5.20%<br>5.30%<br>1,186<br>(2)  | 744<br>666<br>5.40%<br>5.40%<br>1,516<br>1   | 6.00%<br>6.00%<br>1,950   | 1,091<br>262<br>6.00%<br>6.00%<br>2,364<br>6  | 784<br>1,352<br>6.25%<br>6.25%<br>2,289<br>6   | 298<br>1,089<br>6.25%<br>6.25%<br>2,859<br>9  |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding:  Discount Rate  Post-1992 TPP*  Private School TPP*  Funding Shortfall/(Surplus) (\$ millions)  Post-1992 TPP*  Private School TPP*  | 4.80%<br>4.90%   | 806<br>2,237<br>4.90%<br>4.90%<br>322   | 1,528<br>(366)<br>5.15%<br>5.00%  | 5.15%<br>5.10%   | 992<br><b>792</b><br>5.20%<br>5.30%<br>1,186   | 744<br>666<br>5.40%<br>5.40%   | 837<br>450<br>6.00%<br>6.00%<br>1,950   | 1,091<br>262<br>6.00%<br>6.00%<br>2,364   | 784<br>1,352<br>6.25%<br>6.25%<br>2,289  | 298<br>1,089<br>6.25%<br>6.25%<br>2,859   |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding:  Discount Rate  Post-1992 TPP*  Private School TPP*  Funding Shortfall/(Surplus) (\$ millions)  Post-1992 TPP*  Private School TPP*  Private School TPP*   | 4.80%<br>4.90%<br>215<br>(8)<br>207  | 4.90%<br>4.90%<br>4.90%<br>322<br>(7)<br>315  | 1,528<br>(366)<br>5.15%<br>5.00%<br>711<br>(2)<br>709   | 5.15%<br>5.10%<br>863<br>(2)<br>861  | 992<br>792<br>5.20%<br>5.30%<br>1,186<br>(2)<br>1,184  | 744<br>666<br>5.40%<br>5.40%<br>1,516<br>1   | 6.00%<br>6.00%<br>6.00%<br>1,950<br>4<br>1,954  | 1,091<br>262<br>6.00%<br>6.00%<br>2,364<br>6<br>2,370   | 784<br>1,352<br>6.25%<br>6.25%<br>6.25%<br>2,289<br>6<br>2,295                                       | 298<br>1,089<br>6.25%<br>6.25%<br>2,859<br>9<br>2,868   |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding:  Discount Rate  Post-1992 TPP*  Private School TPP*  Funding Shortfall/(Surplus) (\$ millions)  Post-1992 TPP*  Private School TPP*  Private School TPP*   | 4.80%<br>4.90%<br>215<br>(8)<br>207  | 4.90%<br>4.90%<br>322<br>(7)<br>315   | 1,528<br>(366)<br>5.15%<br>5.00%<br>711<br>(2)<br>709<br>41,701                                       | 5.15%<br>5.10%<br>863<br>(2)<br>861  | 992<br><b>792</b><br>5.20%<br>5.30%<br>1,186<br>(2)<br>1,184<br>41,746   | 744<br>666<br>5.40%<br>5.40%<br>1,516<br>1<br>1,517  | 6.00%<br>6.00%<br>1,950<br>4<br>1,954   | 1,091<br>262<br>6.00%<br>6.00%<br>2,364<br>6<br>2,370<br>39,997   | 784<br>1,352<br>6.25%<br>6.25%<br>2,289<br>6<br>2,295  | 298<br>1,089<br>6.25%<br>6.25%<br>2,859<br>9<br>2,868<br>38,346   |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding:  Discount Rate Post-1992 TPP* Private School TPP* Funding Shortfall/(Surplus) (\$ millions) Post-1992 TPP* Private School TPP*  Private School TPP*  Plan Members Active Inactive  | 4.80%<br>4.90%<br>215<br>(8)<br>207<br>42,053<br>12,075                                      | 4.90%<br>4.90%<br>4.90%<br>322<br>(7)<br>315<br>42,186<br>11,833                                      | 1,528<br>(366)<br>5.15%<br>5.00%<br>711<br>(2)<br>709<br>41,701<br>12,116                             | 5.15%<br>5.10%<br>863<br>(2)<br>861<br>42,278<br>11,847                                      | 992<br>792<br>5.20%<br>5.30%<br>1,186<br>(2)<br>1,184<br>41,746<br>11,758                                      | 744<br>666<br>5.40%<br>5.40%<br>1,516<br>1,517<br>40,716<br>11,997                                     | 6.00%<br>6.00%<br>1,950<br>4<br>1,954<br>41,015<br>12,102                                     | 1,091<br>262<br>6.00%<br>6.00%<br>2,364<br>6<br>2,370<br>39,997<br>12,252                                     | 784<br>1,352<br>6.25%<br>6.25%<br>2,289<br>6<br>2,295<br>39,185<br>12,411                            | 298<br>1,089<br>6.25%<br>6.25%<br>2,859<br>9<br>2,868<br>38,346<br>12,364                                     |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding:  Discount Rate  Post-1992 TPP*  Private School TPP*  Funding Shortfall/(Surplus) (\$ millions)  Post-1992 TPP*  Private School TPP*  Private School TPP*   | 4.80%<br>4.90%<br>215<br>(8)<br>207  | 4.90%<br>4.90%<br>322<br>(7)<br>315   | 1,528<br>(366)<br>5.15%<br>5.00%<br>711<br>(2)<br>709<br>41,701                                       | 5.15%<br>5.10%<br>863<br>(2)<br>861  | 992<br><b>792</b><br>5.20%<br>5.30%<br>1,186<br>(2)<br>1,184<br>41,746   | 744<br>666<br>5.40%<br>5.40%<br>1,516<br>1<br>1,517  | 6.00%<br>6.00%<br>1,950<br>4<br>1,954   | 1,091<br>262<br>6.00%<br>6.00%<br>2,364<br>6<br>2,370<br>39,997   | 784<br>1,352<br>6.25%<br>6.25%<br>2,289<br>6<br>2,295  | 298<br>1,089<br>6.25%<br>6.25%<br>2,859<br>9<br>2,868<br>38,346   |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding:  Discount Rate Post-1992 TPP* Private School TPP* Funding Shortfall/(Surplus) (\$ millions) Post-1992 TPP* Private School TPP*  Private School TPP*  Plan Members Active Inactive  | 4.80%<br>4.90%<br>215<br>(8)<br>207<br>42,053<br>12,075                                      | 4.90%<br>4.90%<br>4.90%<br>322<br>(7)<br>315<br>42,186<br>11,833                                      | 1,528<br>(366)<br>5.15%<br>5.00%<br>711<br>(2)<br>709<br>41,701<br>12,116                             | 5.15%<br>5.10%<br>863<br>(2)<br>861<br>42,278<br>11,847                                      | 992<br>792<br>5.20%<br>5.30%<br>1,186<br>(2)<br>1,184<br>41,746<br>11,758                                      | 744<br>666<br>5.40%<br>5.40%<br>1,516<br>1,517<br>40,716<br>11,997                                     | 6.00%<br>6.00%<br>1,950<br>4<br>1,954<br>41,015<br>12,102                                     | 1,091<br>262<br>6.00%<br>6.00%<br>2,364<br>6<br>2,370<br>39,997<br>12,252                                     | 784<br>1,352<br>6.25%<br>6.25%<br>2,289<br>6<br>2,295<br>39,185<br>12,411                            | 298<br>1,089<br>6.25%<br>6.25%<br>2,859<br>9<br>2,868<br>38,346<br>12,364                                     |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding:  Discount Rate Post-1992 TPP* Private School TPP* Funding Shortfall/(Surplus) (\$ millions) Post-1992 TPP* Private School TPP*  Plan Members Active Inactive Retired Members   | 4.80%<br>4.90%<br>215<br>(8)<br>207<br>42,053<br>12,075<br>31,233                            | 4.90%<br>4.90%<br>4.90%<br>322<br>(7)<br>315<br>42,186<br>11,833<br>30,582                            | 1,528<br>(366)<br>5.15%<br>5.00%<br>711<br>(2)<br>709<br>41,701<br>12,116<br>29,851                   | 5.15%<br>5.10%<br>863<br>(2)<br>861<br>42,278<br>11,847<br>29,108                            | 992<br>792<br>5.20%<br>5.30%<br>1,186<br>(2)<br>1,184<br>41,746<br>11,758<br>28,241                            | 744<br>666<br>5.40%<br>5.40%<br>1,516<br>1,517<br>40,716<br>11,997<br>27,625                           | 6.00%<br>6.00%<br>6.00%<br>1,950<br>4<br>1,954<br>41,015<br>12,102<br>27,015                  | 1,091<br>262<br>6.00%<br>6.00%<br>2,364<br>6<br>2,370<br>39,997<br>12,252<br>26,308                           | 784<br>1,352<br>6.25%<br>6.25%<br>2,289<br>6<br>2,295<br>39,185<br>12,411<br>25,545                  | 298<br>1,089<br>6.25%<br>6.25%<br>2,859<br>9<br>2,868<br>38,346<br>12,364<br>24,667                           |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding:  Discount Rate Post-1992 TPP* Private School TPP* Funding Shortfall/(Surplus) (\$ millions) Post-1992 TPP* Private School TPP*  Plan Members Active Inactive Retired Members Number of New Pensions  | 4.80%<br>4.90%<br>215<br>(8)<br>207<br>42,053<br>12,075<br>31,233                            | 4.90%<br>4.90%<br>4.90%<br>322<br>(7)<br>315<br>42,186<br>11,833<br>30,582<br>1,105                   | 1,528<br>(366)<br>5.15%<br>5.00%<br>711<br>(2)<br>709<br>41,701<br>12,116<br>29,851<br>1,147          | 5.15%<br>5.10%<br>863<br>(2)<br>861<br>42,278<br>11,847<br>29,108                            | 5.20%<br>5.30%<br>1,186<br>(2)<br>1,184<br>41,746<br>11,758<br>28,241<br>1,089                                 | 744<br>666<br>5.40%<br>5.40%<br>1,516<br>1,517<br>40,716<br>11,997<br>27,625<br>1,171                  | 6.00%<br>6.00%<br>1,950<br>4<br>1,954<br>41,015<br>12,102<br>27,015                           | 1,091<br>262<br>6.00%<br>6.00%<br>2,364<br>6<br>2,370<br>39,997<br>12,252<br>26,308<br>1,080                  | 784<br>1,352<br>6.25%<br>6.25%<br>2,289<br>6<br>2,295<br>39,185<br>12,411<br>25,545<br>1,214         | 298<br>1,089<br>6.25%<br>6.25%<br>2,859<br>9<br>2,868<br>38,346<br>12,364<br>24,667<br>1,131                  |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding:  Discount Rate Post-1992 TPP* Private School TPP* Funding Shortfall/(Surplus) (\$ millions) Post-1992 TPP* Private School TPP* Private School TPP*  Plan Members Active Inactive Retired Members  Number of New Pensions  Member Service Costs (per member)  | 4.80%<br>4.90%<br>215<br>(8)<br>207<br>42,053<br>12,075<br>31,233<br>1,129<br>\$128          | 4.90%<br>4.90%<br>4.90%<br>322<br>(7)<br>315<br>42,186<br>11,833<br>30,582<br>1,105<br>\$114          | 1,528<br>(366)<br>5.15%<br>5.00%<br>711<br>(2)<br>709<br>41,701<br>12,116<br>29,851<br>1,147<br>\$118 | 5.15%<br>5.10%<br>863<br>(2)<br>861<br>42,278<br>11,847<br>29,108<br>1,180<br>\$120          | 992<br>792<br>5.20%<br>5.30%<br>1,186<br>(2)<br>1,184<br>41,746<br>11,758<br>28,241<br>1,089<br>\$111          | 744<br>666<br>5.40%<br>5.40%<br>1,516<br>1,517<br>40,716<br>11,997<br>27,625<br>1,171<br>\$97          | 6.00%<br>6.00%<br>1,950<br>4<br>1,954<br>41,015<br>12,102<br>27,015<br>1,074<br>\$90          | 1,091<br>262<br>6.00%<br>6.00%<br>2,364<br>6<br>2,370<br>39,997<br>12,252<br>26,308<br>1,080<br>\$87          | 784<br>1,352<br>6.25%<br>6.25%<br>2,289<br>6<br>2,295<br>39,185<br>12,411<br>25,545<br>1,214<br>\$87 | 298<br>1,089<br>6.25%<br>6.25%<br>2,859<br>9<br>2,868<br>38,346<br>12,364<br>24,667<br>1,131<br>\$87          |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding:  Discount Rate Post-1992 TPP* Private School TPP* Funding Shortfall/(Surplus) (\$ millions) Post-1992 TPP* Private School TPP* Private School TPP*  Plan Members Active Inactive Retired Members  Number of New Pensions  Member Service Costs (per member) Benchmark  | 4.80%<br>4.90%<br>215<br>(8)<br>207<br>42,053<br>12,075<br>31,233<br>1,129<br>\$128          | 4.90%<br>4.90%<br>4.90%<br>322<br>(7)<br>315<br>42,186<br>11,833<br>30,582<br>1,105<br>\$114          | 1,528<br>(366)<br>5.15%<br>5.00%<br>711<br>(2)<br>709<br>41,701<br>12,116<br>29,851<br>1,147<br>\$118 | 5.15%<br>5.10%<br>863<br>(2)<br>861<br>42,278<br>11,847<br>29,108<br>1,180<br>\$120          | 992<br>792<br>5.20%<br>5.30%<br>1,186<br>(2)<br>1,184<br>41,746<br>11,758<br>28,241<br>1,089<br>\$111          | 744<br>666<br>5.40%<br>5.40%<br>1,516<br>1,517<br>40,716<br>11,997<br>27,625<br>1,171<br>\$97          | 6.00%<br>6.00%<br>1,950<br>4<br>1,954<br>41,015<br>12,102<br>27,015<br>1,074<br>\$90          | 1,091<br>262<br>6.00%<br>6.00%<br>2,364<br>6<br>2,370<br>39,997<br>12,252<br>26,308<br>1,080<br>\$87          | 784<br>1,352<br>6.25%<br>6.25%<br>2,289<br>6<br>2,295<br>39,185<br>12,411<br>25,545<br>1,214<br>\$87 | 298<br>1,089<br>6.25%<br>6.25%<br>2,859<br>9<br>2,868<br>38,346<br>12,364<br>24,667<br>1,131<br>\$87          |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding:  Discount Rate Post-1992 TPP* Private School TPP* Funding Shortfall/(Surplus) (\$ millions) Post-1992 TPP* Private School TPP* Private School TPP*  Plan Members Active Inactive Retired Members  Number of New Pensions  Member Service Costs (per member)  | 4.80%<br>4.90%<br>215<br>(8)<br>207<br>42,053<br>12,075<br>31,233<br>1,129<br>\$128          | 4.90%<br>4.90%<br>4.90%<br>322<br>(7)<br>315<br>42,186<br>11,833<br>30,582<br>1,105<br>\$114          | 1,528<br>(366)<br>5.15%<br>5.00%<br>711<br>(2)<br>709<br>41,701<br>12,116<br>29,851<br>1,147<br>\$118 | 5.15%<br>5.10%<br>863<br>(2)<br>861<br>42,278<br>11,847<br>29,108<br>1,180<br>\$120          | 992<br>792<br>5.20%<br>5.30%<br>1,186<br>(2)<br>1,184<br>41,746<br>11,758<br>28,241<br>1,089<br>\$111          | 744<br>666<br>5.40%<br>5.40%<br>1,516<br>1,517<br>40,716<br>11,997<br>27,625<br>1,171<br>\$97          | 6.00%<br>6.00%<br>1,950<br>4<br>1,954<br>41,015<br>12,102<br>27,015<br>1,074<br>\$90          | 1,091<br>262<br>6.00%<br>6.00%<br>2,364<br>6<br>2,370<br>39,997<br>12,252<br>26,308<br>1,080<br>\$87          | 784<br>1,352<br>6.25%<br>6.25%<br>2,289<br>6<br>2,295<br>39,185<br>12,411<br>25,545<br>1,214<br>\$87 | 298<br>1,089<br>6.25%<br>6.25%<br>2,859<br>9<br>2,868<br>38,346<br>12,364<br>24,667<br>1,131<br>\$87          |
| Increase in Accrued Pension Obligations Increase (Decrease) in Surplus  Funding:  Discount Rate Post-1992 TPP* Private School TPP* Funding Shortfall/(Surplus) (\$ millions) Post-1992 TPP* Private School TPP* Private School TPP*  Plan Members Active Inactive Retired Members  Number of New Pensions  Member Service Costs (per member) Benchmark  Post 1992 TPP* - year ended August 31 | 4.80%<br>4.90%<br>215<br>(8)<br>207<br>42,053<br>12,075<br>31,233<br>1,129<br>\$128<br>\$181 | 4.90%<br>4.90%<br>4.90%<br>322<br>(7)<br>315<br>42,186<br>11,833<br>30,582<br>1,105<br>\$114<br>\$167 | 1,528 (366)  5.15% 5.00%  711 (2) 709  41,701 12,116 29,851  1,147  \$118 \$174                       | 5.15%<br>5.10%<br>863<br>(2)<br>861<br>42,278<br>11,847<br>29,108<br>1,180<br>\$120<br>\$156 | 992<br>792<br>5.20%<br>5.30%<br>1,186<br>(2)<br>1,184<br>41,746<br>11,758<br>28,241<br>1,089<br>\$111<br>\$150 | 744<br>666<br>5.40%<br>5.40%<br>1,516<br>1,517<br>40,716<br>11,997<br>27,625<br>1,171<br>\$97<br>\$150 | 6.00%<br>6.00%<br>1,950<br>4<br>1,954<br>41,015<br>12,102<br>27,015<br>1,074<br>\$90<br>\$149 | 1,091<br>262<br>6.00%<br>6.00%<br>2,364<br>6<br>2,370<br>39,997<br>12,252<br>26,308<br>1,080<br>\$87<br>\$149 | 784 1,352 6.25% 6.25% 6.25% 2,289 6 2,295 39,185 12,411 25,545 1,214 \$87 \$153                      | 298<br>1,089<br>6.25%<br>6.25%<br>2,859<br>9<br>2,868<br>38,346<br>12,364<br>24,667<br>1,131<br>\$87<br>\$148 |

Note: Amounts relate to transactions of post-1992 Teachers' Pension Plan and of the Private School Teachers' Pension Plan.

<sup>\*</sup> Teachers' Pension Plan (TPP)



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