Alberta Teachers' Retirement Fund Board

Advancing Our Formula for Success

2018 ANNUAL REPORT

At ATRF, we continually enhance the services we provide to our plan members. We also evaluate and fine-tune the ways we invest, secure and grow the fund.

This report shares both our story and results over the past year, as well as updates on new initiatives.

Whether through our day-to-day-operations, or exciting new projects, we remain focused on **Advancing Our Formula for Success.**

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What is Success?

We define it through our Mission, Mandate, Customer Service Statement, and Corporate Values:

Mission

Working in partnership to secure your pension income.

Mandate

ATRF's mandate is to deliver the benefits established by the plan sponsors for current and future plan members.

This requires a plan that is sustainable over the long term at a cost and risk level acceptable to the plan sponsors.

Customer Service Statement

ATRF provides what you need the first time.

- We listen to understand your needs.
- We provide accurate and timely information and benefit payments.
- We deliver value-added investment performance.

Corporate Values

- Excellence
- Accountability
- Integrity
- Partnership

Established in 1939, ATRF is an independent corporation governed by the *Teachers' Pension Plans Act* of the Province of Alberta. From our offices in Edmonton, Alberta, we are the trustee and administrator of two defined benefit plans:

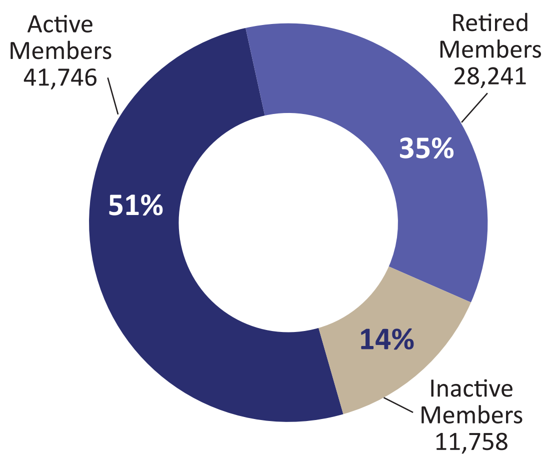
- the Teachers' Pension Plan for all Alberta teachers in school jurisdictions and charter schools, and
- the Private School Teachers' Pension Plan for Alberta teachers in private schools who have elected to join the plan.

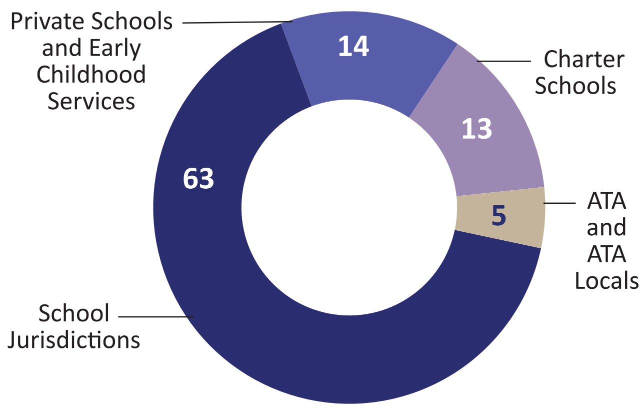
In addition, ATRF is the custodian of the pension assets. We manage the fund assets in a global investment program across different asset classes.

The Teachers' Pension Plans are registered under the *Income Tax Act* and are sponsored by the Government of Alberta and the Alberta Teachers' Association. These plan sponsors are responsible for changes to plan design, benefits and funding arrangements.

2017-18 HIGHLIGHTS

Who We Serve

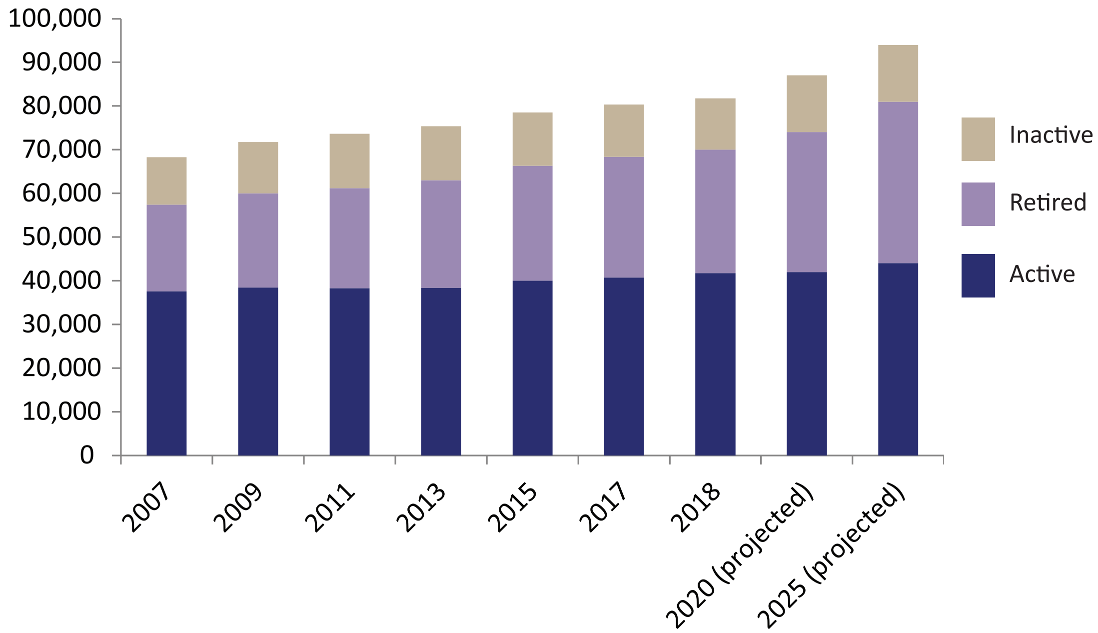




- 793 are members of the Private School Teachers' Pension Plan (PSTPP)
- We welcomed a new private school that opted to join the PSTPP in September 2018

Plan Membership Over the Years

In the past decade, the membership base has grown by nearly 20%. The plans are projected to reach an estimated 95,000 members by 2025, with retired members representing around 40% of the membership.



How We Serve

Personal interviews with teachers: **1,591** (739 at the ATRF office, 852 throughout Alberta)

Number of incoming telephone calls: more than **26,000**

Teachers who attended a seminar: **2,012** (581 at 10 Teachers' Conventions and 1,431 at 38 seminars in 23 locations across Alberta)

Pension estimates: more than **51,200** completed in My*Pension* and 2,795 completed by pension counsellors

Responses to member emails: more than **4,500**

1,089
New pensions

Plan Member Statistics

at August 31	2018	2015	2010	2005	2000
Active and disabled member average age	42	41.8	41.7	42.4	42.7
Active and disabled member average years of pensionable service	11.4	11.2	11.1	12.2	12
Retired member average age	71.5	70.4	68	68	68
New retired member average age	59.7	60	59	58	57.8
Average pensionable service of new retired members	25.3	25.6	26.2	26.4	26.6

- 930 retired members are age 90 or older; 34 members are centenarians.
- The oldest plan member is 108 years old, and has been receiving her pension for 44 years.
- The average annual pension in payment is $32,422, an increase of 2.4% over last year.

In 2017-18:

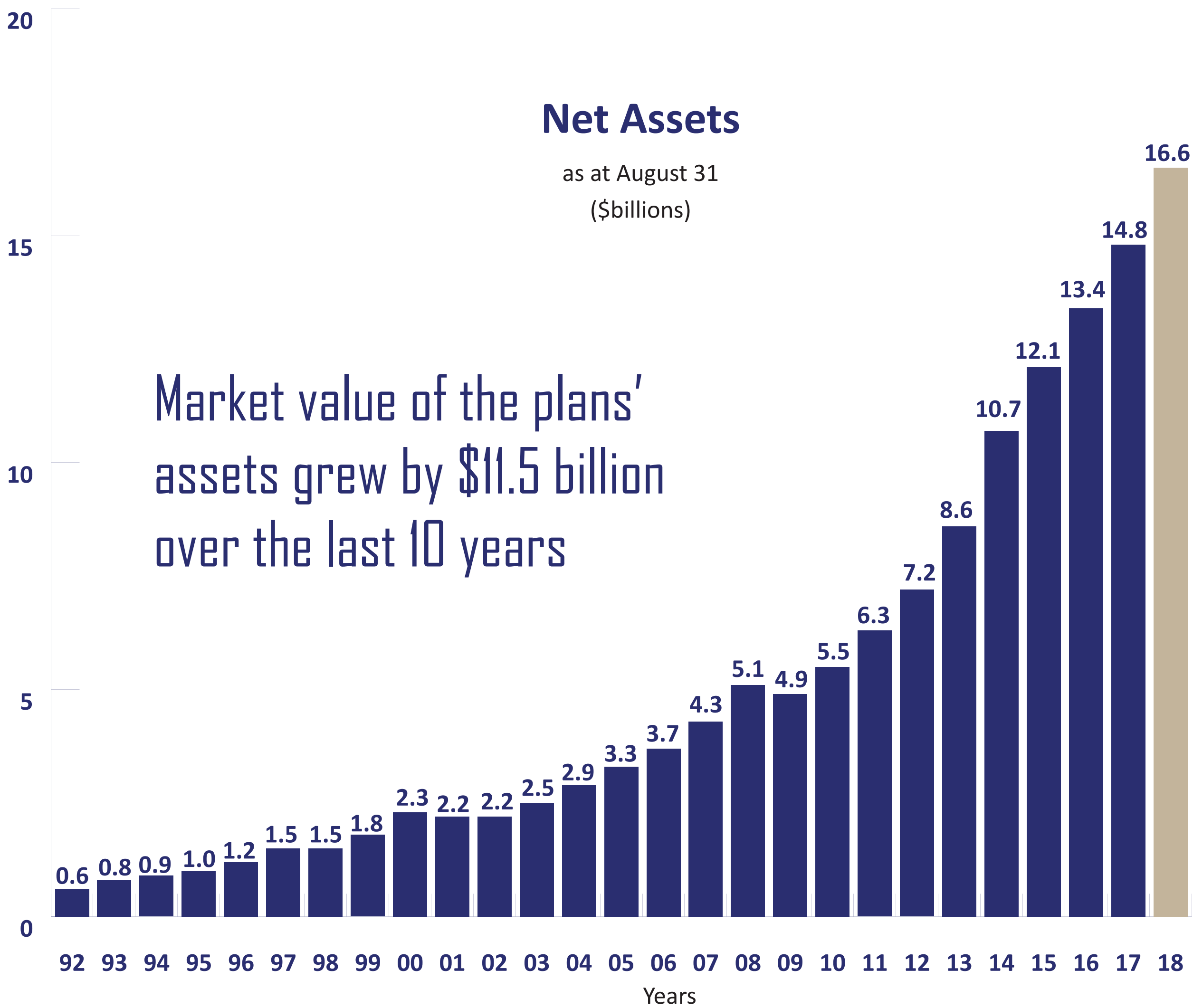
Total Contributions
$871 million

Total Benefits Paid
$509 million*

Administrative Cost
$111 per member compared to $150 average cost per member for a peer group of Canadian public sector pension organizations.

* An additional $476 million was received from the Government of Alberta for benefits paid by ATRF relating to the pre-1992 period.

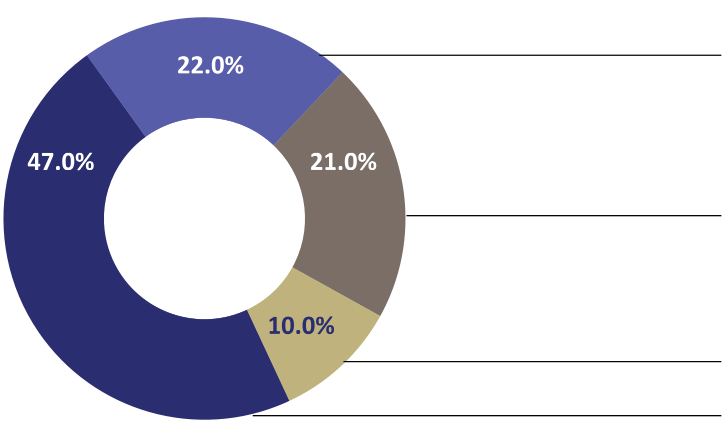
2017-18 HIGHLIGHTS



Market value of the plans' assets grew by $11.5 billion over the last 10 years

Policy Asset Mix

as at August 31, 2018



Fixed Income 22.0%
Universe Bonds 11.0%
Long-term Bonds 9.0%
Money Market 2.0%

Inflation Sensitive 21.0%
Real Estate 14.0%
Infrastructure 7.0%

Absolute 10.0%

Return Enhancing 47.0%
Global Equity 37.0%
Private Equity 10.0%

$16.6 Billion

Net assets at August 31, 2018

9.6%

Annual rate of return

8.1%

Four-year rate of return

93% FUNDED

Teachers' Pension Plan

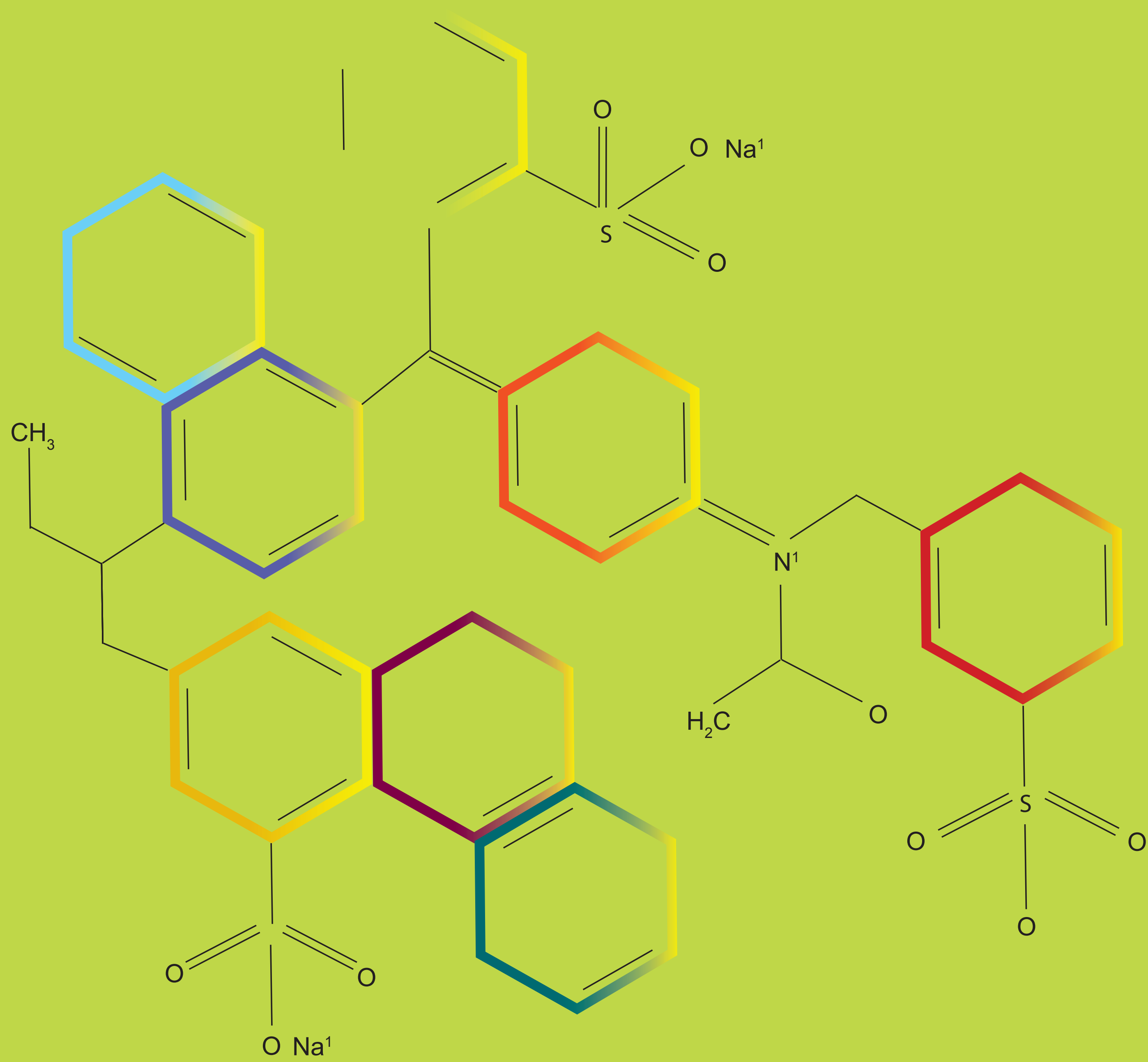
Up from 74% funded in 2013

103% FUNDED

Private School Teachers' Pension Plan

Up from 81% funded in 2013

MESSAGES FROM THE BOARD and ATRF MANAGEMENT



Board Chair Message

Delivering the pension promise

GREG MEEKER
BOARD CHAIR

The Alberta Teachers' Retirement Fund has an enduring mission, one that drives everything we do: to ensure the organization delivers on the pension promise by providing a secure retirement income for our plan members, now and into the future.

ATRF has achieved some significant milestones this year, as you will read about later in this report. 2018-19 also marks an important milestone for me – soon after the end of our fiscal year in August 2019, my tenure as a Board member and Chair will come to an end. The Board will announce my successor in the coming months and I look forward to welcoming the new Chair with a smooth and effective transition.

I am extremely proud to have served ATRF for the past 12 years – it has been an honour and a privilege to work alongside a dedicated Board, executive, and staff, and to have met so many of you, our members, and to share with you our deep commitment to your pension security and retirement well-being.

When I started on the Board, ATRF had 38 staff members serving just over 68,000 members. The plan's assets were approximately $4.3 billion and the plan was 38% funded. Since then, we have gone through a major restructuring brought on by the Government of Alberta in 2007 assuming financial responsibility for all pension obligations related to service prior to 1992. That kick-started a new era at ATRF. Our assets began to grow rapidly. Today, 10 years later, the Teachers' plan is 93% funded and our assets have grown to $16.6 billion. Our staff has increased to over 100 dedicated employees serving more than 80,000 members.

"Maintaining a well-funded plan is central to ATRF's mission and operations, and I'm proud to report that the funding of the plans continued to improve in 2017-18."

I would like to particularly express my gratitude to the Alberta Teachers' Association for this opportunity. Also my thanks to the two CEOs who led ATRF since I joined: Emilian Groch, our past CEO, and Rod Matheson, our current CEO, who is marshalling in this exciting new era. Finally, to my fellow Board members, past and present – thank you.

For this year, I am pleased to report, ATRF remains strongly positioned for ongoing success. Ultimately, ATRF exists to serve our members. We are proud of our legacy of excellent service. At the same time, we continue to look for ways to innovate and improve. So that's why, given the opportunities our growth and organizational maturity presents, the Board approved major initiatives to advance our formula for success in our two main business areas, investments and pension services.

You will read more about these initiatives later in this report. On behalf of the Board, I am pleased with the strategic planning work completed so far to deliver on two key initiatives that will enable ATRF to continue to provide pension certainty, stability and sustainability – alongside excellent and responsive service.

Our Board remains ever mindful of the challenges facing pension plans and continues to closely monitor the financial health of the plans, prudently taking actions to ensure long-term stability, security and sustainability. In recognition of that, in 2017-18 the Board completed a comprehensive update to our funding policy. This was a significant accomplishment, as it provides an important tool to establish our key funding objectives and risk framework, both of which will be used by the Board to make decisions related to funding and contribution rate setting. Ultimately, our new funding policy will assist the Board in continuing our path to full funding while ensuring stability and contribution rate affordability – and will be an integral part of the new funding-focused investment approach we developed in Project Whiteboard (see page 39 for more information on this initiative).

Moreover, the Board takes an active oversight role in the key areas of ATRF's operations through our Audit and Finance, Governance, Human Resources and Compensation, and Investment Committees. Our governance role ensures that as ATRF grows and matures, it is focussed on, as the theme for this annual report says, "advancing our formula for success."

Funding and contribution rate update

Maintaining a well-funded plan is central to ATRF's mission and operations, and I'm proud to report that the funding of the plans continued to improve in 2017-18. The market value of the plans' assets has increased to $16.6 billion.

The funded status of the Teachers' Pension Plan (TPP) continues to steadily improve and remains on a solid trajectory to being fully funded. The plan's deficiency – the difference between the actuarial value of the plan's assets and its liabilities – decreased from $1.52 billion to $1.19 billion. The ratio of funding assets to funding liabilities increased to 93% from 90% last year.

I am pleased to note that the Private School Teachers' Pension Plan (PSTPP) has reached the important milestone of being fully-funded this year. The funding ratio is now 103% compared to 98% last year.

Strong investment returns allowed the Board to continue taking prudent measures to reinforce the plans' long-term sustainability and manage risks. For example, the discount rate used to evaluate the plan liabilities has been further reduced from 5.4% to 5.2% for the TPP (and 5.3% for the PSTPP) to continue building cushions to be used in difficult times.

As you know, contribution rates were reduced effective September 1, 2018, by a total of 1.42% of teachers' pay for the TPP and 1.1% for the PSTPP.

I am pleased to announce that the contribution rates will remain the same next year (2019-20) for both plans.

Acknowledgements

As ever, it remains my privilege to undertake this work alongside my fellow ATRF Board members, and with the employees of ATRF. I want to take this opportunity to acknowledge everyone's hard work in delivering the pension promise, and working collaboratively to advance our formula for success.

Greg Meeker

Board Chair

The ATRF Board

GREG MEEKER

Greg joined the ATRF Board in 2007, and in 2009 assumed the role of Board Chair. He is an Assistant Principal at Ross Sheppard High School in Edmonton. Previously, Greg taught at Victoria School of the Arts and Centre High School in Edmonton. He is also a former member of the Alberta Teachers' Association (ATA) Pension Committee and a member of the Council for School Leadership.

Greg is Vice Chair of ATRF's Audit and Finance Committee, and a Member of the Investment Committee.

JOHN BUTLER

John is a director of Bristol Gate Capital Partners Inc. and a member of the federal government Treasury Board Secretariat Departmental Audit Committee. His 38-year career includes having been a partner at the law firm Torys LLP, a senior executive at Barrick Gold Corporation and the Senior Managing Director, General Counsel and Corporate Secretary of the Canada Pension Plan Investment Board. He joined the ATRF Board in December 2016.

John is Vice Chair of the Governance Committee, and a Member of the Investment and Audit and Finance Committees.

CATHERINE CONNOLLY

Catherine is the founder and president of Gist Capital Solutions Inc. She was previously Vice President at the Ontario Municipal Retirement System (OMERS), and held positions with the Canadian Pacific Railway in both engineering and finance, including responsibility for the defined benefit pension plan. Catherine holds a PhD from the University of Alberta and an MBA from Queen's University. She joined the ATRF Board in December 2016, prior to which she served on the Investment Committee since 2009.

Catherine is Chair of the Investment Committee, and a Member of the Governance Committee.

KAREN ELGERT

Karen is a District Principal in Wetaskiwin, Alberta, and has worked for the Wetaskiwin Regional Public School Division for more than 25 years. She currently oversees the Wetaskiwin Outreach and is responsible for Summer School. She has been active throughout her career with the local ATA, serving on EPC and NSC committees. Karen holds a BFA and B.Ed. from the University of Calgary and a M.Ed from the University of Alberta. Karen joined the ATRF Board in August of 2009.

Karen is Vice Chair of the Human Resources and Compensation Committee, and a Member of the Investment Committee.

The ATRF Board

MARIA HOLOWINSKY

Maria is Director of Research at CWB Wealth Management. Previously, she was President and CEO of Adroit Investment Management. Maria sits on the University of Alberta Board Investment Committee, and on the Investment Advisory Committee of Athabasca University. She recently served as a Director and Governance Chair on the Edmonton Economic Development Corporation Board. She joined the ATRF Board in May 2017.

Maria is Chair of the Governance Committee, and a Member of the Investment and Audit and Finance Committees.

SANDRA JOHNSTON

Sandra is Coordinator, Teacher Welfare with the ATA. After teaching for nine years in the Peace River School Division, Sandra became the Assistant Supervisor of Curriculum and Instruction. She joined the ATRF Board in December 2012.

Sandra is Chair of the Human Resources and Compensation Committee, and a Member of the Investment and Governance Committees.

MARVIN ROMANOW

Marvin is a Corporate Director, Executive in Residence at the University of Saskatchewan, and former President and Chief Executive Officer of Nexen Inc. He is also Chairman of Freehold Royalties Ltd., and Board member for both the Arnie Charbonneau Cancer Institute and SaskPower. In 2007, Marvin was recognized as Canada's "CFO of the Year" and in 2013, he was inducted into the Saskatchewan Oil Patch Hall of Fame. He joined the ATRF Board in October 2016.

Marvin is Vice Chair of the Board, Vice Chair of the Investment Committee, and a Member of the Human Resources and Compensation Committee.

KAREEN STANGHERLIN

Kareen is CEO and co-founder of Zelos Capital Ltd. Previously, she held executive positions in two investment firms and also worked with KPMG in Calgary and the Cayman Islands. She currently serves on the Canadian CFA Societies' Advocacy Council and is a Board member for two private investment companies. Kareen is a CPA, a CFA and a Certified Financial Planner. She joined the ATRF Board in December 2016.

Kareen is Chair of the Audit and Finance Committee, and a Member of the Investment and Human Resources and Compensation Committees.

CEO's Message

Advancing our formula for success

ROD MATHESON
CHIEF EXECUTIVE OFFICER

At ATRF, everything we do is about advancing our formula for success. From our investment professionals to our pension service experts, from IT and Legal partners to our HR and Finance staff, we strive to continually find the right balance of elements to advance our formula for success.

And what is success for ATRF? Quite simply, it's defined in our mandate and mission statement: to deliver the benefits established by plan sponsors for current and future plan members. This requires a plan that is sustainable over the long term, at a cost and risk level acceptable to the plan sponsors.

Our assets have experienced tremendous growth over the past decade – reaching $16.6 billion, up from $5 billion just 10 years ago, and we expect the asset base to continue to grow. Our membership has also grown significantly – up by nearly 20% over the past decade, including a 40% increase in retired members. This overall growth, combined with significant organizational maturity, led us to make the strategic decision this past year to re-evaluate and re-think how we approach our two core business areas, investments and pension services. This resulted in two important initiatives we've called Whiteboard and Lantern.

"To continue to meet our stakeholders' needs and bring value, we must continuously evolve and adapt."

With Project Whiteboard, we spent much of the past year examining whether the strategies we have used to manage the assets successfully in the past will still be optimal in the future. By the end of the year we defined the way we will approach investing and constructing an investment portfolio to ensure we continue to deliver on our pension promise, while reliably achieving the necessary returns at an appropriate risk and cost. We'll achieve this by building a total portfolio grounded in a deep understanding of our liabilities, and the factors that drive our investment performance.

We continue to enjoy strong investment returns, and we've seen our funded ratio continue to improve to the point where we are approaching full funding for the first time in the history of the Teachers' plan. But we know that good times don't last forever, and we need to continue to safeguard what our plan members and ATRF have worked so hard to achieve over many years.

In the coming year, we will work on implementation plans for a transition of our new approach to investment management, an initiative that we expect will take several years. In a very real sense, this project is all about advancing our formula for success. Our Chief Investment Officer, Derek Brodersen, has more to say about this initiative later in this report.

On a similar front, Project Lantern also got underway in 2017-18, and is all about assessing and ultimately modernizing our service delivery model for years to come.

ATRF has long prided itself on the high level of customer service we deliver and the foresight and innovation we demonstrated throughout the years, including offering new channels such as online services earlier than many other plans. Plan members and employers' needs and expectations on how they want to interact and transact with us are also changing. To continue to meet our stakeholders' needs and bring value, we must continuously evolve and adapt. This is what Project Lantern is about. There's still a lot of work to do, and we'll provide updates as we move ahead. Please see page 28 for more information.

But this upcoming change doesn't mean ATRF hasn't continued to deliver results and excellent service. Over the past year, our Pension Services and Pension Finance teams continued to provide plan members with what they needed, the first time and when, where and how they wanted it. On average, $75 million in pensions were paid to retired members accurately and on time every month, while our staff fielded more than 26,000 telephone calls, and delivered 38 seminars to more than 2,000 teachers at 23 locations across Alberta and 10 Teachers' conventions. More than 1,000 plan members embarked on their retirement journey in 2017-18 and ATRF was there to support them along the way.

Acknowledgements

I would like to thank the members of our Board for their continued support and guidance. I would also like to give a big thanks to our entire team of dedicated and committed employees. Across ATRF, our staff has not only engaged in Projects Lantern and Whiteboard, but have continued to excel in delivering the pension promise on a daily basis as we grow the fund and work in partnership with our plan members and stakeholders.

I'm also excited that ATRF achieved a historic and important milestone. Early in 2018, we reached the 100 employee marker. While we will strive to retain the personalized service and values of the smaller organization we have long been, we are committed to updating and improving our services, organization wide, as we continue our growth.

I would also like to acknowledge two significant changes to our executive and management teams. Earlier this year, Margot Hrynyk, Vice President, Corporate Services, announced her retirement after more than 12 years with ATRF. Margot has been an invaluable resource to me, and has been instrumental in the success of our organization. Also, after more than 36 years with ATRF providing dedicated and professional service to our clients, Jill Bruce, Manager, Member Services, is retiring. I want to congratulate both Margot and Jill on their successful careers, and wish them both well-earned retirements.

Rod Matheson
Chief Executive Officer

The ATRF Executive

ROD MATHESON

As Chief Executive Officer, Rod Matheson is responsible for the operation and management of the organization. Prior to joining ATRF in November 2014, Rod served the Government of Alberta in various capacities for over 30 years, most recently as Assistant Deputy Minister, Treasury and Risk Management with Alberta Treasury Board and Finance. Rod has a Bachelor of Commerce degree and an MBA from the University of Alberta, as well as a CPA (CMA) designation and a Chartered Financial Analyst (CFA) designation.

DEREK BRODERSEN

As Chief Investment Officer, Derek Brodersen is responsible for the development, implementation and ongoing management of investment policies, strategies and systems, and the monitoring and evaluating of investment performance and policy compliance. Derek holds a Bachelor of Commerce from the University of Manitoba, an MBA from York University and CFA and ICD.D designations. He is a member of the CFA Institute, the Edmonton CFA Society, the Pension Investment Association of Canada, the Institute of Corporate Directors, and is a board member of the Canadian Coalition for Good Governance.

TINA ANTONY

Tina Antony is ATRF's VP, General Counsel and Corporate Secretary and leads all legal and governance affairs across ATRF's corporate and investment business lines. Tina specializes in M&A, investment fund formation, corporate finance, risk oversight and governance. Prior to joining ATRF, Tina was on the executive of publicly-traded entities and a partner at one of Canada's largest national law firms. Tina was recently honoured as a C-Suite Executive of the Year. Tina holds an ICD.D from the Rotman School of Management, and Bachelors of Laws and of Music from the University of Calgary. She is a member of Women in Capital Markets, the Institute of Corporate Directors, the Governance Professionals of Canada, the Alberta Law Society, and a board member of Calgary Opera.

ALBERT COPELAND

Albert Copeland is responsible for all aspects of Information and Technology Services, including IT infrastructure, security, software development and records management. He determines IT strategy, standards, policies and budget and manages IT planning, implementation, security, data and communications, and business resumption plans. Albert has a diploma in computer systems technology from NAIT and is a member of CIOCAN, the CIO Association of Canada representing IT Executives and CIOs; ISACA, representing IT governance professionals; and, the Public Retirement Information Systems Managers group (PRISM), representing IT professionals of public retirement organizations.

The ATRF Executive

MARGOT HRYNYK

Margot Hrynyk is responsible for the ongoing management of ATRF's Corporate Services, including human resources management, administration functions, corporate communications and board support activities.

Margot holds a BA, B.Ed. (After Degree), a Personnel Administration Certificate and is a Chartered Professional in Human Resources (CPHR). She is a member of the Human Resources Institute of Alberta, the Canadian Pension and Benefits Institute, and the Freedom of Information and Protection of Privacy Association of Alberta.

JULIE JOYAL

Julie Joyal is responsible for the strategic direction and ongoing management of Pension Services at ATRF, including the provision of accurate, timely and cost-effective benefit payments and services to plan members and information to employers and plan sponsors. She advises on pension benefit, member services and actuarial issues.

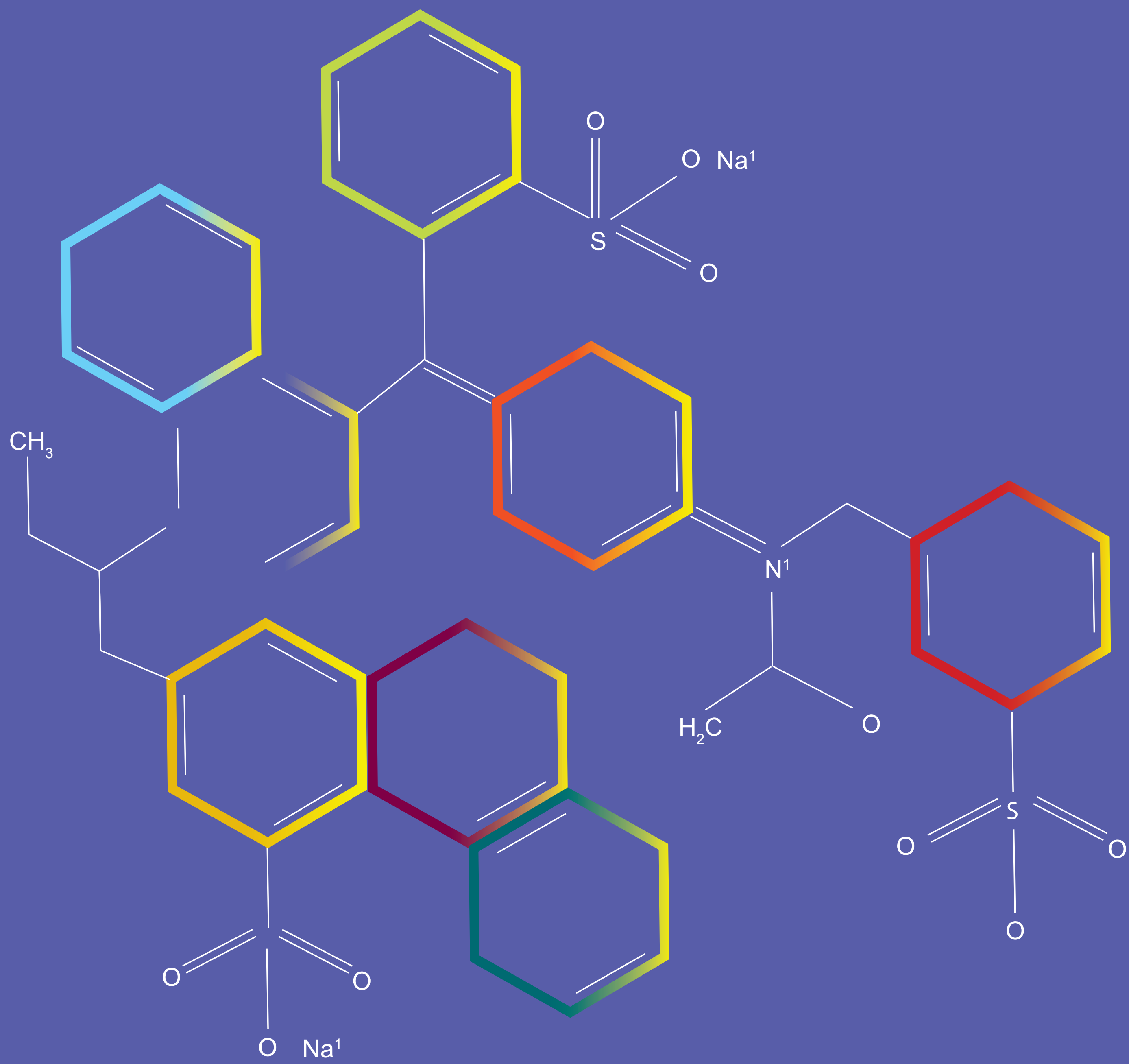
Julie holds a B.Sc. degree in Mathematics from the University of Montreal. She is a Fellow of the Canadian Institute of Actuaries and a Fellow of the Society of Actuaries. Julie is a member of the Canadian Pension & Benefits Institute and is involved with the Association of Canadian Pension Management.

MYLES NORTON

Myles Norton is responsible for the effective and efficient management of all aspects of ATRF's financial services including pension payroll, contributions, refunds and transfers, financial reporting, investment accounting, risk management, and the maintenance and monitoring of the budgetary process.

Myles has a Bachelor of Commerce (Accounting) degree as well as a CPA (CMA) designation and is a CFA charterholder. He is a member of CMA Alberta, the CFA Institute and the Edmonton CFA Society.

BOARD GOVERNANCE



Board Governance

ATRF has eight Board members with four members nominated by the Government of Alberta and four members nominated by the Alberta Teachers' Association in accordance with the *Teachers' Pension Plans Act*. ATRF's Board is responsible for overseeing the management of the business and affairs of ATRF.

Under its governing legislation and to fulfill its fiduciary duty, the Board is required to perform certain functions, but may delegate certain activities for effective and efficient governance. The Board has established the following standing committees for that purpose:

Audit and Finance Committee

The Audit and Finance Committee is responsible for the corporation's financial reporting, accounting systems and internal controls. The committee oversees and is responsible for ATRF's external audit, and recommends the approval of financial statements to the Board. It also oversees Enterprise Risk Management, and reviews ATRF's business plan, operating and capital budget for recommendation to the Board. Members: Kareen Stangherlin, Chair; Greg Meeker, Vice Chair; John Butler, Maria Holowinsky

Governance Committee

The Governance Committee provides assistance to the Board in fulfilling its governance responsibility by developing effective corporate governance principles, policies, standards and practices. The committee facilitates appropriate and efficient board operations and acts as a resource for board chair and committee chair renewals, governance oversight, and competency and effectiveness evaluation. Members: Maria Holowinsky, Chair; John Butler, Vice Chair; Catherine Connolly, Sandra Johnston

Human Resources and Compensation Committee

The Human Resources and Compensation Committee is responsible for performing duties that enable the Board to fulfill its oversight responsibilities in relation to the corporation's human resources and compensation matters including compensation design, risk and reward alignment and succession planning. Members: Sandra Johnston, Chair; Karen Elgert, Vice Chair; Marvin Romanow, Kareen Stangherlin

Investment Committee

The Investment Committee approves investment policy, and is responsible for monitoring, analyzing and determining strategic investment matters. The committee verifies that investment strategies are implemented, and that they comply with legislative and ATRF requirements. The committee also monitors and evaluates the performance and cost effectiveness of investment policies and strategies. Members: Catherine Connolly, Chair; Marvin Romanow, Vice Chair; John Butler, Karen Elgert, Maria Holowinsky, Sandra Johnston, Greg Meeker, Kareen Stangherlin

Review Committee

The Review Committee hears plan members' cases to review certain administrative decisions made by ATRF staff. The committee consists of the entire Board.

Board and committee composition:

	Board	Investment	Audit & Finance	Governance	Human Resources & Compensation	Review
John Butler	√	√	√	Vice Chair		√
Catherine Connolly	√	Chair		√		√
Karen Elgert	√	√			Vice Chair	√
Maria Holowinsky	√	√	√	Chair		√
Sandra Johnston	√	√		√	Chair	√
Greg Meeker	Chair	√	Vice Chair			√
Marvin Romanow	Vice Chair	Vice Chair			√	√
Kareen Stangherlin	√	√	Chair		√	√

Board attendance and remuneration

The *Teachers' Pension Plans Act* provides that no remuneration can be paid to any Board member who is employed by an employer covered by the plans, the Government of Alberta or the Alberta Teachers' Association; employers are reimbursed for time spent by certain Board members. The Board, with advice from an external consultant, annually reviews and sets the remuneration for Board members eligible to receive remuneration. The review is based on a survey of the remuneration rates being paid by other similar Canadian public sector pension investment and administration organizations. Five out of eight Board members were eligible to receive remuneration during the 2017-18 fiscal year.

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

	2017-18 ($)
Board Member Retainer	$ 15,000
Committee Chair Retainer	4,000
Fee per Board Meeting	1,200
Fee per Committee Meeting (in excess of 4 hours)	1,200
Fee per Committee Meeting (less than 4 hours)	$ 800

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

Provided below is a summary of Board member attendance and remuneration for the 2017-18 fiscal year.

Board meeting attendance/remuneration

Board Member	Board Meetings	Committee Meetings[6]	2017-18 Total Remuneration ($)
Greg Meeker[1]	10/10	17/17	n/a[7]
John Butler	10/10	24/24	$41,400
Catherine Connolly[2]	10/10	26/26	$51,400
Karen Elgert	10/10	16/17	n/a[7]
Maria Holowinsky[3]	10/10	29/30	$50,600
Sandra Johnston[4]	10/10	23/24	n/a[7]
Marvin Romanow	10/10	14/16	$34,200
Kareen Stangherlin[5]	10/10	31/32	$54,200

[1] Board Chair
[2] Chair, Investment Committee
[3] Chair, Governance Committee
[4] Chair, Human Resources & Compensation Committee
[5] Chair, Audit & Finance Committee
[6] Includes attendance at additional meetings for special projects relating to Board/Committee work
[7] In accordance with legislation, no cash remuneration is paid to this Board member, as this individual works for an employer or employer-contributor. Employers are reimbursed for time spent by certain Board members; in 2017-18, the amount reimbursed was $43,500 in total.

Board diversity

In recruiting for Board members, consideration is given to a diverse set of candidates in the spirit of increased diversity and inclusion not only in the Boardroom, but throughout ATRF.

The following table shows the number and percentage of men and women who are members of the Board currently:

Gender	# of Board Members	% of Board Members
Men	3	37.5%
Women	5	62.5%
Total	8	100%

Board member competencies, continuing education and development

ATRF believes the ongoing development and education of its Board members is integral to achieving a high level of Board effectiveness. During the 2017-18 fiscal year, the Board, its committees and individual Board members participated in presentations, attended relevant external instruction and received educational information and/or materials on a variety of topics relevant to asset management, governance and pension administration.

To aid in recruitment and development of Board members, the Governance Committee of the Board is responsible for reviewing and refreshing its Board Skills Matrix which identifies key skills, backgrounds and attributes required for ATRF Board membership and assesses the current Board skill set against this criteria. The results of this review will be used not only in the recruitment of future Board member candidates, but also to identify skill set improvements that can be made at the full Board and individual director level through increased educational and development opportunities.

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 Professional Conduct. In 2017-18, there were no disclosures received.

Internal Controls Over Financial Reporting

The Chief Executive Officer and the Vice President, Finance are responsible for the design and maintenance of internal control 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.

The 2017-18 fiscal year evaluation has found that internal control over financial reporting and disclosure controls and procedures are properly designed and operated effectively throughout the year. No changes were made in internal controls over financial reporting during the year ended August 31, 2018, that materially affected, or are reasonably likely to materially affect, internal control over financial reporting.

PENSION SERVICES

Our Services

Providing excellent service to plan members

Our members are at the core of ATRF. They drive everything we do, which is why our customer service statement is: **We provide what you need the first time.** Our caring, knowledgeable and dedicated team provides personalized services to plan members to help them understand their ATRF pension plan, and be able to make informed decisions.

Whether members prefer to speak directly with an ATRF representative or access information through our website or the My*Pension* portal, our goal is to provide an exceptional member experience at every point of contact.

Obtaining pension information is as simple as contacting our office by phone, email, online secure messaging or in person. Members who get timely and accurate pension information are better prepared for decisions they need to make at various stages of their career.

In 2017-18, there were:

- 1,591 personal interviews with teachers,
- more than 26,000 incoming phone calls,
- 2,012 teachers who attended a seminar,
- more than 4,500 responses to member emails, and
- more than 51,200 pension estimates completed in My*Pension* and 2,795 completed by pension counsellors.

Who We Serve

81,745
plan members:

41,746
active and disabled plan members who accrue pensionable service

28,241
retired plan members and survivors who are currently collecting a pension

11,758
inactive members who are not accruing pensionable service and are not yet collecting a pension

793
are members of the Private School Teachers' Pension Plan

95
employers:

63
school jurisdictions

13
charter schools

14
private schools and early childhood services

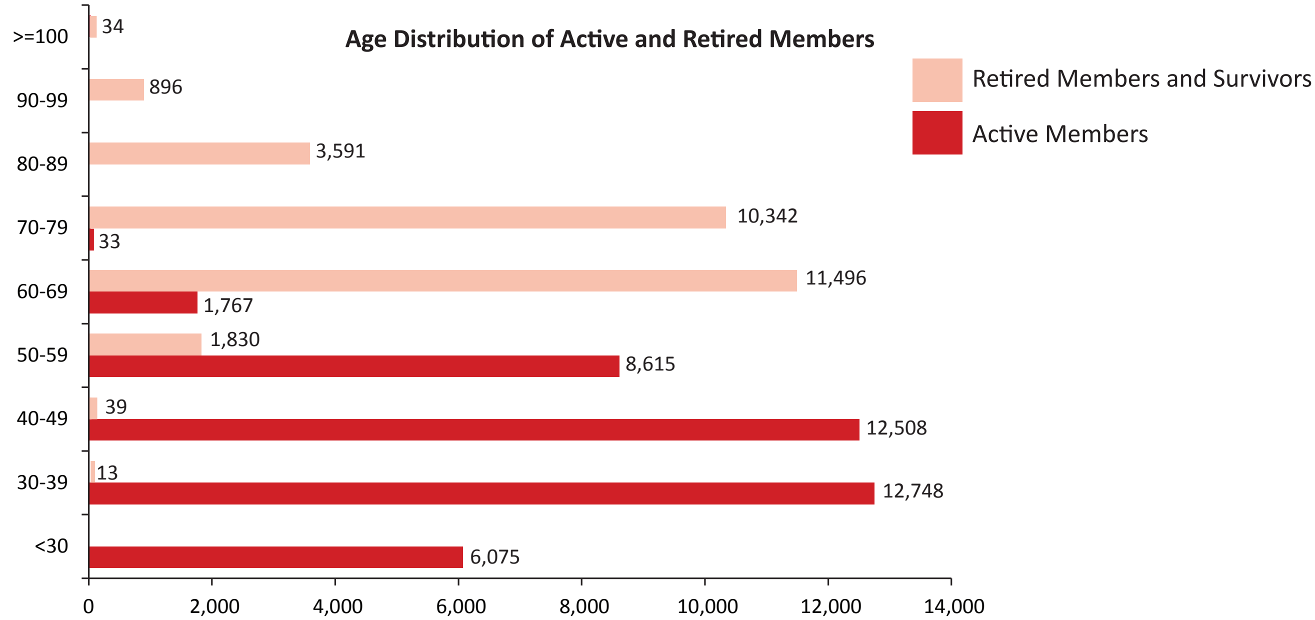
5
ATA and ATA locals

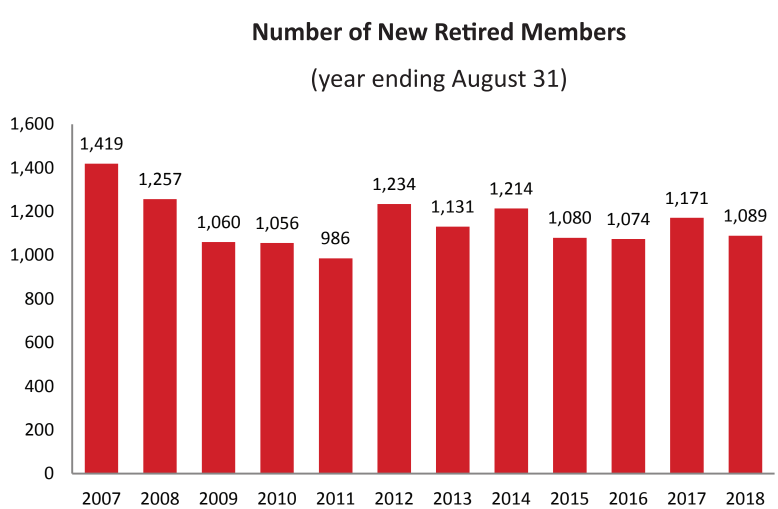
Service levels

Our service levels are among the best in the industry. To ensure we deliver the required services to members in a timely manner, we have established benchmarks for key services. We measure completion of a service from the date we receive the necessary information from the plan member or the employer, to the date service or information is provided. Our results for the 2017-18 fiscal year are summarized in the table below.

Service Provided	Benchmarks for 2017-18	Average Elapsed Time in 2017-18	% that met or 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	3 days	82%
Pension payment processed for new retired members	Within 5 days	6 days	65%
Pension estimate	Within 5 days	1 day	97%
Termination benefit package	Within 7 days	3 days	91%
Purchase of service estimate	Within 7 days	1 day	98%
Written inquiries	Within 3 days	1 day	97%
Telephone inquiries	Within 1 day	1 day	100%

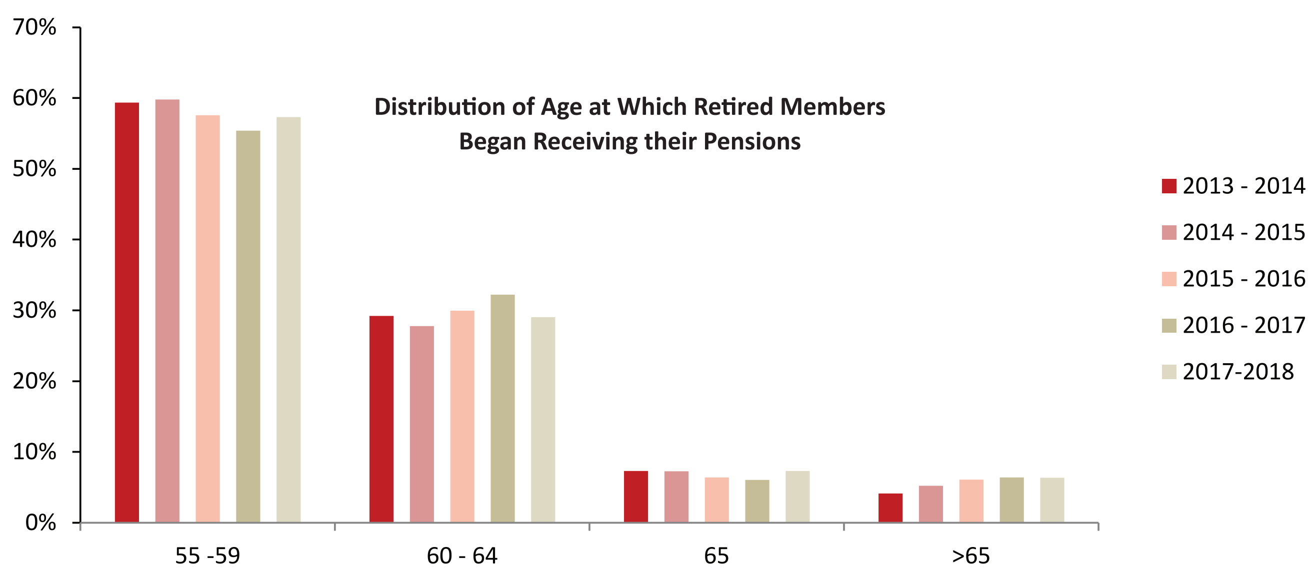
Demographic Profile





There were 1,089 new retirements in 2017-18. New retired members who responded to our survey gave a **97%** satisfaction rating for the overall service received from ATRF during their retirement process.

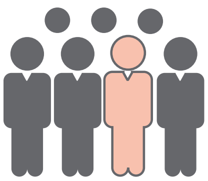
We expect about 1,000 new retired members each year over the next 10 years.



Engaging Employers

In March 2018, we sent invitations to 317 representatives of our 94 employers to participate in a survey to assist us in understanding their needs, experiences and expectations of our service delivery at ATRF. It's the first time that we surveyed our employers in many years – this initiative speaks to our ongoing commitment to listening and engaging with our stakeholders. Representatives from 65 employers responded to the survey, representing 69% of employers, and provided valuable information that will be used to further refine and customize the tools we use to support employers.

Key results from the survey



SUPPORT

Employer satisfaction with ATRF support - available when and where they need it

94%

OVERALL EXPERIENCE

Employer satisfaction with overall experience interacting with ATRF

84%

ACCURACY

Employer satisfaction with the accuracy of responses from ATRF

82%

TIMELINESS

Employer satisfaction with timeliness of response from ATRF

76%

Employers' priorities

- Greater availability of training and support service through multi-media materials and channels
- Centralized online communication portal for all interactions
- Simplified validation process
- User-friendly, web-based reporting application

Here's what employers told us

"I have had a very good rapport with ATRF over the last 30 years. Most questions/ concerns are dealt with in a timely manner."

"I really value the ability to get data from ATRF-CS and export it to Excel."

"Digital communications instead of letters for ERTN requests and verifying employees who are terminating after leave. We are moving to paperless and this would help."

"As always, our goal is to build a strong partnership with employers to help us effectively serve plan members and meet their needs," said Julie Joyal, VP, Pension Services. "I would like to thank everyone who contributed to the survey. Your feedback is encouraging and helps us enhance future services for our employers and plan members."

Did you know?

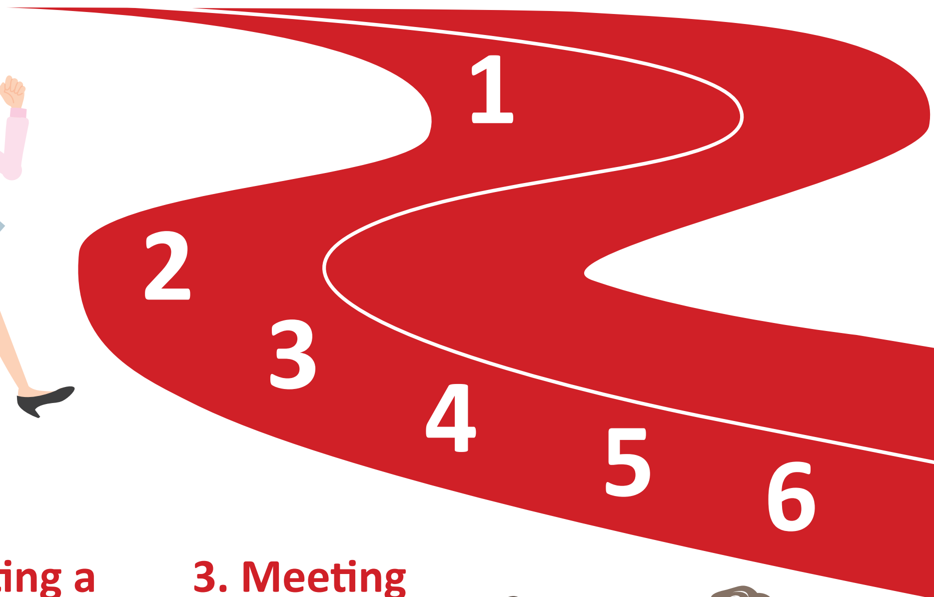
- Employers participating in the pension plans vary in size. Some have one active plan member and some have more than 7,000.
- The six largest employers represent 51% of active plan members.

A Member's Journey

No matter where our members are in their career journey, ATRF is there to support them through major life changes like marriage, divorce, having children, job changes and, eventually, retirement. Below is an example of a typical plan member's interactions with our office as they navigate their career (and life!):

1. New teacher

Jodie is a 25-year-old just starting her teaching career in Alberta. She is enrolled in the Teachers' Pension Plan by her school board, and completes her Information Update and Beneficiary Designation. She is eager to register for My*Pension* and check the ATRF website to find out more information about her new plan, including transferring her service from a public sector pension plan in Alberta she contributed to while working part-time. There may be a time limit for transfer, so it's best to look into this early!



2. Starting a family

Jodie and her spouse have a baby and they both share parental leave. She updated her beneficiary designation to make sure this new addition to her family is considered. She can't contribute to the plan while on leave, but is planning to purchase this service when she returns to work, so she plans her budget accordingly.

3. Meeting with a pension counsellor

One service ATRF provides is personal meetings or interviews with pension counsellors. This is the option Jodie chooses to discuss her parental leave and service purchase options in person.

4. Divorce

Life didn't quite go the way she planned and now, unfortunately, Jodie is getting a divorce. She is appreciative of the information she found online at ATRF.com about this life event and confirmation received by ATRF regarding the potential implications on her pension.

5. Using My*Pension* and the ATRF website

Using the ATRF website, Jodie logs into her secure account on My*Pension* to update her information following this life event. More than 48% of plan members are registered for My*Pension,* like Jodie.

6. Moving out of province

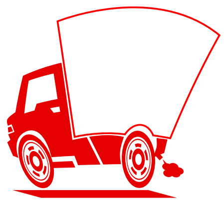
Jodie decides to make a fresh start. She finds a new job as a teacher in another province. She wonders if she should transfer her pension.

7. Phone our office

With Jodie's busy schedule planning her move, she decides to do as much as she can over the phone. So she calls ATRF to discuss the Reciprocal Transfer Agreement with other teachers' pension plans. After further analysis and not being sure if this is a permanent move, she decides to leave her pension with ATRF for the time being.

8. Returning to Alberta

Years later, Jodie decides to move back to Alberta to work with another school that is participating in the Teachers' Pension Plan. This makes it possible for Jodie to receive a pension for all her service in Alberta.



9. Attend a seminar at a Teachers' Convention

Jodie attends a seminar that ATRF is presenting at her Teachers' Convention. She was also able to book a quick one-on-one session with a pension counsellor to make sure she had everything planned and documented.

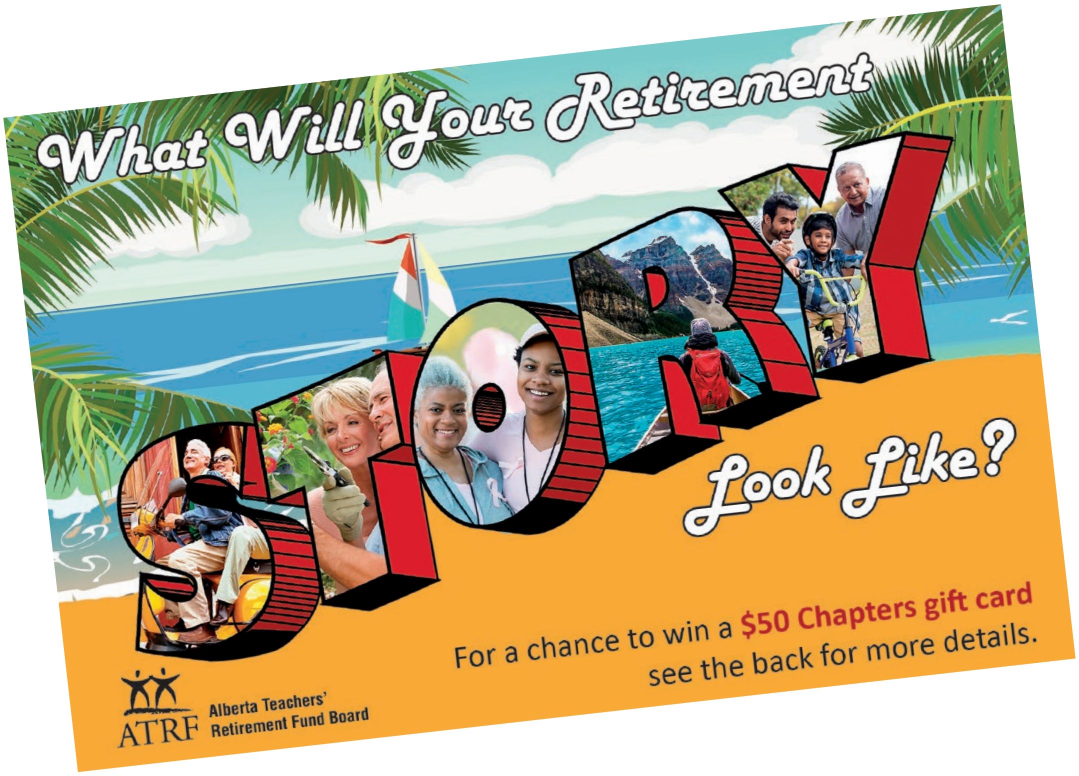
10. Planning for retirement

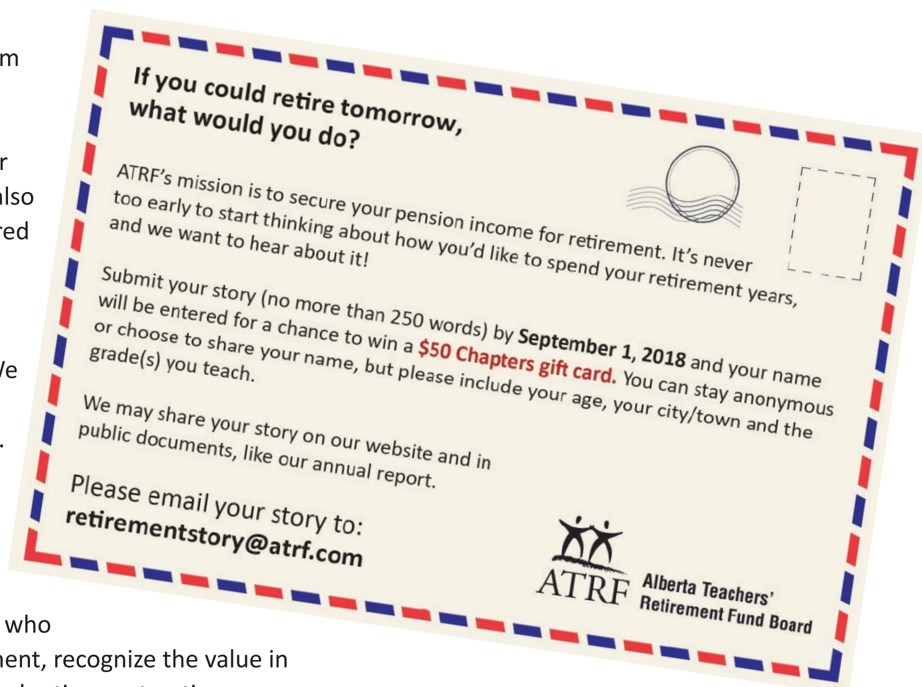
Jodie is about five years away from retirement, and wants to learn more about her options. She attends a Steps to Retirement seminar ATRF is presenting in her area, and books a meeting with a pension counsellor to review her pension estimates, and discuss her options.

11. Retired!

After a lot of changes in her life, Jodie is now retired. She used the video in the **Teachers' Lounge** on the ATRF website to help her fill out all the necessary forms. ATRF pension specialists answered her questions and processed her pension. Jodie still keeps her eyes open for information about cost-of-living adjustments and other information important to her pension. She makes sure to keep her contact information up-to-date with ATRF, including her email address, so she can be informed wherever her retirement years take her.

What's Your Retirement Story?





For many working teachers, retirement can seem very distant—more like a concept than a future reality. But ATRF knows how important it is to encourage teachers to start thinking about their retirement options sooner rather than later. It also helps to hear stories and experiences from retired teachers who have made the transition and are now enjoying the fruits of their labour! So, in 2018 ATRF created a postcard campaign that asked retired members to share their stories. We also asked active members to tell us what they thought their retirement stories might look like.

ATRF received dozens of submissions from both active and retired members, with themes about travel and volunteering, starting new businesses, and spending time with loved ones. We also heard that members, both those who are new to their careers or approaching retirement, recognize the value in thinking early, and often, about their pension and retirement options.

A big thank you to everyone who shared their stories! On the next page are two of those stories, including one from our contest winner, Tom Dirsa.

Writing his legacy

A steady pension income during retirement has allowed Tom Dirsa and his wife to travel, write, teach and raise awareness about children with Attention Deficit Hyperactivity Disorder (ADHD) through a book series.

“Being an educator doesn’t stop when you retire from the classroom,” Tom Dirsa wrote in his retirement story.

If anything, Tom has become both student and teacher again, as he explores his various interests. Since he retired in 2005, Tom has taken several writing courses, written sports content for local newspapers, and published a number of articles in national magazines. He has also been awarded a writing contract with the Alberta Distant Learning junior high school summer program in social studies.

In 2014, he began publishing a series of children’s picture books about a child with ADHD—a series that continues today.

“Being an educator doesn’t stop when you retire from the classroom.”

“I wrote the series for two reasons: I thought these stories would be of interest to other ADHD parents, but I also wanted to leave something for my children, grandchildren and great grandchildren,” Tom explained.

Planning her family’s future

Kristin Lapierre is already planning ahead when it comes to thinking about how to make retirement work for her and her family.

“I like to think I’m actively planning for retirement,” said Kristin. “Actually, what prompted my interest was a professional development session the Alberta Teachers’ Association was hosting. ATRF was there and talking about your retirement options, and I thought ‘This is going to happen, I might as well pay attention.’”

Kristin has been teaching since 2007, and is currently a substitute teacher with the Sturgeon Public School Division. Her husband has a career in the military and they have had to move often, which unfortunately makes securing a continuous contract challenging. But Kristin and her husband make it work. Not only does she invest in the ATRF pension plan when she has enough teaching hours, but she also invests in other external pension plans, trying to ensure that her family is prepared for retirement.

“... what prompted my interest was a professional development session the Alberta Teachers’ Association was hosting. ATRF was there and talking about your retirement options, and I thought ‘This is going to happen, I might as well pay attention.’”

“One thing I’ve noticed is that school boards are starting to do more retirement sessions. They are trying to get us thinking about this earlier in our careers. And honestly, it shows people that there is something to look forward to after teaching!

“Along with being more attuned to the present, I would also like to travel more since my schedule would be more flexible and my daughter would be out of high school,” Kristin writes in her submission. “As one who loves teaching history and French, I would travel to places that I have talked about in my classroom.”

Project Lantern: Enlightening the Future

In 2018, ATRF embarked on a multi-year initiative to ensure we continuously meet our clients' expectations. We affectionately call this Project Lantern. It's about assessing and modernizing how we deliver services to our members and employers for years to come. It's about understanding how our clients access services, interact and transact with us, now and in the future.

Project Lantern is also about connecting with our clients using various channels, to continue creating value and meeting their needs, by being even more proactive and personalized. We want to continue to provide high-value, timely and relevant information to each of our clients. We are guided by our customer service statement: providing what you need the first time.

The name Project Lantern came from an internal contest of suggestions from ATRF staff. The name captures the essence of this project and all the opportunities it presents: vision, evolution, and innovation, for today and tomorrow. Everyone at ATRF has a lantern on their desk to provide a daily reminder of the importance of this project, and the difference they make for our clients.

ATRF was one of the first pension plan administrators to offer comprehensive online services many years ago. We want to build on that agility and innovative thinking. As with everything we do, we need to ensure we have the right tools, systems, processes and talent to be able to deliver on our promise. Project Lantern will allow us to do that by creating the right environment, one that includes modernized business solutions.

"Enhanced experience for members, employers and ATRF staff is at the heart of this project."

We are listening

This last year we focused on information gathering and thoughtful planning. We have assessed where we are and where we want to be, mapped the way we think and operate, and explored ideas. We are also learning and leveraging what others are doing in the pension and customer service industries.

We are bringing together the right people to create a service formula that will result in maximum client satisfaction. We have gathered input from members, employers, partners such as the Alberta Teachers' Association (ATA), the Alberta Retired Teachers' Association (ARTA) and the Alberta School Employee Benefit Plan (ASEBP), to find out what they like about ATRF services and tools, and what they wish to see going forward.

We heard consistent themes, aligned with our service-guiding principles: personalized, proactive, seamless, transparent, and simple. We will continue to listen and connect with our clients—their feedback will help us advance our formula for success now and into the future.

It's an exciting time. Being involved in shaping and building our service offerings for years to come is a unique opportunity to make a lasting difference.

Project Lantern is an important initiative and significant investment that will bring many benefits to ATRF's clients. We will continue to share the progress of this project throughout our journey and, over time, our clients and staff will experience first-hand the benefits it will provide.

ATRF Selected Again as a Top 70 Employer

Alberta's TOP 70 EMPLOYERS 2018 ®

ATRF was proud to have once again been selected as one of Alberta's Top 70 Employers for 2018. This is the second consecutive year the organization has been recognized as an employer that leads their industry in offering exceptional places to work.

"Given the growth of our membership and investment portfolio, this designation affirms the importance we place on making ATRF a great place to work, and attracting and keeping talented employees," said Rod Matheson, ATRF's CEO. "From supporting our staff through an employee-driven Engagement Committee, to recognizing the importance of supporting our community through two paid volunteer days offered to each employee, we strive to build a dynamic and collaborative work environment."

The annual competition, organized by the editors of Canada's Top 100 Employers, evaluates employers using specific workplace criteria. Employers are then compared to other organizations in their field to determine which offers the most progressive and forward-thinking programs.

Here are just some of the reasons ATRF was selected as one of Alberta's Top Employers for 2018:

- ATRF supports employees who are new mothers with maternity leave top-up payments of up to 95% of salary for up to eight weeks, as well as flexible hours to help them transition to their new roles as parents.
- As part of ATRF's health benefits plan, the organization offers a health and wellness spending account of up to $1,500, allowing employees to top up existing levels of coverage based on their personal needs.
- ATRF encourages employees to continue to develop their skills with tuition subsidies for job-related courses and subsidies for professional accreditation.

ATRF IN OUR COMMUNITY

Employees Strive to Make a Difference

Here are some of the ways our employees engage with their community:

Helping others

ATRF's Charitable Initiatives Committee held their annual United Way campaign from October 30, 2017 to November 10, 2017. Through numerous events such as Jeans Week, Slippers Friday, Chili Cook-Off, Stock Competition and Game Day, employees were able to raise $12,004!

All proceeds raised were donated to the United Way – Alberta Capital Region which helps 100+ programs that lift people out of poverty and prevent those at risk from falling into it.

Habitat for Humanity

Helping make a difference in our community is at the core of ATRF's Charitable Initiatives Committee. Their work in organizing more than two dozen ATRF employees to volunteer their time in April 2018 to help build affordable housing with Habitat for Humanity is a testament to that mission.

After donning hard hats, safety glasses and steel-toed shoes, employees took part in everything from trash removal, painting walls and closets, to installing door frames and flooring. From newbies who had never held a paint brush, to would-be Mike Holmes carpenters, the ATRF work crew had a blast working with others from across Edmonton on a worthwhile (and rewarding) cause.

Challenge accepted!

From May 23 to June 10, 2018, employees from ATRF teamed up to participate in and volunteer for this year's edition of Corporate Challenge under the theme Welcome to the Jungle. From taking part in games like cribbage, darts, badminton, table tennis, bowling, basketball, and golf, to helping coordinate the games themselves, ATRF's teams stepped up and had a blast with their colleagues.

Corporate Challenge is an annual event in the City of Edmonton, and this marks the second year ATRF fielded a team. The event is geared to promote participation, sportsmanship, team-building and fun.

Above: Members of the ATRF team rest after a day hammering, sawing, painting and hauling at Carter Place, Habitat's build in Edmonton's Laurel community. The development will be home to 58 families upon completion.

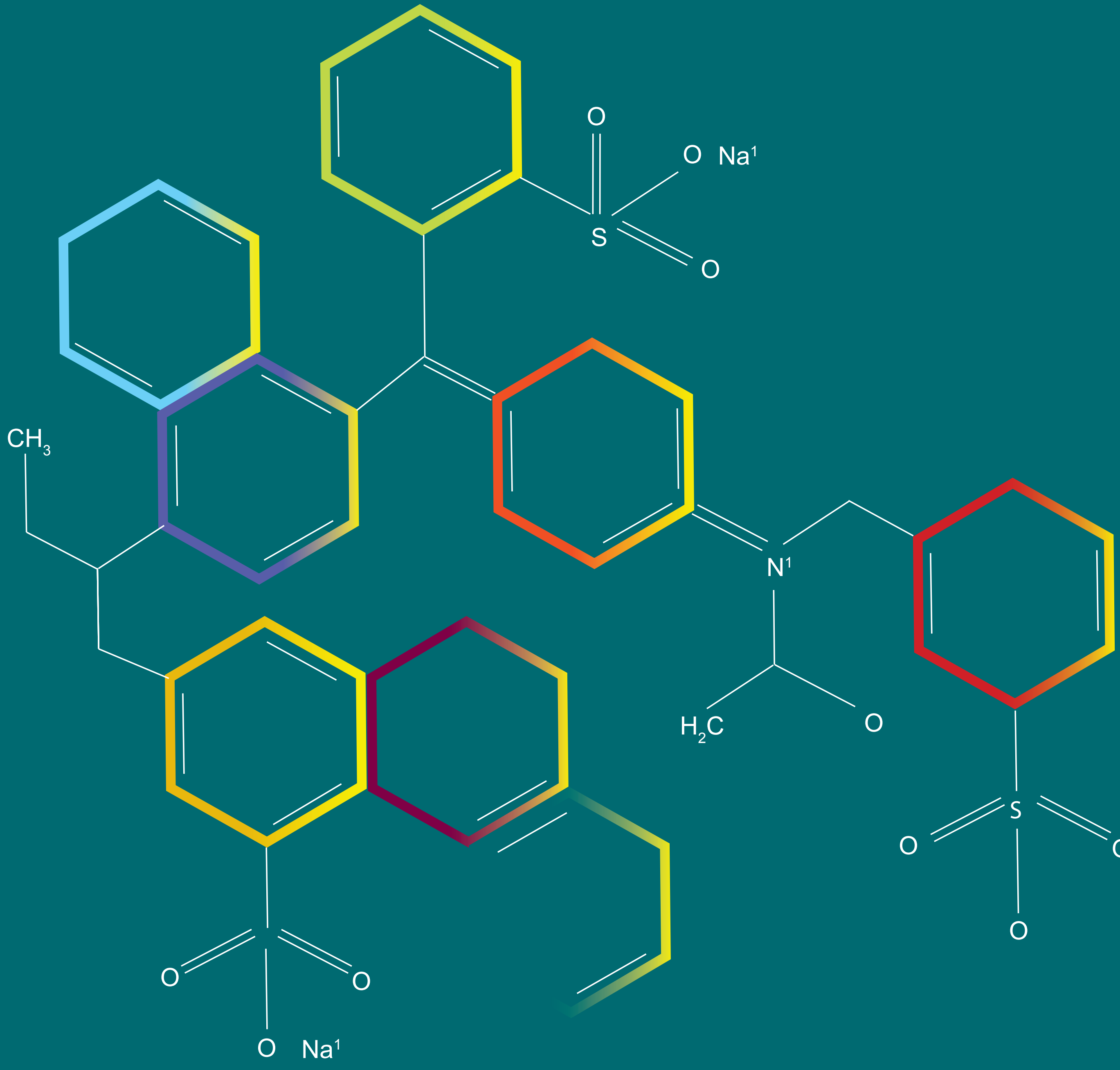
Left: Our team at Corporate Challenge.

Below: Jersey Day at ATRF.

In solidarity

In the wake of the tragic Humboldt Broncos hockey team bus crash on April 7, 2018, ATRF showed support for the players, their families, friends and community by wearing a mix of hockey jerseys and green and yellow clothing.

FUNDING



Funding

ATRF's Mandate:

To deliver the benefits established by the plan sponsors for current and future plan members. This requires a plan that is sustainable over the long term, at a cost and risk level acceptable to the plan sponsors.

Plan funding objectives

The ATRF Board established a funding policy with principles and guidelines that govern how the plans are funded. The overall objective is the sustainability of the plans — to ensure the plans will be able to pay the promised pensions to members and their beneficiaries, today and over the long term.

The funding policy is reviewed annually. In 2018, the Board completed a comprehensive review of the funding policy. The review ensured the funding policy provides sound guidance to the Board on funding decisions that anticipate and mitigate the funding challenges, and enhance the plans' long-term sustainability.

The **primary funding objective** is benefit security, which is a crucial element of a plan's sustainability. This is achieved by doing regular funding assessments targeting a plan that is fully funded over the long term — ensuring there is enough money to pay all current and expected pensions for all plan members.

The plan may not be fully funded in every year depending on the economic and demographic environments. The funding assessments take this into account and target, with a high probability, for the funded ratio to remain above a sufficient level every year to deliver the promised benefits while at the same time ensuring that contributions do not increase to unaffordable levels.

Keeping contribution rates stable is the **second funding objective**. The goal is to have contributions remain relatively stable, avoiding whenever possible large up and down adjustments in pension deductions on teachers' pay.

The cost of the plans should be sustainable over time, and should reflect the long-term view of the plans' assets and liabilities. This supports the **third funding objective**: inter-generational equity. This means, to the extent possible, that each generation of active members fund the benefits accruing for that generation of active members.

To achieve these funding objectives, there are various risk management tools that are used, mainly around building reserves when times are good that can then be used for rainy days.

We describe these tools in more details with the results of the actuarial valuations on the next page.

The new funding policy will be integral to ATRF's funding-focused investment approach that is currently being developed through our new initiative called Project Whiteboard.

How the plans are funded

The Teachers' Pension Plan (TPP) and the Private School Teachers' Pension Plan (PSTPP) have unique funding arrangements, as described below.

Teachers' Pension Plan

Pre-1992

The 2007 Memorandum of Agreement between the Government of Alberta and the Alberta Teachers' Association states the government is responsible for the liabilities associated with the pensions for the period of service before September 1992. No assets are in the plan for that period of service. The Government of Alberta guarantees the payment of pensions related to the pre-1992 period. ATRF receives sufficient funds each month to pay these pensions, as they become due. In 2017-18, the government provided $476 million to meet this obligation.

Post-1992

The cost of pension benefits earned for service after August 1992 is shared between active plan members and the Government of Alberta. Funding of the 60% cost-of-living pension adjustment provision is shared by the government and active plan members. Active members are also responsible for funding an additional 10% cost-of-living pension adjustment provision.

Funding deficiencies under the plan are amortized by additional contributions from active members and the Government of Alberta over a maximum 15-year period. Pensions for service post-1992 are not guaranteed if the plan is terminated. That is one of the reasons why the primary funding objective is to ensure there are sufficient assets to pay all post-1992 pensions.

Private School Teachers' Pension Plan

Private school teachers participate in the PSTPP if their employer decides to join this plan. The funding of the PSTPP works the same as the post-1992 portion of the Teachers' Pension Plan, except that the cost is shared between the teachers and the employers (the private schools) instead of the Government of Alberta.

On Course to Full Funding

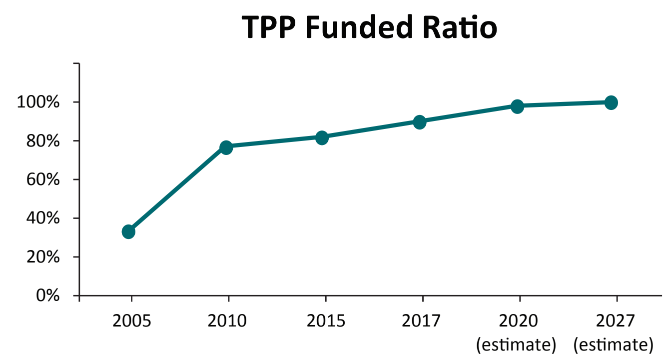
ATRF regularly conducts actuarial funding studies to assess the value of the plans' liabilities compared to their assets and to ensure adequate funding. An actuarial valuation is a report on the health of the plans.

The funded status of the plans based on the most recent actuarial valuations as at August 31, 2018 is:

Teachers' Pension Plan (TPP) Post-1992 Period	
Funding Value of Assets	$ 15.78 billion
Funding Liabilities	$ 16.97 billion
Funding Deficiency	$ 1.19 billion
Funded Ratio	93%

Private School Teachers' Pension Plan (PSTPP)	
Funding Value of Assets	$78.46 million
Funding Liabilities	$76.34 million
Funding Surplus	$ 2.12 million
Funded Ratio	103%

Based on these valuations, the funded status of the Teachers' Pension Plan (TPP) continues to steadily improve and is on course to being fully funded. The Private School Teachers' Pension Plan (PSTPP) has reached the important milestone of being fully funded this year.



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 tools to help achieve our funding objectives of contribution stability and benefits being fully funded.

This year the margin has been increased, from 1.1% to 1.3% for the TPP (and 1.2% for the PSTPP), in light of the good plan experience and investment returns, to build cushions when times are good and having them available for use when needed. The increase in margin brings the discount rate used to evaluate the plan liabilities to 5.2% for the TPP and 5.3% for the PSTPP (from 5.4% in last year's valuation).

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 moderate short-term adjustments to contribution rates. This practice is intended to 'even out' the impact from the volatility of market returns on the plans' funded status. This practice produces a funding value of plan 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 fluctuation reserve is putting money aside by not recognizing immediately some of the positive returns when times are good. Conversely, the reserve will serve to not recognize losses immediately when returns are not as good as expected.

As at August 31, 2018, the fluctuation reserve for the Teachers' Pension Plan was $690 million, and $3.42 million for the Private School Teachers' Plan.

"...the funded status of the Teachers' Pension Plan (TPP) continues to steadily improve and is on a good trajectory to being fully-funded."

Contribution Rates

Contribution rates were reduced effective September 1, 2018 by a total of 1.42% of teachers' pay for the Teachers' Pension Plan, and 1.1% for the Private School Teachers' Pension Plan.

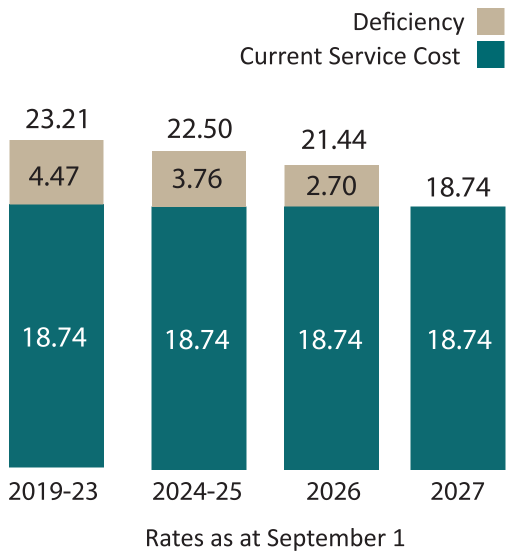
These current rates, as shown in the following tables, remain adequate and will stay the same for the next school year (2019-20).

Teachers' Pension Plan (TPP)	
Contribution Rates	% of pensionable salary
up to YMPE[1]	10.17%
above YMPE	14.52%
Total Teachers' Contribution	11.92%
Total Government Contribution	11.29%

Private School Teachers' Pension Plan (PSTPP)	
Contribution Rates	% of pensionable salary
up to YMPE[1]	8.76%
above YMPE	12.52%
Total Teachers' Contribution	10.27%
Total Employer Contribution	9.73%

[1] YMPE: Yearly Maximum Pensionable Earnings used by the Canada Pension Plan ($57,400 in 2019)

Based on the August 31, 2018 actuarial valuation, the total contribution rate for the TPP is 23.21% of teacher salaries, consisting of a current service cost of 18.74% of salaries and total deficiency contributions of 4.47% of salaries. The deficiency contributions are planned to decrease according to the following schedule.

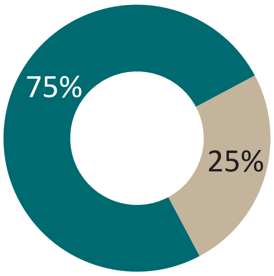


Of course, these projections assume that all assumptions remain unchanged and will be realized as expected. Actual experience will vary and the actual results recognized in future actuarial valuations can be better or worse than these projections. Therefore the rates illustrated above may vary.

Based on the August 31, 2018 actuarial valuation, the total contribution rate for the PSTPP is 20.00% of teacher salaries, representing the current service cost (i.e. the cost of benefits being accrued in a year). There are no longer deficiency contributions required under the PSTPP since this plan no longer has a deficit.

Did you know?

- The TPP is a relatively young plan, projected to have positive cash flow over the next several years.
- Approximately 75 cents of every pension dollar comes from investment returns, and 25 cents from contributions.



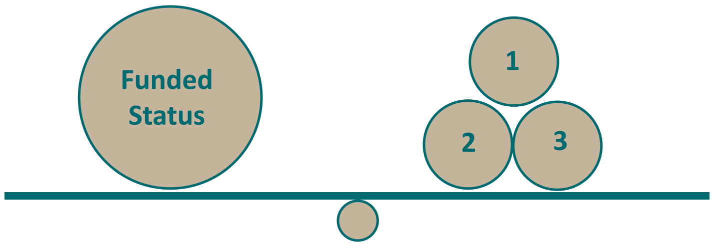
Funding Challenges

The Board has two main levers to achieve long-term sustainability:

1. Funding policy (contributions from teachers and government/employers)
2. Investment policy (how the assets are invested)

Plan sponsors have a third lever:

3. Benefits policy (level and type of benefits offered)



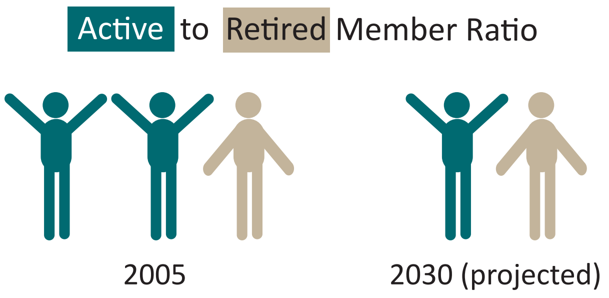
Like other retirement systems, the plans continue to face funding challenges due to long-term low interest rates, plan maturity, volatility and increasing plan member longevity. Some of these challenges are illustrated below.

Plan maturity

One measure of plan maturity is the proportion of retirees' liabilities to the total liabilities in the plan. A growing percentage of retirees' liabilities indicate a plan's increasing maturity.

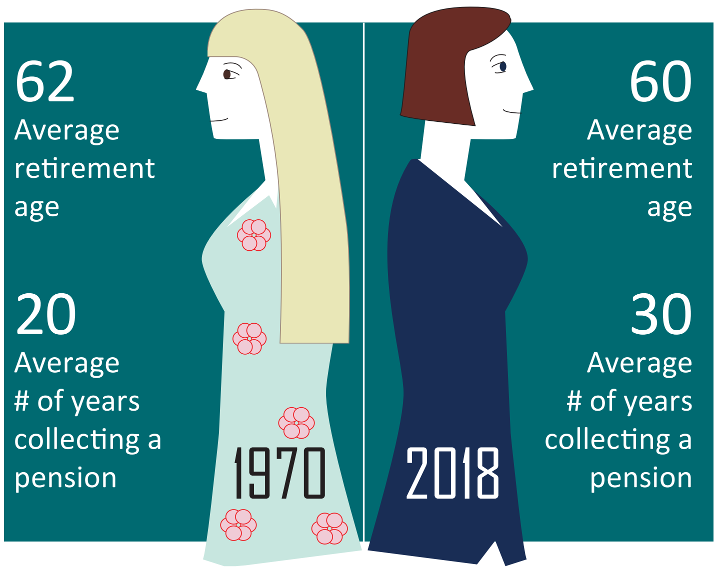
Another measure of plan maturity is the ratio of active to retired members. A decreasing ratio indicates a plan is maturing.

Plan maturity presents a funding challenge, because a funding shock (such as investment losses, increased longevity, or lower expected returns) will be absorbed by a smaller number, in proportion, of contributing members.



Plan members' increasing longevity

Increased life expectancy presents a funding challenge for pension plans. It 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. The last several decades have seen significant changes in retirement experiences. Teachers are living longer and retiring earlier. In the 1970s, the average teacher retired at age 62. They could expect to live and collect their lifetime pension for another 20 years on average. Now, the average teacher retires at age 60. They can expect to live and collect their lifetime pension for another 30 years on average.



This means the plan pays out pensions for 50% more years on average now than in the 1970s.

Volatility

A key assumption in the funding of the plans is that the fund will earn an average net investment return each year at least equal to the discount rate used for funding purposes. Actual year-to-year investment returns can be quite volatile, and absent any adjustment could lead to frequent contribution rate changes.

The asset smoothing technique and margins in assumptions, as explained previously, are used to reduce the impact of volatile market returns and other factors on the plans' funded status and contribution requirements. This approach effectively handled investment losses stemming from the 2008-09 financial crisis by providing time for markets to recover while limiting contribution rate increases. Similarly, the strong investment performance over the past five fiscal years has provided both plans the ability to mitigate potential future market losses.

While smoothing is effective in stabilizing contribution rates during short periods of market volatility, failure to achieve the assumed funding discount rate on average over the long term would still result in contribution rate increases.

One of the major initiatives ATRF is undertaking, Project Whiteboard, may result in helping further reduce overall volatility of the plans' funds. The investment portfolios will be constructed in a way that optimizes the achievement of the funding policy objectives, while also focusing as much on risks as returns. The ultimate goal of Project Whiteboard is to not only generate the returns needed to sustainably fund the plan, but to do so with less volatility over time. For more information on Project Whiteboard, see page 39 in the Investments section of this report.

Financial Statements valuation

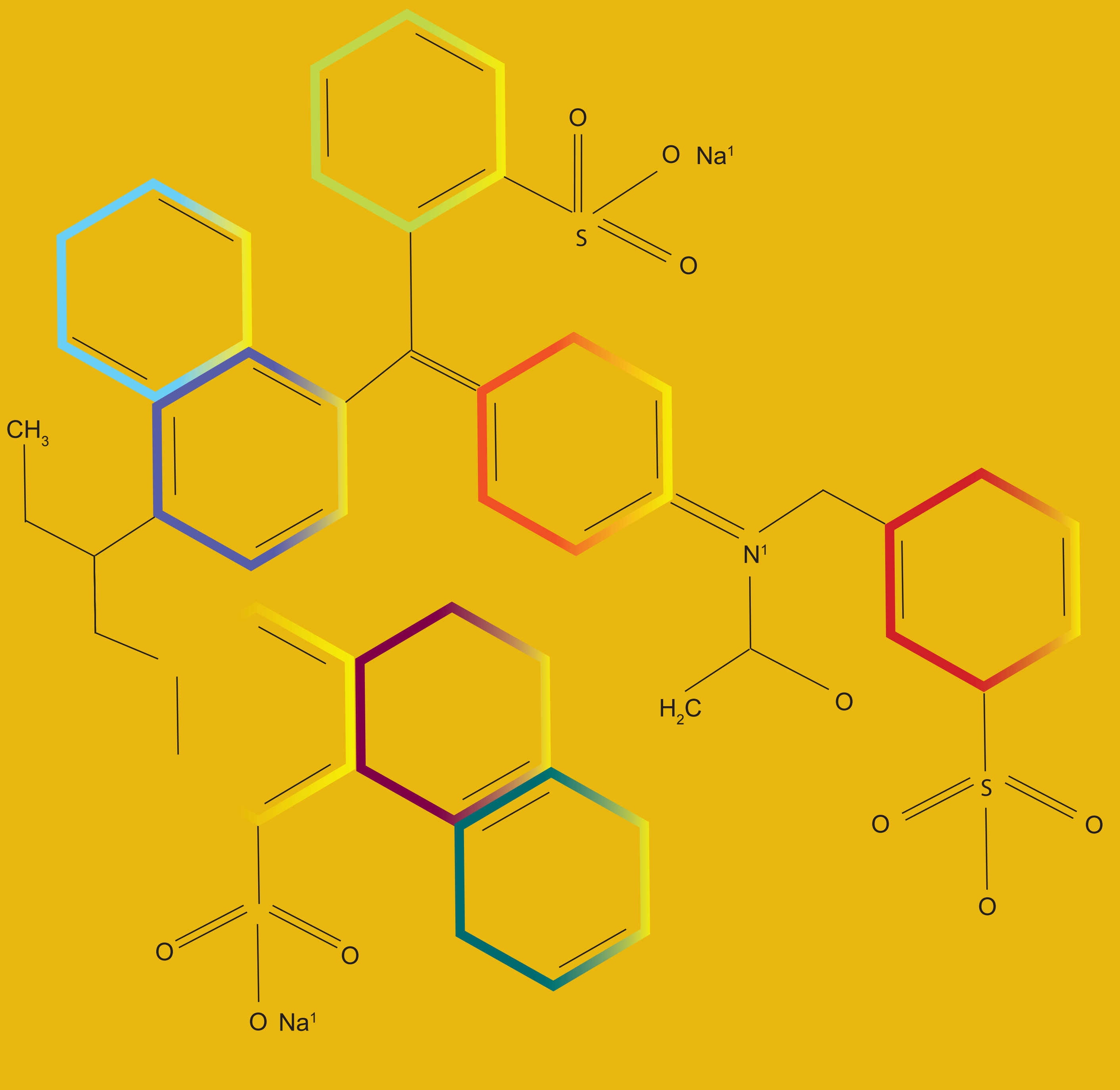
ATRF conducts two different actuarial valuations of the plans. One is for funding purposes. The second is for the Financial Statements, as required by the prescribed accounting standards. These results are shown in the Financial Statements section of this report.

Both types of valuations have prescribed uses, are based on the same underlying plan member data, but differ in the following ways:

1. The funding valuation uses an actuarially-accepted method of smoothing market returns over a five-year period to mitigate investment market volatility and support contribution rate stability. The Financial Statement valuation uses the prescribed accounting standard method which does not allow for smoothing of market returns; the fair or market value of assets must be used.
2. The funding valuation incorporates a margin for adverse deviation in the discount rate used to determine the present value of liabilities of the plans, to again mitigate volatility in contribution rates. The Financial Statement valuation uses a discount rate without margin.

Accordingly, the asset and liability amounts in the Financial Statements differ from those in the funding valuation.

INVESTMENTS



Q & A with the CIO

DEREK BRODERSEN
CHIEF INVESTMENT OFFICER

How did the fund perform in 2018?

With a few exceptions, financial markets around the world had another strong year in 2018. While geopolitical and trade issues such as Brexit, U.S. protectionism and conflicts in the Middle East dominated news headlines, economic growth in most regions remained strong and financial markets reflected that. In this ongoing bull market, our fund returned 9.6% for the year, which exceeded both our long-term funding objective and the fund's benchmark for the year.

One year never tells the story, however. The plan's funding depends on achieving sufficient return over long-time periods, not just in one year. Over the past four years, the fund had an annual return of 8.1%, and over the past 10 years the fund returned an average of 7.4% annually. These strong investment returns are a primary reason why the funded position of the plan has improved significantly over this time.

What were the highlights?

The United States continued to lead the world in economic growth, corporate profits and employment growth, driven in part by dramatic tax cuts introduced early in the year. As a result, growth-oriented investments such as equities performed very well. Canadian growth lagged behind the U.S., but was still positive and domestic financial markets had a solid year. Europe continued to improve economically, although markets were mixed, due in large part to the uncertainty over the impacts of the U.K. exiting the European Union in early 2019.

Rising corporate profits and low interest rates provided a good environment for equity markets, which performed very well this year. ATRF's private equity portfolio had a particularly strong year, with returns in excess of 20%. While interest rates remain low in an historical context, they have been moving consistently higher, which limited the return from our bond portfolios. Aside from private equity, our other private market assets, such as infrastructure and real estate, recorded strong returns, as they have since the inception of these programs eight years ago.

The table on page 43 provides a more detailed review of our investment returns.

As you noted, markets have performed very well over the past several years. Does ATRF have a plan to deal with a potential market change if markets take a turn?

In the investing world, we always think and plan for the future. Over the past several years, investors have enjoyed one of the longest equity bull markets in history. It has allowed pension funds and other investors to recover from the devastating financial crisis of 2008 and 2009. But we all know that economies and financial markets are cyclical, and that it is very difficult to predict when market conditions are about to change. The gradual return of inflation, rising interest rates and high levels of corporate profitability are all indications that we are likely closer to the end of this cycle than the beginning. In order to be as ready as we can be for the next cycle, we maintain a highly diversified portfolio, ensuring we own assets that perform well in different environments. We also carefully monitor global economic conditions, looking for any early indications that things may be about to change. We then tactically adjust the portfolio to ensure we are not over-exposed to regions or asset classes where we believe risk is rising.

Project Whiteboard is one of the biggest projects ATRF has ever undertaken. What's it all about?

ATRF has grown significantly over the last several years, both organizationally and in assets. As I mentioned earlier, we have also enjoyed very strong investment returns and have seen our funded ratio improve dramatically, to the point where we are nearing full funding for the first time in decades. But we know the bull market won't go on forever, and we don't want to lose what our plan members and ATRF have worked so hard to achieve over so many years.

So, we decided to take a step back and think about whether the strategies we have used to manage the assets successfully in the past will continue to work in the future. To do that, we embarked on Project Whiteboard. The starting point for the project was to assume that rather than owning a diversified portfolio of assets worth $16.6 billion, we held $16.6 billion in cash. Then we asked ourselves how we would best construct a portfolio from scratch to invest that $16.6 billion, given the profile of our liabilities. After going through a lengthy strategic exercise to consider this question, we then compared the results to the way we have actually been managing the assets - and determined the changes that needed to be made.

We are now working out implementation plans for a transition of our approach to investment management that is expected to take several years. In a very real sense, this project is all about advancing our formula for success.

Can you elaborate a bit more on what kinds of changes members and other stakeholders can expect to see?

Once fully implemented, the changes we are expecting to make may not result in a portfolio that looks meaningfully different on the surface, as we still expect to invest in many of the same things we do today, such as equities, bonds, real estate and infrastructure. But it's behind the scenes where we expect a lot of change to occur. Very simply, the idea is to ensure that the investment portfolio is constructed in a way that satisfies the key funding criteria outlined in our funding policy. These criteria include achieving and maintaining full funding, and ensuring that contribution rates are both affordable and relatively stable.

We all expect that over the next 30 years there will be continued volatility in the capital markets and times when we see significant declines in market returns. For funding purposes, we assume that the investment portfolio earns a consistent return every year. In reality, there are years when the portfolio generates returns far above the expected return, and years where the portfolio returns are significantly below the long-term expectation.

By looking at the risks in our portfolio in a different way, and better understanding the relationship between our assets and liabilities, we hope to smooth the future return profile of ATRF's investment portfolio and limit both the highs and the lows. The ultimate goal is to construct a portfolio that can not only generate the returns needed to sustainably fund the plan, but can do so with less risk of future contribution rate hikes.

Specifically, the way we construct the portfolio and allocate capital to asset classes will change. Going forward, we plan to place more emphasis on the plan's liabilities and understanding the specific risk factors (such as economic growth, inflation or interest rates) that impact the value. Similarly, we will do the same thing on the asset side, analyzing and understanding the key risk factors underlying each type of investment. When we look at both of those together, it changes how we think about diversification and how capital is allocated to each asset class. Simply put, it is an approach that is as focused on risk as it is on return.

ATRF has grown dramatically over the past several years. What impact does this have on how the assets are managed?

ATRF's investment portfolio has more than tripled in size since 2010 due to a combination of strong investment returns and the fact that contributions to the plan each year exceed annual pension obligations. At $16.6 billion in assets, ATRF has the scale to cost-effectively invest in ways that were not feasible back in 2010. Over the past several years, we built internal teams to manage illiquid assets such as private equity, real estate and infrastructure, as well as invest in somewhat more esoteric assets, such as hedge funds. We expect this trend to continue and ATRF to progressively internalize the management of more and more assets that are currently managed on our behalf by external partners. Managing assets internally is not only more cost-effective, but provides ATRF with greater flexibility and control over its own assets.

We hear a lot about ESG in the investments world, and it is not a new concept to ATRF. What has the organization done lately on this front?

The acronym ESG is short for Environmental, Social and Governance and has become the common term in the investment industry to describe what many would call 'Responsible Investing.' In 2016, ATRF adopted a Responsible Investing Policy which outlines ATRF's approach to managing ESG risks in its portfolio.

We integrate an analysis of ESG factors into our evaluation of investments. We know that issues surrounding things like an organization's environmental footprint, labour practices, and governance can have a substantial bearing on an investment's risk and return. An analysis of these things is part of our regular due diligence and an important aspect of the research we undertake before making investments. This past year we placed even more discipline around ensuring the analysis of ESG issues is robust and conducted for every asset where we make the ultimate investment decision. For assets managed by external partners, we regularly evaluate their ESG practices to ensure their investment principles are in line with ours.

We are also an active and engaged asset owner. Our internal and external investment teams communicate with the companies in which we are invested on ESG-related issues. We also participate with other institutional shareholders in shared ESG initiatives, with a strong focus on corporate governance. We regularly collaborate with other asset owners through well-known and respected organizations like the Canadian Coalition for Good Governance, of which ATRF is a founding member, the Pension Investment Association of Canada and the Carbon Disclosure Project (CDP).

Influencing the Industry

Generating a strong Return on Investment with industry associations

Knowledge is power, and in the investment world that phrase is especially appropriate. With more than $16 billion in assets invested across 66 countries, our investment professionals strive to stay at the top of their game.

One of the platforms ATRF leverages is our membership in a variety of professional investment associations that share information, provide training, and offer networking opportunities.

ATRF has board representation on two of the most prominent associations, the Institutional Limited Partner Association (ILPA) and the Canadian Venture Capital and Private Equity Association (CVCA).

On June 6, 2018, Kevin McDowell, one of ATRF's Managing Directors of Private Investments, joined ILPA's Board of Directors. ILPA was established in 2002 and is made up of Limited Partners (LPs) from across the globe. It includes 450 member institutions representing more than $2 trillion U.S. of private equity assets under management. This makes up about 4,500 professionals from over 50 countries.

LP refers to the person or people investing money on behalf of their company or organization. General Partner (GP) is typically the fund manager, and sets the terms for the fund.

ILPA is exclusively made up of LPs, which is why their education and training are targeted to this group. ATRF takes full advantage of this by requiring every new Private Investment employee to take ILPA Institute training sessions, which are very extensive. ILPA also offers LPs an opportunity to share best practices with each other, and to strengthen their network.

By participating at the Board level, ATRF ensures it has influence in setting the agenda for the industry.

"It's about having a voice," explains Kevin. "It's powerful to share ideas with fellow LPs and be a thought leader on industry best practices." Kevin's involvement in ILPA, over time, will translate into better international brand recognition for ATRF, while strengthening the private equity community.

"Increased knowledge and better networking opportunities affect our deal flow," Kevin says. "Our involvement in ILPA also means we're that much stronger as LPs. There is work involved here, but there's a payoff as well."

KEVIN McDOWELL (left), KENT KIRKPATRICK (right)

The CVCA offers similar benefits to its members, but provides a national focus. The CVCA was established in 1974, and currently has more than 250 member companies, along with about 1,500 member professionals.

"ATRF has had representation with the CVCA for about seven years," says Kent Kirkpatrick, one of ATRF's Managing Directors of Private Investment who has sat on the organization's board since 2016. "Being part of the board really helps in terms of getting our name out there in the Canadian market. Currently, we're more well-known internationally than nationally because we invest more outside of Canada.

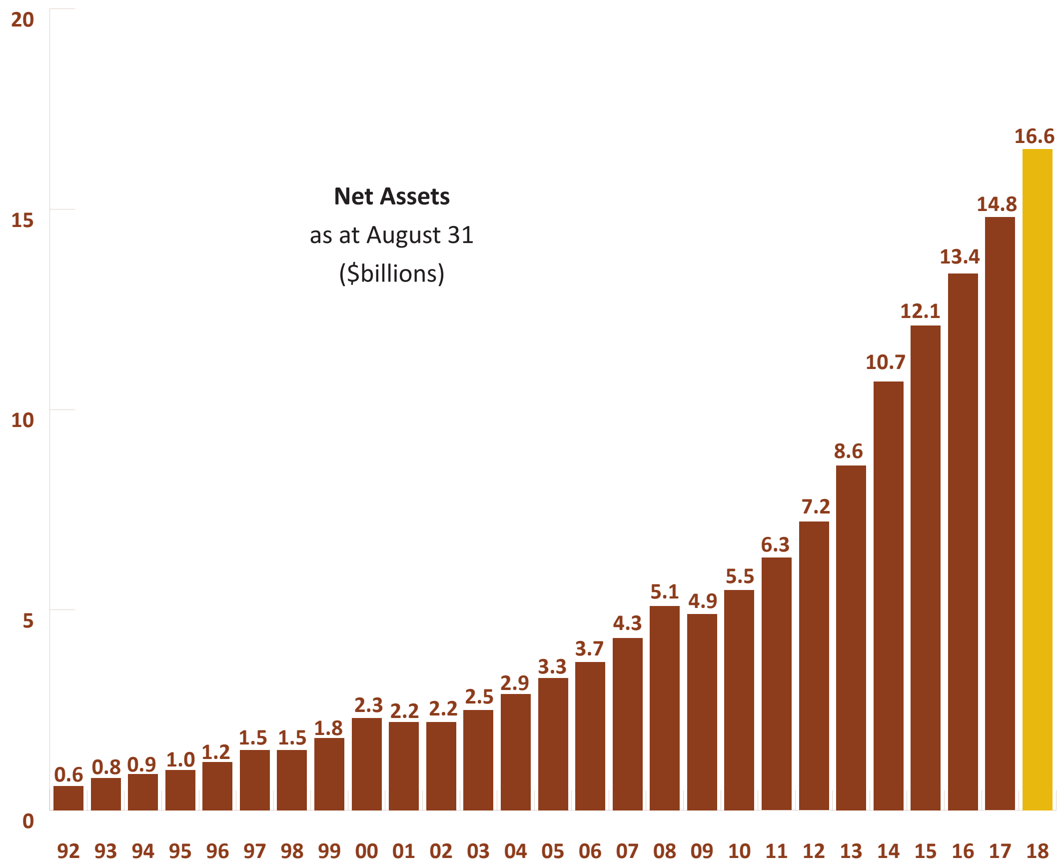
"So it keeps us in the flow of the Canadian industry. We get to know all the players and they get to know ATRF and what we're doing. And at the end of the day, representation on the boards is really about increasing our knowledge and the team's knowledge, and ultimately benefiting ATRF through increased returns."

Besides education and networking opportunities, CVCA advocates on behalf of the industry. Mike Woollatt, the CEO of CVCA, says his organization also provides members with access to accurate and up-to-date industry data.

Investment Management

At ATRF, we are advancing our formula for success in our investment management operations by ensuring plan members receive a predictable and reliable pension income in retirement. This means we will always have sufficient assets to fund the plan and deliver the pension promise to our plan members.

Our investment portfolio has grown rapidly over the past several years, as a result of strong investment returns and the fact that contributions into the plan from working plan members continue to exceed the value of the pensions being paid out to retired members. As of August 31, 2018, the assets of the plan have increased to $16.6 billion.



Policy asset mix

The current long-term policy asset mix was adopted in 2014, following the most recent asset-liability modeling study. ATRF typically conducts this study every four to five years with the goal of determining the most appropriate asset mix for the plan. The policy asset mix includes traditional public market assets, such as equities and bonds, as well as private market assets, such as real estate and infrastructure.

ATRF began investing in real estate and infrastructure in 2010, and we have been gradually and prudently increasing our allocations to each asset class toward reaching our long-term policy weights. During this time, the policy asset mix is adjusted each year to reflect the actual growth in these asset classes.

Policy Asset Mix	Policy at Aug 31, 2018	Long-term Target
Total	**100.0%**	**100.0%**
Return Enhancing	**47.0%**	**45.0%**
Global Equity	37.0%	35.0%
Private Equity	10.0%	10.0%
Fixed Income	**22.0%**	**20.0%**
Universe Bonds	11.0%	9.0%
Long-term Bonds	9.0%	9.0%
Money Market	2.0%	2.0%
Inflation Sensitive	**21.0%**	**25.0%**
Real Estate	14.0%	15.0%
Infrastructure	7.0%	10.0%
Absolute Return	**10.0%**	**10.0%**

Investment Performance

Rates of return*

As at August 31, 2018

Asset Class	1 Year (%)		4 Years (%)		10 Years (%)	
	ATRF	Benchmark	ATRF	Benchmark	ATRF	Benchmark
Fixed Income	**2.1**	**1.9**	**2.9**	**3.0**	**4.8**	**4.7**
Universe Bonds	1.6	1.3	2.7	2.6	4.7	4.3
Long-term Bonds	3.0	2.8	4.0	4.2		
Money Market	1.4	1.0	0.3	0.7	0.8	0.8
Return Enhancing	**13.4**	**13.0**	**10.3**	**10.0**	**8.6**	**8.4**
Global Equity	11.2	12.5	8.5	9.0	7.9	8.3
Private Equity	22.4	14.5	19.1	14.4	11.7	10.3
Inflation Sensitive	**12.8**	**7.3**	**12.5**	**6.2**		
Real Estate	9.9	7.1	10.9	6.0		
Infrastructure	19.4	7.6	15.7	6.7		
Absolute Return	**2.7**	**5.1**	**3.1**	**4.7**		
TOTAL PLAN	**9.6**	**8.5**	**8.1**	**7.2**	**7.4**	**6.9**

In order 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 (8.5% for 2018) is calculated by aggregating the benchmark returns of each individual asset class and weighting them according to the fund's policy benchmark.

*Returns are net of fees.

Investment performance benchmarks

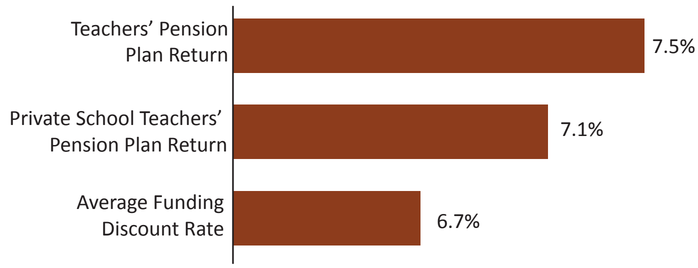
Asset Class	Benchmark
Money Market	FTSE TMX 30 Day T-Bill Index
Universe Bonds	FTSE TMX Universe Bond Index
Long-term Bonds	FTSE TMX All-Government Long-term Bond Index
Global Equity	Hybrid of 3 Indices: MSCI World (50%), S&P/TSX Composite (30%), MSCI Emerging Markets (20%)
Private Equity	MSCI World Index plus 2.0%
Real Estate	Canada CPI plus 4.25%
Infrastructure	Canada CPI plus 4.75%
Absolute Return	FTSE TMX 91 Day T-Bill Index plus 4.0%

Long-term investment objective

An essential long-term assumption in determining the funding requirements of the plans is that net investment returns will, at a minimum, meet the funding discount rate used in the funding valuation of the plans.

We review this measure of performance for time periods up to 15 years as this coincides with the 15-year amortization period of deficiencies (required by Legislation). Over the past 15 years, the funding discount rate of the plan has been reduced to 5.4% (5.2% as at August 31, 2018 for the TPP and 5.3% for the PSTPP) from 7.5% as forecasts of long-term investment returns have fallen and the Board has reduced the overall funding risk of the plans.

15-Year Return vs Long-term Funding Objective
as at August 31, 2018



Over the past 15 years, the investment return for the Teachers' Pension Plan was 7.5%, which was 0.8% above the average funding discount rate. For the Private School Teachers' Pension Plan, the rate of return was 7.1% over the same time period. The return differs slightly from the return on the Teachers' Pension Plan as it did not include the loan to the Government of Alberta that was part of the assets of the Teachers' Pension Plan until the end of 2009.

Fixed income assets

Fixed income assets are typically among the lowest risk assets in the fund, and are expected to provide lower, but more stable, returns than other asset categories over the long term. ATRF's fixed income assets are diversified across short, medium and long-term maturity dates and include both government and corporate issuers.

Most of our fixed income assets are managed internally by ATRF's investment team, while a minority of these assets has been outsourced to external managers who are focused on particular segments of the markets.

Return enhancing assets

Return enhancing assets are generally expected to provide the highest return over the long term, but reflect a higher risk profile than other assets in the plan. Return enhancing assets are the largest investment category in the fund, and include our public and private equity portfolios.

Our public market equity portfolios are highly diversified by investment style, company size, and geography in order to mitigate risk. While some of these assets are managed by ATRF's internal investment team, the majority are managed by external investment partners who have specific expertise in certain markets or investment types. Our private equity assets consist of a combination of limited partnerships and direct investments.

Inflation sensitive assets

Inflation sensitive assets are included in the fund to provide returns that are at least partially correlated to inflation over the very long term. This characteristic provides a degree of long-term funding protection as pension benefits under the plans are 70% indexed to inflation. Both real estate and infrastructure are included in this asset category.

Our real estate and infrastructure portfolios are constructed and managed using a combination of internal and external investment managers. Our internal teams have established an extensive global network of partners and fund managers with whom we work closely to identify and manage investments.

Absolute return assets

Our absolute return assets play an important role in diversifying risk by generating investment returns that are relatively stable and largely uncorrelated with more traditional assets (primarily return enhancing assets). These assets are highly diversified, reflect a wide range of risk-return profiles, and include managed futures, hedge funds and other multi-asset strategies. All of these strategies are managed by external investment partners.

2018 Deal Highlights

39 Niagara

39 Niagara is a mixed-use development in Toronto, Ontario comprised of 501 multifamily rental units and approximately 54,210 square feet of retail space. The project is situated at the corner of Front and Bathurst Streets, is pursuing LEED designation, and will provide about 25,000 square feet of indoor/outdoor amenity space. ATRF owns a partial interest in the development alongside the Minto Group.

Coastal Multifamily Portfolio

The Coastal Multifamily Portfolio represents a collection of 3,864 units in seven high-quality multifamily properties in California, Hawaii and New York. Four of the seven deals are situated in Los Angeles. The portfolio is a joint venture between Carmel Partners (51%) and Brookfield Asset Management (49%); ATRF owns a partial interest, alongside Brookfield Asset Management.

LBC Tank Terminals

ATRF invested in a global provider of responsible logistics solutions that owns and operates midstream and downstream facilities for bulk liquid chemicals, oil and refined petroleum products through a global network of storage terminals located in Europe, the U.S. and China. Together, these provide a storage capacity of two million cubic meters. ATRF partnered with Ardian, a Paris-based infrastructure manager, for the acquisition of a 35% stake in LBC Tank Terminals.

Southern Capital

ATRF contributed to a restructuring of Mulberry Asia Fund II, a fund managed by Southern Capital, a Southeast Asian-focused private equity fund manager. ATRF invested in three assets in the fast-growing Asia telecom and healthcare markets from the Mulberry fund. ATRF participated in this investment alongside AlpInvest Partners, a global private equity secondaries manager.

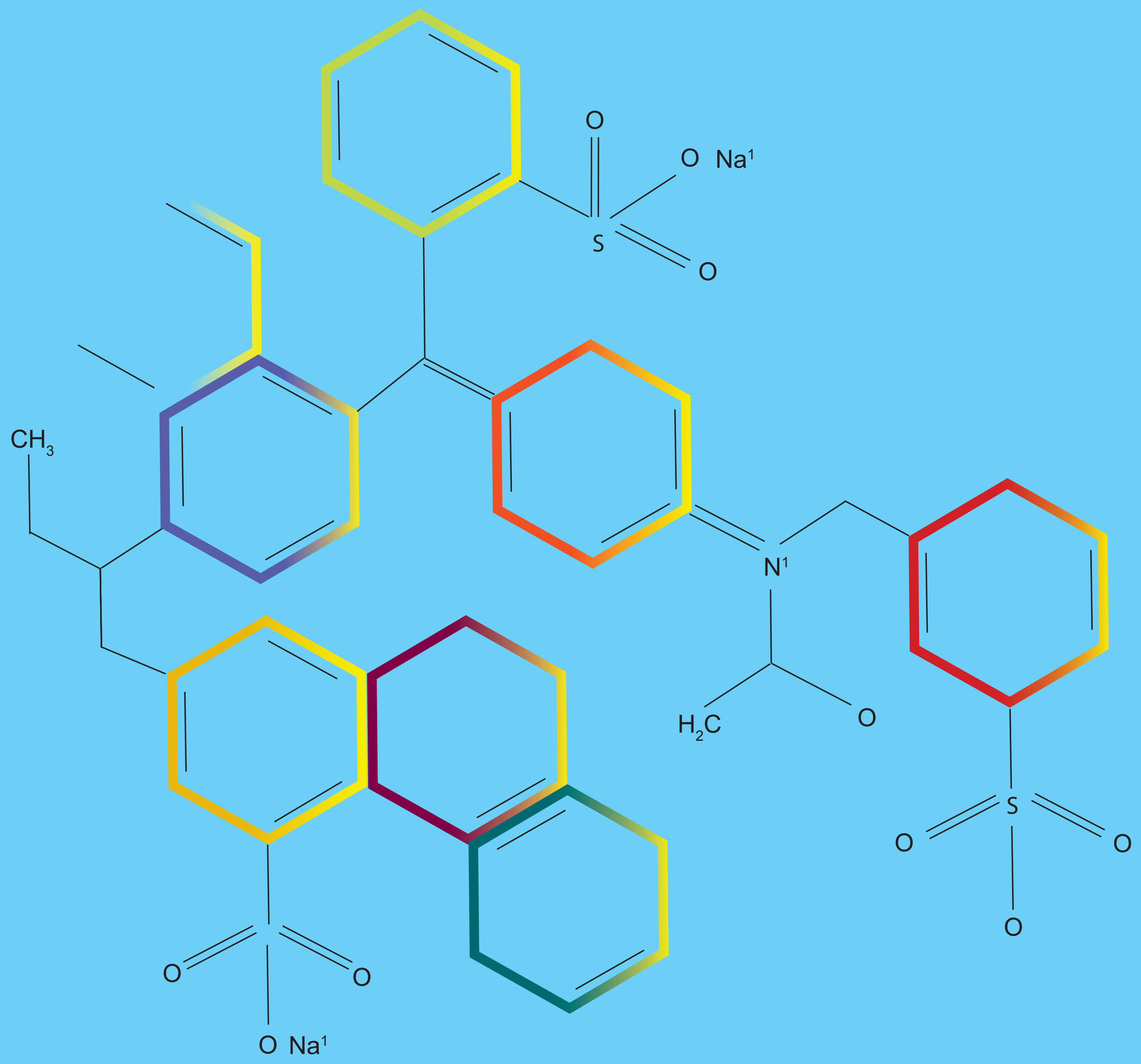
U.S. Logistics Fund 1

U.S. Logistics Fund 1 represents a programmatic club investment targeting the development of Class A industrial/logistics assets in key U.S. markets. The program currently contains three seed investments in Seattle, Portland and Atlanta representing approximately 340,000 square feet of existing industrial and 2.6 million square feet of buildable industrial/logistics space. ATRF owns a partial interest in the three projects alongside CRG.

Verscend

ATRF invested into Verscend Technologies, a U.S.-based leader in data-driven healthcare solutions, to facilitate the acquisition of Cotiviti Holdings, Inc., a provider of payment accuracy and analytics-driven solutions focused primarily on the healthcare industry. ATRF participated in this investment alongside Veritas Capital, a New York-based private equity firm investing in companies that provide critical technology and technology-enabled solutions to government and commercial customers worldwide.

SUMMARY OF COSTS



Service and Investment Costs

Investment Costs

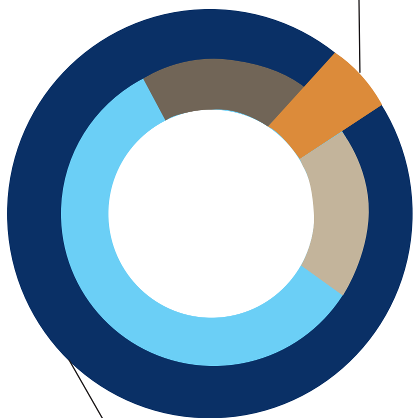
Performance Fees
$26.1 million
$0.16 per $100 of assets
Fees incurred to align interests between ATRF and external managers for high performance

Operating Expenses
$28.6 million
$0.17 per $100 of assets
Internal costs incurred to prudently manage ATRF fund

Management Fees
$84.3 million
$0.51 per $100 of assets
Fees incurred to access external managers' expertise and performance

Total Plan Expenses

Plan Member Service Costs
5%; $7.8 million
(2017: 5%; $6.6 million)



Investment Costs
95%; $139.0 million
(2017: 95%; $127.3 million)

Total: $146.8 million *(2017: $133.9 million)*

Plan Member Service Costs

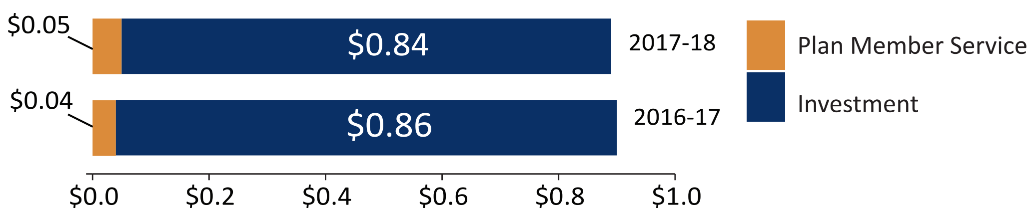
Operating Expenses
$7.8 million
$0.05 per $100 of assets

Costs incurred to effectively deliver pension services to ATRF members

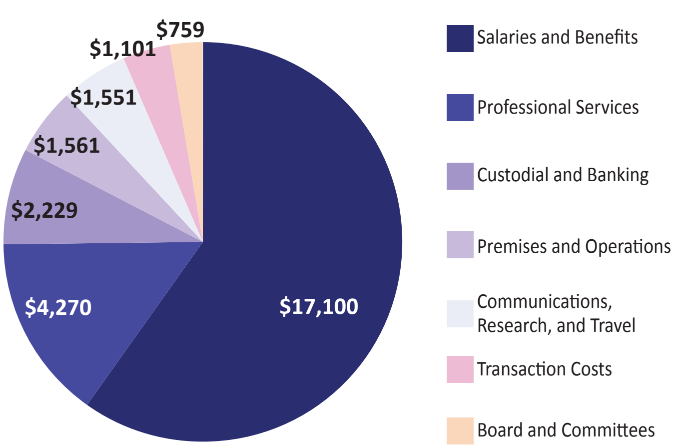
Cost per member of $111 (2017: $97) is measured against a $150 per member* benchmark for a peer group of Canadian public sector pension organizations

**Active and retired*

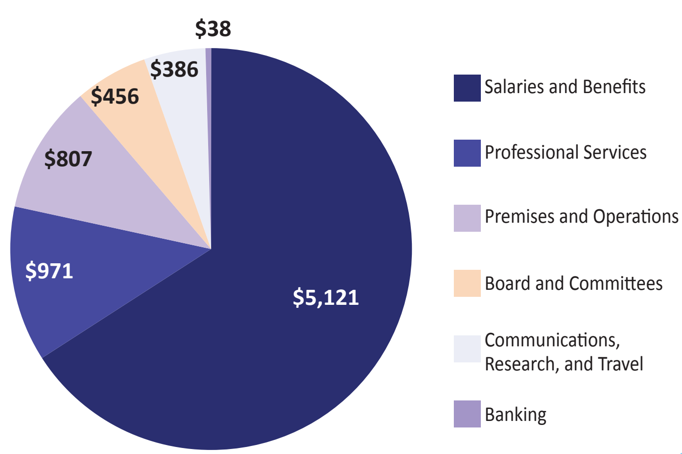
Cost per $100 of Assets



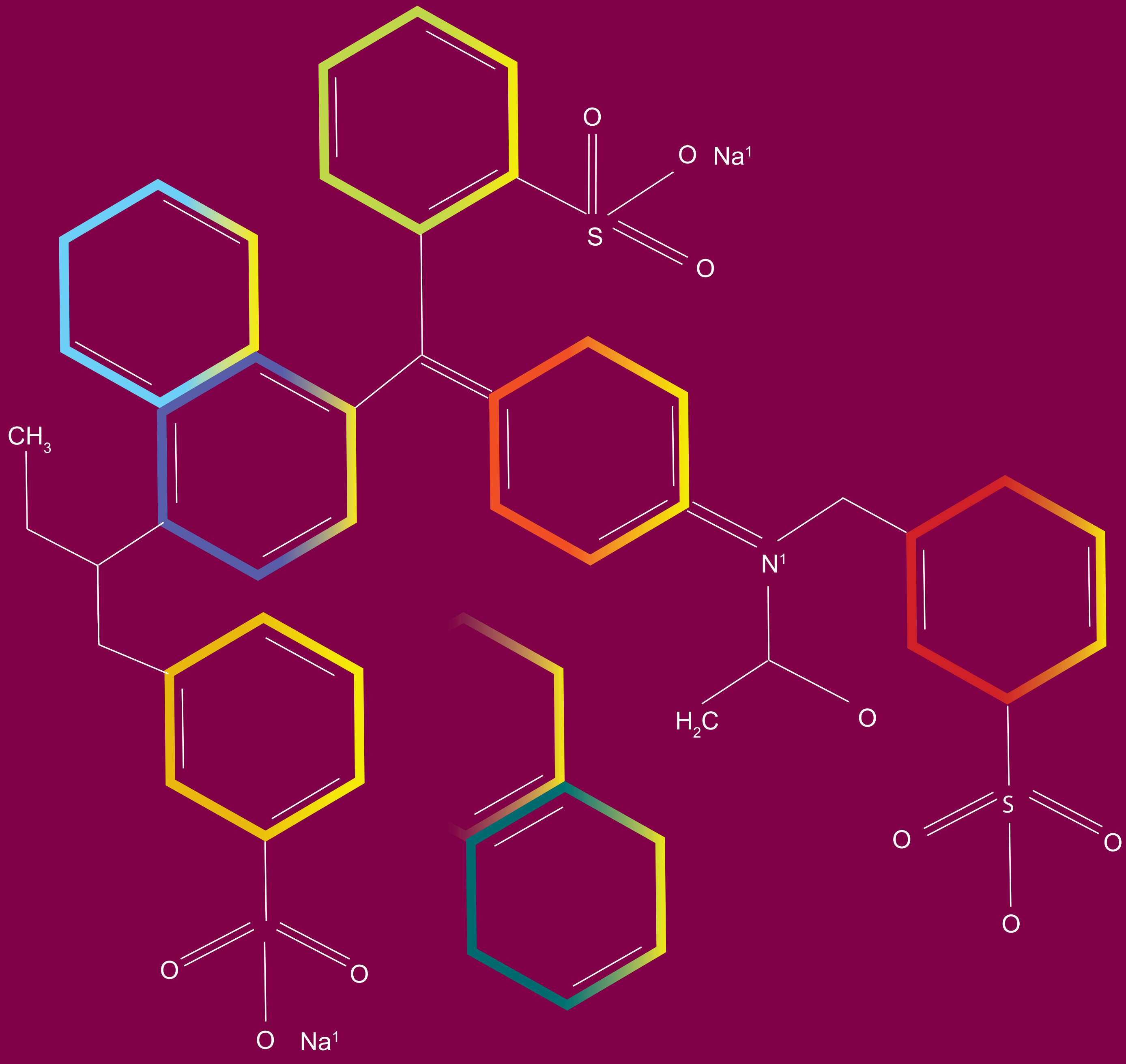
Investment Operating Costs



Plan Member Service Costs



COMPENSATION DISCUSSION & ANALYSIS



Executive Compensation Program

The Compensation Discussion & Analysis explains ATRF's approach to compensation, 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" or the "Committee") assists the Board in fulfilling its oversight responsibilities in relation to our human resources and compensation matters.

The HRCC is made up of four board members and the committee met four times during 2017-18 fiscal year. In camera sessions are held at the beginning and end of each meeting, without management present.

In 2017-18 the HRCC's key responsibilities included:

- evaluating and designing the compensation structure and succession planning for the Chief Executive Officer
- approving compensation of the Chief Executive Officer and Chief Investment Officer and their direct reports
- approving the compensation philosophy recommended by the Chief Executive Officer for other executives and all staff
- ensuring appropriate succession planning by the Chief Executive Officer for key executive positions
- reviewing human resource and compensation aspects of the corporation's business plan
- ensuring that the enterprise risk management framework appropriately considers human resource and compensation risks
- approving incentive and supplementary pension plans

Principles of ATRF's compensation philosophy

Fair and competitive executive compensation is critical to the success of ATRF and our ability to attract and retain high performance professionals. Our overall compensation philosophy is rooted in our commitment to deliver on the pension promise, to ensure the highest level of service, and to maximize returns on the plan assets in a sound, sustainable and secure manner. We believe that longer-term investment success through prudent risk taking is more important than volatile short-term gains.

ATRF's executive compensation program objectives are to:

- Reward executives in a competitive market context so as to attract and retain high quality professionals.
- Focus the executive team on achieving critical business and investment goals in the strategic plan.
- Align interests of the Executive Team with pension plan member interests by encouraging and rewarding long-term performance. This shall be supported by promoting a pay for performance culture that seeks to preserve the pension promise and protect beneficiaries' benefits.
- Reward the Executive Team for superior performance based on investment results as well as plan administration and member service results.
- Total Compensation will reflect the shared efforts of the Executive Team by rewarding for a culture of teamwork and collegiality throughout the organization. These efforts are reflected through the individual performance assessments conducted by the Board as well as the CEO and CIO of their direct reports on an annual basis.

Compensation philosophy and good governance

A number of attributes in our compensation program 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 ranging from targets of 30% for certain executives to 55% for the CEO and CIO.
- **Long-term time horizon –** A significant portion of executive compensation is linked to longer-term, value-added and absolute performance. We use a 4-year horizon in our Short Term Incentive Plan (STIP) and Long Term Incentive Plan (LTIP).
- **Pay for performance –** A large portion of variable executive compensation is linked to achieving "above median performance" against performance hurdles. "Above median performance" and performance hurdles are determined using a holistic approach that considers relevant external data sources, historical performance and risk of ATRF's fund, and the current investment strategy and portfolio asset mix.
- **Maximum payout caps –** STIP and LTIP payouts are capped at 200% and 300% of target respectively to ensure affordability and reasonableness.
- **Challenging, but reasonable investment return targets –** Performance benchmarks and value-add hurdle rates are reviewed regularly by the Board and are set to reflect a median return expectation in the marketplace. Value-add hurdle rates are also set with reference to the competitive market, but also ATRF's risk appetite and investment strategy.
- **Threshold performance levels –** Our investment returns must meet or exceed our benchmark indexes before short or 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 and investment 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 compensation program does not incent management behaviours outside ATRF's risk appetite. Compensation risk is managed by:

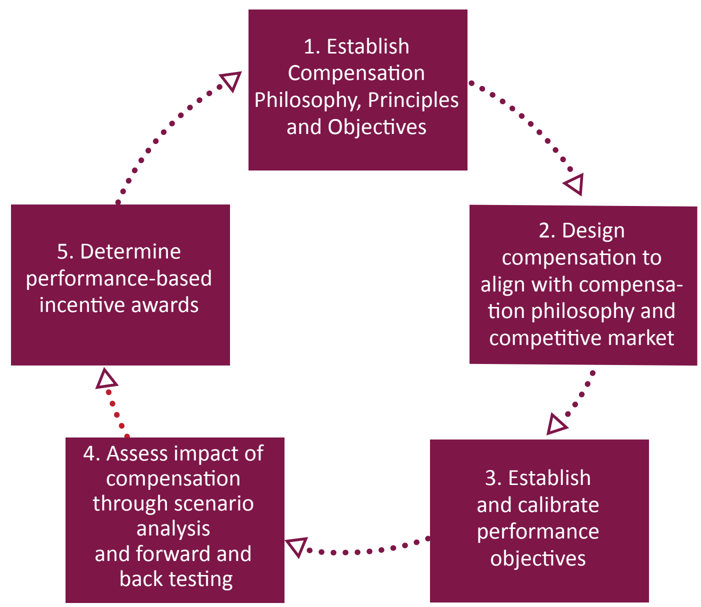
- ensuring HRCC's independence from management, and retaining an external compensation advisor
- working within an enterprise-wide risk management framework, a robust code of conduct and ensuring that appropriate risk limits and controls are articulated in the Investment Policy
- establishing appropriate 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
- including long-term performance measures (i.e. four-year rates of return) in the STIP and LTIP to align compensation with the time horizon of the fund
- including non-investment performance measures in the incentive plan

Comparator groups used to set competitive pay

Our overall objective is to provide competitive compensation compared to organizations we compete with for the skills and expertise of investment-related and management professionals. Compensation is benchmarked against other Canadian in-house pension funds and institutional investment organizations of similar size and complexity to ATRF. Within these comparator groups, we review compensation levels of comparable jobs, assess performance against benchmarks, as well as the relative size and investment-structure complexity of those peers.

Compensation process and compensation consultants

ATRF's compensation strategy and structure are regularly reviewed. Each year, the HRCC reviews and approves the comparator groups, overall base salary, and the annual performance measures, targets and weightings for the incentive plans, based on market conditions. Market data is provided to the HRCC by external sources. The HRCC uses the following decision making process when setting executive compensation:



Compensation elements

The compensation structure for executives balances fixed and variable pay that are linked to long-term performance. The elements of the executive compensation plan are provided below. The following table summarizes the type, nature and purpose of each element of our compensation program.

Element	Intent	Plan Design	Variable with Performance
Base salary	Compensates for the day-to-day responsibilities of the role.	Set annually based on review of competitive market data.	Fixed (not variable)
Short-Term Incentive	Annual plan that rewards for superior investment and non-investment performance.	Payouts are capped at 200% of target, based upon value-add investment performance over a one- and four-year period, weighted to Total Fund and Asset Class (where applicable) and/or individual performance aligned to achieving annual corporate objectives.	High variability
Long-Term Incentive	Four-year plan intended to reward for superior and sustained investment performance aligned to the investment strategy and to help in retaining high performers.	Payouts are capped at 300% of target, based upon Total Fund value-add performance and absolute return performance over a four-year period.	High variability
Pension Benefits	Intended to attract and retain key employees and reward for their continued service.	Defined benefit pension based on 1.4% of salary up to Canada Pension Plan limit and 2% of salary for any excess up to *Income Tax Act* limit. For eligible roles, a supplemental benefit pension plan is provided in excess of capped pensionable salary and matches the formula in the defined benefit plan.	Low variability (will increase as salary level increases)
Benefits	Intended to attract and retain key employees.	Standard health and dental-care benefits, life insurance, illness and long-term disability coverage.	Low variability
Perquisites	Intended to attract and retain select key employees.	Paid professional membership fees and car allowances.	Low variability

Base Salary

Base salaries are intended to be competitive with the market and are 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. The Government of Alberta instituted a salary freeze in 2016; accordingly, base salaries have not changed.

Short-Term Incentive Plan (STIP)

The STIP is 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, fund and portfolio benchmarks as well as individual objectives are established at the beginning of the year, and actual performance is evaluated at the end of the year.

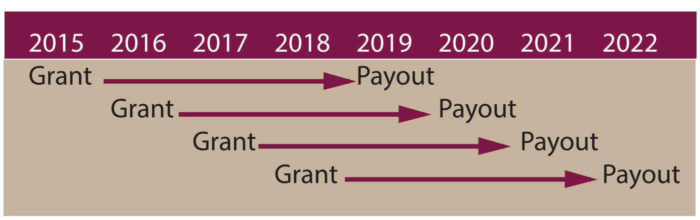
Each participant's target corporate incentive payment is calculated based on a percentage of salary. Based on actual performance against pre-approved objectives, payouts can range from zero to two times the target corporate incentive amount.

Investment incentive payments are based on the achievement of total fund and/or portfolio performance above established benchmarks. Consistent with ATRF's compensation objectives, payments are calculated based on a 75% weight towards long-term performance results over a four-year rolling average period and 25% towards the performance in the past year. The STIP rewards participants for delivering target benchmark performance or better. Based on total fund and/or portfolio performance, actual payments can range from zero to two times the target incentive amount. The annual incentive plan has a threshold level of performance. If the threshold is not met, incentive payments are not made. The threshold, target and maximum value-add hurdles are calibrated to account for ATRF's investment strategy and portfolio mix, which inherently accounts for ATRF's risk profile.

Long-Term Incentive Plan (LTIP)

The LTIP is designed to encourage and reward long-term performance, critical to ATRF's success; attract, retain and motivate participants by providing additional compensation if investment performance goals are achieved; and, to align participant interests with pension plan interests. The LTIP has a four-year vesting period before a first payment is awarded to a plan participant. This is based on relative value-added performance above the benchmark portfolio, net of investment operating costs and is further modified by absolute fund performance. The threshold, target and maximum value-add hurdles are calibrated to account for ATRF's investment strategy and portfolio mix, which inherently accounts for ATRF's risk profile.

Participation in the LTIP is limited to executives, management and senior investment professionals. Participants receive a notional grant (reflected as a percentage of salary), at the beginning of a four-year performance period. The grant is equal to the target award opportunity, and could increase or decrease based on final investment performance results relative to the benchmark portfolio, net of investment operating costs. At the end of the performance period, the four-year rolling average performance of the total fund is calculated. A multiplier is applied to the target plan award, based on the investment performance of the total fund after taking into account fees paid to external managers and direct investment costs as compared to specific benchmarks approved by the HRCC. The multiplier is capped at three times the value of the target award. Except for certain situations, an eligible employee must be actively employed as of the payment date in order to receive a payout.



Pension and benefits

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

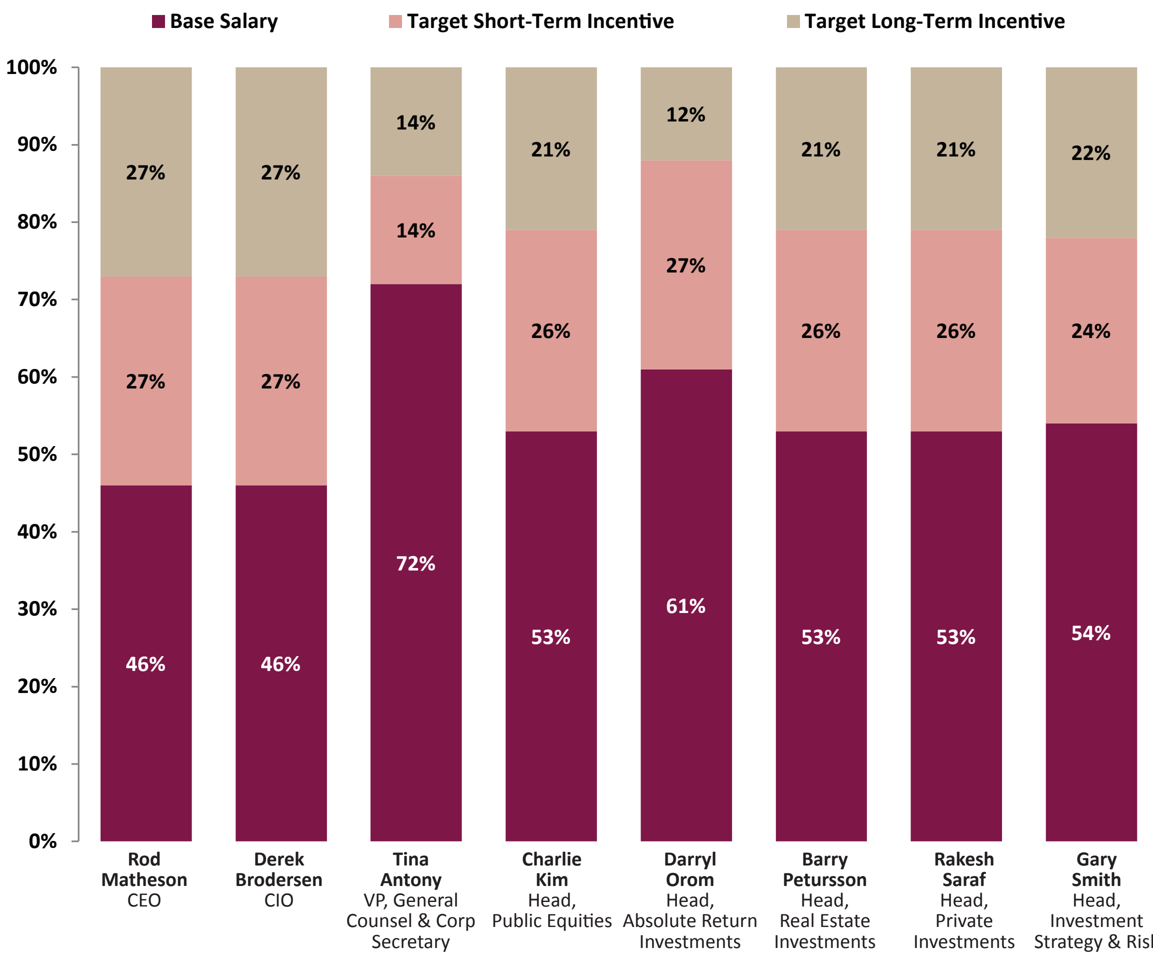
All ATRF staff participates in the Local Authorities Pension Plan (LAPP). This is a defined benefit pension plan, and provides for a pension of 1.4% for each year of pensionable service based on the average salary of the highest five consecutive years up to the Year's Maximum Pensionable Earnings under 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, a non-registered, 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 executives, Vice Presidents, Asset Class Heads and Senior Portfolio Managers. For pensionable service before September 1, 2012, pensionable salary under the SEPP includes 50% of the actual annual incentive target-level amount paid under the annual incentive plan. For pensionable service after August 31, 2012, pensionable salary is limited to base salary paid.

Target Total Direct Compensation mix

Provided below is an illustration of the Target Total Direct Compensation mix for executives at ATRF listed in the Total Compensation Summary on page 55.

Note: Total Direct Compensation is made up of Base Salary, Short-Term Incentive and Long-Term Incentive



2017-18 performance and its impact on compensation levels

For the 2017-18 year, incentive plan compensation was paid in relation to meeting and exceeding pre-set corporate objectives; individual portfolio benchmarks; and, to proportionately recognize the above-benchmark performance of the overall fund in the past one and four fiscal years.

Investments

In the 2017-18 fiscal year, the fund earned a net rate of return of 9.6% exceeding the fund's 8.5% benchmark. This resulted in $150 million of value-added investment performance by ATRF, which will be reinvested into the fund.

Over the four-year period ended August 31, 2018, the fund earned a net rate of return of 8.1%. This compares to the fund's 7.2% benchmark return resulting in a 0.9% or $422 million of value add to the assets of the plan.

Corporate

ATRF's corporate objectives for 2017-18 reflected milestones for the organization. The objectives included:

- Board Support and Corporate Governance;
- Plan Administration and Member Services;
- ATRF Plan Sponsor Support and Relationships with Stakeholders; and,
- Investment management results.

Compensation of the Chief Executive Officer

ATRF's HRCC worked with its independent advisor, GGA, and CEO to create a set of objectives that reflected the key milestones for the CEO during the 2017-18 fiscal year. The Board measured the CEO's performance against those key milestones, and assessed his performance as significantly above-target.

ATRF's CEO had the following payout related to his Balanced Scorecard:

($ dollars, audited)

	2017-18		2016-17	
Performance Measure	**Weight**	**Payout**	**Weight**	**Payout**
• Total Fund Value Add Return	45%	$ 189,000	50%	$ 189,900
• Leadership and Governance • Plan Administration and Member Services • Investment Management • Plan Funding and Sustainability	55%	213,700	50%	148,200
Total Balanced Scorecard Payout		$ 402,700		$ 338,100

Compensation

($ dollars, audited)

Compensation Element	2017-18 Compensation	2016-17 Compensation
Base Salary	$ 350,000	$ 350,000
Short-term Incentive	402,700	338,100
Long-term Incentive*	614,800	*
Total Direct Compensation	$ 1,367,500	$ 688,100

* Earned long-term incentives are paid upon vesting after a four-year period. For estimated future payouts, refer to the "Estimated Long-Term Incentive Awards" table on page 56.

Total Compensation Summary

This table represents disclosure of salary, incentive payments, value of SEPP benefits and all other compensation earned for years ended August 31, 2018, 2017 and 2016 by ATRF's Chief Executive Officer, Chief Investment Officer, Vice President, General Counsel & Corporate Secretary, and the five Asset Class Heads – the most highly compensated senior investment professionals.

($ dollars, audited)

Name and Position	Fiscal Year	Salary[1]	Short-Term Incentive Plan (STIP)	Long-Term Incentive Plan (LTIP)[2]	SEPP[3, 4]	All Other Compensation[5]	Total Compensation
Rod Matheson Chief Executive Officer	2018	$ 350,000	$ 402,700	$ 614,800	$ 41,400	$ 49,700	$ 1,458,600
	2017	350,000	338,100	—	32,800	49,600	770,500
	2016	350,000	251,800	—	34,600	49,300	685,700
Derek Brodersen Chief Investment Officer	2018	322,900	362,100	553,300	38,600	48,600	1,325,500
	2017	322,900	307,000	504,800	30,100	48,500	1,213,300
	2016	322,900	301,100	540,000	30,500	48,400	1,242,900
Tina Antony[6] VP, General Counsel & Corporate Secretary	2018	250,000	87,500	—	20,100	41,400	399,000
	2017	78,700	—	—	4,700	16,200	99,600
	2016	—	—	—	—	—	—
Charlie Kim Head, Public Equities	2018	260,000	149,600	278,800	15,100	38,100	741,600
	2017	260,000	169,900	245,700	11,400	38,000	725,000
	2016	240,000	193,500	268,300	12,500	37,400	751,700
Darryl Orom Head, Absolute Return Investments	2018	180,000	72,900	—	3,000	36,300	292,200
	2017	180,000	78,500	—	2,700	36,200	297,400
	2016	165,900	75,800	—	—	35,500	277,200
Barry Petursson[7] Head, Real Estate Investments	2018	175,400	157,800	300,500	25,100	33,800	692,600
	2017	263,000	231,100	261,100	20,200	37,600	813,000
	2016	263,000	229,000	282,000	20,200	37,500	831,700
Rakesh Saraf[8] Head, Private Investments	2018	258,600	226,300	325,800	25,200	567,600	1,403,500
	2017	288,000	263,800	280,500	19,600	38,700	890,600
	2016	288,000	259,400	300,000	19,600	38,500	905,500
Gary Smith[9] Head, Investment Strategy & Risk	2018	235,000	200,900	—	14,300	37,600	487,800
	2017	235,000	175,000	—	11,000	41,200	462,200
	2016	—	—	—	—	—	—

[1] Salary is comprised of all regular pensionable base pay earned. With the exception of promotions or position reclassifications, salaries in 2018 remained static to comply with the external directive for salary freeze issued by the Government of Alberta for provincial agencies.

[2] Amounts shown represent LTIP awards incorporating business and individual 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 is earned. For further information on LTIP targets and awards, refer to "Estimated Long-Term Incentive Awards" table.

[3] Amounts shown represent SEPP current service accruals in the plan. Pension benefits for SEPP are paid as the benefits come due. Accordingly, no pre-funding occurs with no assets set aside or placed into trust to meet future liabilities. SEPP financing costs are included in the pension expense as the present value of the accrued benefits of the SEPP. For further information on present value of accrued benefits, refer to "SEPP Present Value of Accrued Benefits" table.

[4] Prior year amounts have been restated to conform with current year presentation.

[5] All other compensation consists of vacation payouts, lump sum payments and ATRF's share of all employee benefits, contributions or payments made on behalf of employees, health plan coverage, and statutory contributions.

[6] Employment commenced May 2017.

[7] Mr. Petursson commenced leave in May 2018.

[8] Mr. Saraf concluded his employment with ATRF in July 2018. The $455,200 value in "All Other Compensation" reflects payments as per his termination agreement.

[9] Employment commenced September 2016.

Estimated Long-Term Incentive Awards

LTIP awards are granted at the start of a fiscal year and paid out at the end of the four-year vesting period. The following table shows the LTIP and estimated future payouts for the listed positions. The future value of the awards granted but not yet vested are estimated as at August 31, 2018, based on:

- actual performance multipliers for fiscal years 2015-16, 2016-17 and 2017-18, and pro-forma multipliers of one (1.0x) for future years; and
- actual fund rates of return for fiscal years 2015-16, 2016-17 and 2017-18, and no assumed growth in future years.

($ dollars, audited)

Name and Position	Fiscal Year of Grant	Award (Target Value)[1]	Maximum Value[2]	2019	2020	2021
Rod Matheson Chief Executive Officer	2018 2017 2016	$ 210,000 210,000 210,000	$ 630,000 630,000 630,000	$ — — 381,500	$ — 431,700 —	$ 391,300 — —
Derek Brodersen Chief Investment Officer	2018 2017 2016	193,700 193,700 193,700	581,100 581,100 581,100	— — 351,900	— 398,300 —	361,000 — —
Tina Antony[3] VP, General Counsel & Corporate Secretary	2018 2017 2016	50,000 — —	150,000 — —	— — —	— — —	93,200 — —
Charlie Kim Head, Public Equities	2018 2017 2016	104,000 104,000 96,000	312,000 312,000 288,000	— — 174,400	— 213,800 —	193,800 — —
Darryl Orom[4] Head, Absolute Return Investments	2018 2017 2016	36,000 36,000 33,200	108,000 108,000 99,600	— — 60,300	— 74,000 —	67,100 — —
Barry Petursson[5] Head, Real Estate Investments	2018 2017 2016	105,200 105,200 105,200	315,600 315,600 315,600	— — 143,400	— 162,200 —	147,000 — —
Gary Smith[6] Head, Investment Strategy & Risk	2018 2017 2016	94,000 94,000 —	282,000 282,000 —	— — —	— 193,300 —	175,200 — —

[1] Represents the target value at the time of grant. No award is payable if performance is below a threshold value-add hurdle.

[2] Represents the maximum value payable at the end of the four-year vesting period.

[3] Eligibility commenced in the 2017-18 fiscal year.

[4] Eligibility commenced in the 2015-16 fiscal year.

[5] Mr. Petursson commenced leave in May 2018. Mr. Petursson is not eligible for an LTIP grant for fiscal year 2019. Unvested incentive awards from prior years will vest, in accordance to the LTIP terms and conditions.

[6] Eligibility commenced in the 2016-17 fiscal year.

SEPP Present Value of Accrued Benefits

The accrued benefits is estimated based on the projected benefit method prorated on service, incorporating the same assumptions used for both of the Teachers' Pension Plans (see Note 5(a) to the Financial Statements), and represent entitlements that may change over time. In particular, the present value is based on benefit amounts with salary increases projected to retirement. The following table represents changes in the present value of accrued benefits in the year:

($ dollars, audited)

Name and Position	Present Value of Accrued Benefits August 31, 2017	Current Service Accrual in Plan	Interest Cost, Experience, and Assumption Changes*	Present Value of Accrued Benefits August 31, 2018
Rod Matheson Chief Executive Officer	$ 98,600	$ 41,400	$ 21,800	$ 161,800
Derek Brodersen Chief Investment Officer	574,200	38,600	128,700	741,500
Tina Antony VP, General Counsel & Corporate Secretary	5,200	20,100	1,500	26,800
Charlie Kim Head, Public Equities	103,100	15,100	73,900	192,100
Darryl Orom Head, Absolute Return Investments	2,300	3,000	100	5,400
Barry Petursson Head, Real Estate Investments	159,400	25,100	29,700	214,200
Rakesh Saraf Head, Private Investments	154,800	25,200	45,800	225,800
Gary Smith Head, Investment Strategy & Risk	11,900	14,300	2,600	28,800

* SEPP discount rate assumptions were updated effective September 1, 2017.

Succession planning

ATRF has short-term contingency plans and longer-term succession plans in place for the Chief Executive Officer and senior management. In identifying potential successors, the Board and Chief Executive Officer consider ATRF's future business strategy, the core skills and experiences required to carry out this strategy, and the leadership abilities of individuals.

Where there are gaps in experience or skills of potential successors, the Chief Executive Officer discusses developmental opportunities with the individual and with the Board. The Board also ensures that the Board members get to know the potential successors identified, through Board presentations and events. Evaluating a diverse set of candidates based on gender, race, religion and/or other factors allows ATRF to consider a broad range of backgrounds and experiences in building its leadership team.

The HRCC reviews the succession plan on an annual basis.

Commitment to diversity

ATRF has not set any defined quotas or targets for the representation of women within its executive or investment leadership teams, but will continue to focus on hiring the right person for each role. That being said, ATRF will continue to work towards increasing the level of diversity at all levels of the organization across a number of different factors, including gender.

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 2017-18 fiscal year, until February 10, 2018, Global Governance Advisors (GGA) was the HRCC's independent advisor. During that time, GGA assisted the HRCC in:

- reviewing director compensation levels against the market and ATRF's stated philosophy;
- analyzing the correlation of executive pay for performance within the compensation program;
- developing the CEO's 2017-18 balanced scorecard;
- developing the CIO's 2017-18 balanced scorecard;
- reviewing ATRF's executive compensation philosophy; and
- providing educational presentations to Board members.

GGA did not provide any other services to ATRF or to management.

Following a competitive process, the HRCC engaged Hugessen Consulting on March 19, 2018. For the remainder of the fiscal year 2017-18, Hugessen assisted the HRCC in:

- reviewing director compensation levels and travel allowance policies against the market and ATRF's stated philosophy;
- analyzing the correlation of executive pay for performance within the compensation program;
- reviewing ATRF's executive compensation philosophy and current compensation governance practices; and
- development of a compensation peer group for the purposes of benchmarking executive pay.

Hugessen also provided consulting services to the Governance Committee on Board member compensation matters.

The HRCC reviews all fees, and the terms of consulting services provided by GGA and Hugessen respectively; 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 GGA and Hugessen respectively for the periods noted:

($ dollars, audited)

Advisor	Executive Compensation-Related Fees		All Other Fees	
	2018	2017	2018	2017
Global Governance Advisors[1]	$69,400	$58,800	$22,100	$12,600
Hugessen Consulting[2]	41,800	—	—	—

[1] From September 1, 2017 to February 10, 2018.

[2] From March 19, 2018 to August 31, 2018.

2018 FINANCIAL STATEMENTS

Management's Responsibility for Financial Reporting

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 elsewhere in the Annual Report is consistent with the information contained in 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 properly executed in accordance with management's authorization, and that the accounting records provide a solid foundation from which to prepare the financial statements. 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 Audit and Finance Committee of the Board reviews the Auditor's Report and the financial statements, and recommends them for approval by the Board. 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.

[Original Signed]

Rod Matheson

Chief Executive Officer

[Original Signed]

Myles Norton

Vice President, Finance

Independent Auditor's Report

Auditor General
OF ALBERTA

Independent Auditor's Report

To the Alberta Teachers' Retirement Fund Board

Report on the Financial Statements

I have audited the accompanying financial statements of the Alberta Teachers' Retirement Fund Board, which comprise the statement of financial position as at August 31, 2018, and the statements of changes in net assets available for benefits and changes in pension obligations for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for pension plans, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Opinion

In my opinion, the financial statements present fairly, in all material respects, the financial position of the Alberta Teachers' Retirement Fund Board as at August 31, 2018, and the changes in its 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.

[Original Signed]

W. Doug Wylie FCPA, FCMA, ICD.D
Auditor General
December 11, 2018
Edmonton, Alberta

Actuaries' Opinion

Actuaries' Opinion

Aon Hewitt 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, 2018. 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 and asset data provided by ATRF as at July 31, 2018, projected to August 31, 2018 and adjusted to reflect anticipated new hires as at September 1, 2018;
- assumptions that we understand have been adopted as ATRF management's best estimates; and
- actuarial cost methods and asset valuation methods that are in 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, 2018, 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.

[Original Signed]

Brenda Prysko
Fellow, Canadian Institute of Actuaries
Fellow, Society of Actuaries

[Original Signed]

Damon Y. Callas
Fellow, Canadian Institute of Actuaries
Fellow, Society of Actuaries

November 16, 2018

Aon Hewitt
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Financial Statements

Statement of Financial Position

As at August 31 ($ Thousands)	**2018**	2017
ASSETS		
Investments *(Note 3)*	$ 16,981,553	$ 15,075,926
Contributions receivable	20,318	25,999
Other assets	3,274	5,365
	17,005,145	15,107,290
LIABILITIES		
Investment related liabilities *(Note 3)*	418,900	311,350
Accounts payable and accrued liabilities *(Note 4)*	34,727	28,438
	453,627	339,788
NET ASSETS AVAILABLE FOR BENEFITS *(Note 5)*	16,551,518	14,767,502
ACCRUED PENSION OBLIGATIONS *(Note 5)*	13,854,246	12,862,534
SURPLUS	**$ 2,697,272**	**$ 1,904,968**

The accompanying notes are part of these financial statements.

Approved by the Board

[Original Signed]

Greg Meeker

Chair

[Original Signed]

Kareen Stangherlin

Chair, Audit & Finance Committee

Statement of Changes in Net Assets Available for Benefits

For the Year Ended August 31 ($ Thousands)	**2018**	2017
Net assets available for benefits, beginning of year	**$ 14,767,502**	**$ 13,356,941**
Investment operations		
Change in fair value of investments *(Note 6)*	1,122,015	730,875
Investment income *(Note 6)*	446,729	423,720
Investment expenses *(Note 7)*	(139,065)	(127,339)
Net investment operations	1,429,679	1,027,256
Member service operations		
Contributions *(Note 8)*		
Teachers	440,931	432,654
The Province	415,185	405,193
Private School Boards	2,383	2,272
Transfers from other plans	12,423	8,914
	870,922	849,033
Benefits paid *(Note 9)*	(508,806)	(459,116)
Member service expenses *(Note 7)*	(7,779)	(6,612)
Net member service operations	354,337	383,305
Increase in net assets available for benefits	1,784,016	1,410,561
Net assets available for benefits, end of year	**$ 16,551,518**	**$ 14,767,502**

Statement of Changes in Pension Obligations

For the Year Ended August 31 ($ Thousands)	**2018**	2017
Accrued pension obligations, beginning of year	**$ 12,862,534**	**$ 12,118,229**
Increase (decrease) in accrued pension obligations		
Interest on accrued benefits *(Note 5)*	835,942	788,508
Benefits accrued *(Note 5)*	505,008	484,444
Experience losses (gains) *(Note 5)*	141,833	(105,489)
Changes in actuarial assumptions *(Note 5)*	17,735	35,958
Benefits paid *(Note 5,9)*	(508,806)	(459,116)
	991,712	744,305
Accrued pension obligations, end of year *(Note 5)*	**$ 13,854,246**	**$ 12,862,534**

The accompanying notes are part of these Financial Statements.

Notes to the Financial Statements

NOTE 1 DESCRIPTION OF PLANS

The following description of the Teachers' Pension Plan and the Private School Teachers' Pension Plan (the "Plans") is a summary only.

a) General

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 Plans. The Plans are contributory defined benefit pension plans for the teachers of Alberta.

b) 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).

c) Funding

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. An additional 10 percent cost-of-living adjustment for service earned after 1992 is funded entirely 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. An additional 10 percent cost-of-living adjustment for service earned after 1992 is funded entirely by the teachers.

d) 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 early retirement pensions are payable to teachers who retire at or after age 55 with a minimum of five years of pensionable service.

e) 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.

NOTE 1 DESCRIPTION OF PLANS (CONTINUED)

f) Termination benefits

Refunds or commuted value transfers are available when a teacher ceases employment, subject to certain restrictions.

g) Death benefits

Death benefits are available upon the death of a teacher and may be available upon the death of a pensioner. The benefit may take the form of a lump sum payment or a survivor pension.

h) Other provisions

Purchase of past service and reinstatement of refunded service is allowed on a basis that is cost neutral to the Plans.

i) Cost-of-living ("COLA") adjustments

Pensions payable are increased each year by an amount equal to 60 percent of the increase in the Alberta Consumer Price Index. The portion of pension earned after August 31, 1992 is increased by an additional 10 percent of the increase in the Alberta Consumer Price Index.

j) Income tax

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) Future changes in accounting standards

IFRS 9 Financial Instruments, issued by the International Accounting Standards Board ("IASB") replaces IAS 39 Financial Instruments: Recognition and Measurement, for annual reporting periods beginning on or after January 1, 2018. The standard contains certain classification and measurement principles for financial instruments. Management does not expect any significant impact on the Plans' financial position and investment income when adopting the new standard for reporting period ending August 31, 2019.

IFRS 15 Revenue from Contracts with Customers, issued by the IASB, replaces IAS 11, IAS 18, IFRIC 13, IFRIC 15, IFRIC 18 and SIC-31, for annual reporting periods beginning on or after January 1, 2018. The standard guides how and when an entity will recognize revenue and its related disclosure requirements. Management does not expect significant impacts to the Plans' financial statements and future financial results when adopting the new standard for reporting period ending August 31, 2019.

IFRS 16 Leases, issued by the IASB, replaces IAS 17 Leases, for annual reporting periods beginning on or after January 1, 2019. The standard provides new principles for the recognition, measurement, presentation and disclosure of leasing arrangements. Management does not expect significant impacts to the Plans' financial statements and future financial results when adopting the new standard for reporting period ending August 31, 2020.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

c) Investments

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

i) VALUATION OF INVESTMENTS

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.

Fair values are determined as follows:

CATEGORY	BASIS OF VALUATION
Money-market securities	Cost plus accrued interest approximates fair value due to the short-term nature of these securities.
Bonds and debentures	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.
Public equity	Closing quoted market price. Where a market price is not available, market value is determined using appropriate valuation methods.
Private equity/ Infrastructure	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	Absolute return funds are recorded at fair value, as reported by the investment managers.
Real estate	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 appropriate valuation techniques such as discounted cash flows, comparable purchases and sales transactions, and independent appraisals. Fair value for directly held real estate is independently appraised at least once every three years. Investments held through fund investments are valued using carrying values reported by the investment managers using similar accepted industry valuation methods.
Bond repurchase agreement	Bonds sold under repurchase agreement are recorded at cost plus accrued interest, which approximates fair value.
Derivatives	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.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

ii) INCOME RECOGNITION

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

iii) EXTERNAL INVESTMENT MANAGEMENT EXPENSES

Management expenses and performance fees for external investment managers are expensed as incurred.

iv) TRANSACTION COSTS

Transaction costs are legal fees and due diligence costs attributable to the acquisition and disposition of investment assets or liabilities. Transaction costs are expensed as incurred (Note 7).

d) Foreign currency translation

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

e) 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.

f) 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.

g) 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).

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

h) Capital assets

Capital assets are recorded at cost and amortized on a straight-line basis over their estimated useful lives. Costs net of accumulated amortization are included with 'other assets' on the Statement of Financial Position.

i) Use of estimates

The preparation of financial statements, in conformity with Canadian accounting standards for pension plans, requires management to make estimates and assumptions that affect the amounts reported in the financial statements.

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.

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.

j) Salaries and benefits

Details of senior staff compensation included in "salaries and benefits" (Note 7) 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. The employer contributions are recorded as an expense under salaries and benefits (Note 7).

ATRF provides a Supplementary Employee Pension Plan (SEPP) to executives and 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 under salaries and benefits (Note 7) and as a liability (Note 4).

NOTE 3 INVESTMENTS

The following schedule summarizes the fair value of the Plans' investments before allocating the market exposure related to derivative financial instruments. 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;
Level 2 – Fair value is based on market data other than quoted prices included in Level 1 that are observable either directly or indirectly;
Level 3 – Fair value is based on inputs other than observable market data.

The following table presents the level within the fair value hierarchy for investments.

($ Thousands)		**Fair Value**		**2018**	2017
	Level 1	**Level 2**	**Level 3**	**Total**	Total
Fixed Income					
Cash	$ 180,084	$ -	$ -	$ 180,084	$ 164,689
Money-market securities		508,434	-	508,434	193,160
Bonds and debentures	21,789	3,441,686	124,636	3,588,111	3,282,170
	201,873	3,950,120	124,636	4,276,629	3,640,019
Equity					
Public	6,140,196	-	-	6,140,196	5,609,233
Private	-	-	1,538,526	1,538,526	1,397,728
	6,140,196	-	1,538,526	7,678,722	7,006,961
Absolute return	-	-	1,510,741	1,510,741	1,339,709
Real estate	-	-	2,389,092	2,389,092	1,939,963
Infrastructure	-	-	1,075,727	1,075,727	951,942
	-	-	3,464,819	3,464,819	2,891,905
Investment related assets					
Accrued income	11,603	-	-	11,603	12,732
Due from brokers	13,179	-	-	13,179	18,574
Unrealized gains and amounts receivable on derivative contracts	1,964	23,896	-	25,860	166,026
	26,746	23,896	-	50,642	197,332
INVESTMENT ASSETS	6,368,815	3,974,016	6,638,722	16,981,553	15,075,926
Investment related liabilities					
Due to brokers	14,487	-	-	14,487	13,600
Bonds repurchase agreements	-	348,395	-	348,395	280,553
Unrealized losses and amounts payable on derivative contracts	21	55,997	-	56,018	17,197
INVESTMENT LIABILITIES	14,508	404,392	-	418,900	311,350
NET INVESTMENTS	$ 6,354,307	$ 3,569,624	$ 6,638,722	$ 16,562,653	$ 14,764,576

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, 2018:

($ Thousands)	Fair Value, August 31, 2017	Purchases	Sales	Realized Gain/(Loss)	Unrealized Gain/(Loss)	**Fair Value, August 31, 2018**
Bonds and debentures	$ 139,166	$ 12,549	$ (23,241)	$ -	$ (3,838)	$ 124,636
Private equity	1,397,728	345,034	(522,959)	233,029	85,694	1,538,526
Absolute return	1,339,709	75,289	(7,700)	(559)	104,002	1,510,741
Real estate	1,939,963	443,860	(169,255)	13,918	160,606	2,389,092
Infrastructure	951,942	74,037	(98,603)	20,279	128,072	1,075,727
	$ 5,768,508	$ 950,769	$ (821,758)	$ 266,667	$ 474,536	$ 6,638,722

NOTE 4 ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

($ Thousands)	**2018**	2017
Tax withholdings	$ 12,207	$ 11,422
Accounts payable	7,909	6,200
Incentive plans payable	6,537	5,204
Supplementary Employee Pension Plan	3,528	2,745
Long-Term Incentive Plan	2,909	2,772
Other	1,637	95
	$ 34,727	$ 28,438

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 prepared annually by an independent firm of actuaries. For accounting purposes, actuarial valuations of the Plans were performed as at August 31, 2018. Valuations for the Plans were also prepared as at August 31, 2017. The present value of the accrued pension obligations of $13,854 million (2017: $12,863 million) was determined using the projected benefit method prorated on service.

a) Best-estimate valuations and assumptions

The assumptions used in the valuations are based on 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:

	2018	2017
Rate of return on invested assets (discount rate)	6.5%	6.5%
Rate of Alberta inflation	2.0%	2.0%
Rate of inflation	2.0%	2.0%
Real wage increases	1.0%	1.0%

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:

	Teachers' Pension Plan		**Private School Teachers' Pension Plan**	
	0.5% decrease in rate of return on invested assets	0.5% increase in rate of inflation	0.5% decrease in rate of return on invested assets	0.5% increase in rate of inflation
Increase in current service costs (% of total teacher salaries)	1.5%	1.1%	1.8%	1.3%
Increase in accrued pension obligations	$1,100 million	$789 million	$5 million	$4 million

For accounting purposes, as at August 31, 2018, the current service cost (excluding 0.2% for administrative expenses) as a percent of total teacher salaries for the Teachers' Pension Plan is 14.0% and for the Private School Teachers' Pension Plan is 14.9%.

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 being in a surplus of $2,679 million for the post-1992 period of the Teachers' Pension Plan and a surplus of $19 million for the Private School Teachers' Pension Plan as at August 31, 2018.

($ Thousands)	**2018**			2017		
	Teachers' Pension Plan	**Private Teachers'**	**Total**	Teachers' Pension Plan	Private Teachers'	Total
Net assets at beginning of year	$14,694,784	$ 72,718	$ 14,767,502	$ 13,291,451	$ 65,490	$ 13,356,941
Contributions	866,180	4,742	870,922	844,568	4,465	849,033
Benefits	(506,225)	(2,581)	(508,806)	(456,875)	(2,241)	(459,116)
Investment earnings	1,561,019	7,725	1,568,744	1,148,934	5,661	1,154,595
Investment and member service expenses	(146,122)	(722)	(146,844)	(133,294)	(657)	(133,951)
Net assets at end of year	16,469,636	81,882	16,551,518	14,694,784	72,718	14,767,502
Accrued pension obligations at beginning of year	12,804,256	58,278	12,862,534	12,063,702	54,527	12,118,229
Interest on accrued benefits	832,129	3,813	835,942	784,936	3,572	788,508
Benefits accrued	501,667	3,341	505,008	481,354	3,090	484,444
Experience losses (gains)	141,630	203	141,833	(104,735)	(754)	(105,489)
Changes in actuarial assumptions	17,642	93	17,735	35,874	84	35,958
Benefits paid	(506,225)	(2,581)	(508,806)	(456,875)	(2,241)	(459,116)
Actuarial value of accrued pension obligations	13,791,099	63,147	13,854,246	12,804,256	58,278	12,862,534
Surplus	$ 2,678,537	$ 18,735	$ 2,697,272	$ 1,890,528	$ 14,440	$ 1,904,968

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.

NOTE 5 ACCRUED PENSION OBLIGATIONS (CONTINUED)

iii) EXPERIENCE LOSSES

Experience losses of $141.833 million (2017: Experience gains of $105.489 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 less favorable than anticipated in the assumptions, this results in an experience loss. Experience losses increase the pension obligations. The following table provides details on the net losses on accrued benefits.

($ Thousands)	**TPP**	**PSTPP**	**Total**
Short-term salary increase	$ (23,522)	$ (643)	$ (24,165)
COLA	(29,403)	(130)	(29,533)
Demographic	72,247	603	72,850
Other plan experience	122,308	373	122,681
Experience losses	$ 141,630	$ 203	$ 141,833

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 only assumption change from August 31, 2017 to August 31, 2018 is to the commuted value settlement rates used to calculate the value of lump sum benefit payments. The impact of the assumption change on the accrued benefits is shown in the following table.

($ Thousands)	**TPP**	**PSTPP**	**Total**
Commuted value	$ 17,642	$ 93	$ 17,735

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.

NOTE 5 ACCRUED PENSION OBLIGATIONS (CONTINUED)

d) Valuation methodologies

ATRF conducts two different actuarial valuations of the Plans. One is for financial statements, as per the prescribed accounting standards, and the results are shown within this section of the Notes to the Financial Statements. The second is for funding purposes, as discussed in the funding section of the Annual Report.

For accounting purposes, the Plans' surplus or deficiency, defined as capital, is determined on the 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 in smoothing market returns over a five-year period and incorporating a margin for adverse deviation in the discount rate.

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 funding section of the Annual Report.

NOTE 6 INVESTMENT EARNINGS

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

($ Thousands)	**2018**			2017		
	Investment Income	**Change in Fair Value[1]**	**Total**	Investment Income	Change in Fair Value[2]	Total
Fixed income						
Cash and money-market securities	$ 10,029	$ 99	$ 10,128	$ 6,767	$ (15)	$ 6,752
Bonds and debentures	89,964	(18,537)	71,427	81,193	(137,228)	(56,035)
Equity						
Public	140,217	525,745	665,962	148,496	480,105	628,601
Private	40,308	318,723	359,031	38,948	176,869	215,817
Absolute return	-	103,443	103,443	-	(22,991)	(22,991)
Real estate	99,270	174,524	273,794	95,231	68,490	163,721
Infrastructure	66,941	148,351	215,292	53,085	55,450	108,535
Derivatives	-	(130,333)	(130,333)	-	110,195	110,195
	$ 446,729	$ 1,122,015	$ 1,568,744	$ 423,720	$ 730,875	$ 1,154,595

[1] Change in fair value includes a realized net gain of $625,506 and an unrealized net gain of $496,509.
[2] Change in fair value includes a realized net gain of $662,738 and an unrealized net gain of $68,137.

NOTE 7 INVESTMENT AND MEMBER SERVICE EXPENSES

($ Thousands)	2018			2017		
	Investment	Member Service	Total	Investment	Member Service	Total
Salaries and Benefits	$ 17,100	$ 5,121	$ 22,221	$ 13,433	$ 4,553	$ 17,986
Professional Services	4,270	971	5,241	1,408	563	1,971
Premises and Operations	1,561	807	2,368	1,230	857	2,087
Custodial and Banking	2,229	38	2,267	1,943	46	1,989
Communications, Research, and Travel	1,551	386	1,937	1,485	447	1,932
Board and Committees	759	456	1,215	187	146	333
Transaction Costs	1,101	-	1,101	1,294	-	1,294
Operating Expenses	28,571	7,779	36,350	20,980	6,612	27,592
External Investment Management Fees	110,494	-	110,494	106,359	-	106,359
	$ 139,065	$ 7,779	$ 146,844	$ 127,339	$ 6,612	$ 133,951

NOTE 8 CONTRIBUTIONS

($ Thousands)	**2018**	2017
Teachers		
Current service	$ 286,411	$ 280,310
Current service additional 10% COLA	17,234	16,867
Past service	4,498	5,492
Deficiency	132,788	129,985
	440,931	432,654
The Province		
Current service	287,279	280,047
Past service	2,070	2,478
Deficiency	125,836	122,668
	415,185	405,193
Private School Boards		
Current service	2,053	1,957
Deficiency	330	315
	2,383	2,272
Transfers from other plans	12,423	8,914
	$ 870,922	$ 849,033

NOTE 9 BENEFITS PAID

($ Thousands)	**2018**	2017
Pension benefits	$ 427,598	$ 386,437
Termination benefits	68,237	66,055
Transfers to other plans	12,971	6,624
	$ 508,806	$ 459,116

During the year $476 million (2017: $471 million) was received from the Province and was distributed as benefits paid relating to the pre-1992 period.

NOTE 10 RISK MANAGEMENT

The Plans are exposed to certain financial risks as a result of investment activities. These risks include market risk, credit risk and liquidity risk. ATRF manages financial risk through the Investment Policy which is approved by the Board and reviewed at least once every fiscal year. This policy contains risk limits and risk management provisions that govern investment decisions and has been designed to achieve the mandate of ATRF which is to invest assets to achieve maximum, risk-controlled, cost-effective, long-term investment returns.

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 prices and rates. 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 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)	**2018**			2017		
Currency	**Foreign Currency Exposure**	**Currency Derivatives**	**Net Foreign Currency Exposure**	Foreign Currency Exposure	Currency Derivatives	Net Foreign Currency Exposure
United States dollar	$ 4,793,604	$(3,262,258)	$ 1,531,346	$ 4,118,948	$(2,726,220)	$ 1,392,728
Euro	866,023	(225,288)	640,735	787,752	(241,162)	546,590
British pound sterling	620,062	(296,257)	323,805	446,820	(223,667)	223,153
Hong Kong dollar	322,840	(167)	322,673	321,374	-	321,374
Japanese yen	128,921	99,117	228,038	122,404	(1,645)	120,759
Swiss franc	123,014	(229)	122,785	83,958	(497)	83,461
Other	1,003,580	(60,928)	942,652	984,554	74,527	1,059,081
	$ 7,858,044	$ (3,746,010)	$ 4,112,034	$ 6,865,810	$(3,118,664)	$ 3,747,146

After considering the effect of currency hedges, a 1% 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 $41 million as at August 31, 2018 (2017: $37 million).

NOTE 10 RISK MANAGEMENT (CONTINUED)

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- 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 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)	**2018**		2017	
Term to Maturity	**Market Value**	**Change in Market Value**	Market Value	Change in Market Value
Less than 1 year	$ 802,426	$ 1,996	$ 495,796	$ 1,933
1-3 years	273,162	5,728	272,678	5,522
3-5 years	349,130	12,795	307,951	10,863
5-10 years	553,319	35,863	470,645	30,545
Greater than 10 years	1,959,182	292,292	1,777,439	267,277
Other[1]	159,326	-	150,821	-
	$ 4,096,545	$ 348,674	$ 3,475,330	$ 316,140

[1] Includes externally managed private debt investments and holdings for which term to maturity information is not available or modified duration could not be calculated.

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). The changes in equity market prices may be 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 $614 million (2017: $600 million).

NOTE 10 RISK MANAGEMENT (CONTINUED)

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. Fixed income investments exposed to credit risk, by credit rating, are as follows:

	2018	2017
Investment grade (AAA to BBB-)	94%	94%
Speculative grade (BB+ or lower)	1%	1%
Unrated	5%	5%
	100%	100%

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. Bonds or debentures require minimum ratings of “CCC” or equivalent in the externally managed portfolios and “BBB” for the portfolios managed internally. Unrated private debt investments are required to meet the rating criteria comparable to a “BBB” rating. Credit exposure to any single counterparty is limited to maximum amounts and minimum ratings as specified in the investment policies and guidelines.

The Plans are also exposed to risk through OTC derivative transactions, arising from a default or insolvency of a counterparty. The Plans have exposure to OTC derivatives as follows:

($ Thousands)	**2018**	2017
Forwards	$ 23,468	$ 161,575
Options	154	1,857
Swaps	274	16
	$ 23,896	$ 163,448

The Plans mitigate counterparty credit risk by using an internal credit limit monitoring process, International Swaps and Derivatives Master Agreements (“ISDA”) and/or Credit Support Annex (“CSA”) with our counterparties. The ISDA allows for close-out netting privileges in the event of default, while the CSA enables the Plans to realize upon any collateral placed with it, in the case of default of the counterparty.

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). The investment related liabilities are as follows:

($ Thousands)	**2018**				2017			
	Within 1 year	**1 to 5 years**	**Over 5 years**	**Total**	Within 1 year	1 to 5 years	Over 5 years	Total
Due to brokers	$ 14,487	$ -	$ -	$ 14,487	$ 13,600	$ -	$ -	$ 13,600
Derivative instruments	54,648	17	1,353	56,018	14,705	1,240	1,252	17,197
Bonds repurchase agreements	331,615	16,780	-	348,395	280,553	-	-	280,553
	$ 400,750	$ 16,797	$ 1,353	$ 418,900	$ 308,858	$ 1,240	$ 1,252	$ 311,350

NOTE 10 RISK MANAGEMENT (CONTINUED)

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 traded in active markets that are easily sold and converted to cash. The following table presents the cash holdings and liquid assets at the years ended August 31:

($ Thousands)	**2018**	2017
Cash	$ 180,084	$ 164,689
Money-market securities	508,434	193,160
Bonds and debentures	3,588,111	3,282,170
Public equities	6,140,196	5,609,233
	$ 10,416,825	$ 9,249,252

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, 2018, the sum of these commitments equalled $1,784 million (2017: $1,603 million).

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:

	2018	2017
Net investment return	9.6%	7.7%
Benchmark return	8.5%	7.0%

Investment return has been calculated using a time-weighted rate of return methodology in accordance with the industry standard methods. Net investment return is net of investment cost and excludes plan member service costs of $7.8 million or 0.05% (2017: $6.6 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 COMPARATIVE FIGURES

Comparative figures have been reclassified, where necessary, to conform to the 2018 presentation.

10-year Financial and Statistical Review

(UNAUDITED)

Financial Position as at August 31	**2018**	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**
($ millions)										
Investments										
Equities										
Public	6,140.2	5,609.2	5,350.5	4,872.7	4,860.2	4,626.7	3,821.8	3,545.3	3,298.8	2,873.7
Private	1,538.5	1,397.7	1,195.7	1,145.9	855.4	591.7	358.6	277.5	208.8	127.7
Absolute Return	1,510.8	1,339.7	1,280.1	1,297.9	864.8	-	-	-	-	-
Infrastructure	1,075.7	952.0	946.9	543.5	404.6	278.2	186.9	123.9	-	-
Real Estate	2,389.1	1,940.0	1,518.1	1,090.1	725.9	446.0	334.9	60.6	-	-
Other Investment Assets/(Liabilities)	(368.2)	(114.0)	29.8	(118.6)	30.4	15.0	24.2	7.8	-	-
Fixed Income	4,276.6	3,640.0	3,040.3	3,249.2	2,980.6	2,629.6	2,464.4	2,328.2	1,995.2	756.2
Net Investments	**16,562.7**	**14,764.6**	**13,361.4**	**12,080.7**	**10,721.9**	**8,587.2**	**7,190.8**	**6,343.3**	**5,502.8**	**3,757.6**
Loan Receivable from the Province	-	-	-	-	-	-	-	-	-	1,184.7
Contributions Receivable	20.3	26.0	25.5	19.7	21.4	19.4	17.2	12.0	11.3	11.2
Other Assets and Liabilities	(31.5)	(23.1)	(30.0)	(31.0)	(26.5)	(25.6)	(14.0)	(20.2)	22.9	3.0
Net Assets Available for Benefits	**16,551.5**	**14,767.5**	**13,356.9**	**12,069.4**	**10,716.8**	**8,581.0**	**7,194.0**	**6,335.1**	**5,537.0**	**4,956.5**
Actuarial Value of Accrued Pension Obligations	13,854.2	12,862.5	12,118.2	11,281.1	10,190.6	9,406.3	9,108.7	8,294.4	7,467.7	6,861.7
Surplus/(Deficiency)	**2,697.3**	**1,905.0**	**1,238.7**	**788.3**	**526.2**	**(825.3)**	**(1,914.7)**	**(1,959.3)**	**(1,930.7)**	**(1,905.2)**
Activity during year ended August 31 *($ millions)*										
Benefit and Investment Operations										
Investment earnings	1,568.7	1,154.6	921.5	969.6	1,717.2	1,024.6	512.0	440.4	274.3	(443.5)
Net contributions	870.9	849.0	881.6	842.6	823.8	692.2	596.3	577.5	499.2	433.7
Benefits paid	(508.8)	(459.1)	(421.4)	(378.2)	(337.0)	(291.2)	(220.9)	(194.5)	(173.0)	(153.0)
Investment & member service expenses	(146.8)	(133.9)	(94.2)	(81.4)	(68.2)	(38.6)	(28.4)	(25.3)	(20.0)	(18.2)
Increase in Net Assets	**1,784.0**	**1,410.6**	**1,287.5**	**1,352.6**	**2,135.8**	**1,387.0**	**859.0**	**798.1**	**580.5**	**(181.0)**
Increase in Accrued Pension Obligations	991.7	744.3	837.1	1,090.5	784.3	297.6	814.4	826.7	606.0	539.7
Increase (Decrease) in Surplus	**792.3**	**666.3**	**450.4**	**262.1**	**1,351.5**	**1,089.4**	**44.6**	**(28.6)**	**(25.5)**	**(720.7)**
Funding:										
Discount Rate										
Post-1992 TPP*	5.20%	5.40%	6.00%	6.00%	6.25%	6.25%	6.75%	6.75%	6.75%	7.25%
Private School TPP*	5.30%	5.40%	6.00%	6.00%	6.25%	6.25%	6.75%	6.75%	6.75%	7.25%
Funding Shortfall/(Surplus) ($ millions)										
Post-1992 TPP*	1,186.0	1,516.0	1,950.0	2,364.0	2,289.0	2,859.0	2,880.0	1,751.0	1,787.0	1,766.0
Private School TPP*	(2.1)	1.2	3.5	5.6	5.6	9.1	8.4	5.6	6.0	5.0
	1,183.9	1,517.2	1,953.5	2,369.6	2,294.6	2,868.1	2,888.4	1,756.6	1,793.0	1,771.0
Plan Members										
Active	41,746	40,716	41,015	39,997	39,185	38,346	38,336	38,242	38,578	38,422
Inactive	11,758	11,997	12,102	12,252	12,411	12,364	12,404	12,384	12,119	11,769
Retired Members	28,241	27,625	27,015	26,308	25,545	24,667	23,892	22,989	22,302	21,563
Number of New Pensions	1,089	1,171	1,074	1,080	1,214	1,131	1,234	986	1,056	1,060
Member Service Costs (per member)	**$111**	**$ 97**	**$ 90**	**$ 87**	**$ 87**	**$ 87**	**$ 82**	**$ 69**	**$ 69**	**$ 68**
Benchmark	**$150**	**$150**	**$149**	**$149**	**$153**	**$148**	**$145**	**$155**	**$148**	**$138**
Investment Costs (per $100 of assets) **	$0.84	$0.86	$0.66	$0.63	$0.58	$0.39	$0.32	$0.33	$0.29	$0.28
Post 1992 TPP* - year ended August 31										
Net Investment Returns	9.6%	7.7%	6.7%	8.3%	18.9%	13.6%	7.5%	7.5%	5.3%	-8.8%
Benchmark	8.5%	7.0%	6.6%	6.5%	18.4%	11.5%	6.3%	7.3%	5.4%	-6.8%

* Teachers' Pension Plan (TPP)

** Since 2014, Investment Costs include external management fees for Private Equities, Infrastructure, Real Estate and Absolute Return.

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