



Alberta Teachers'
Retirement Fund Board

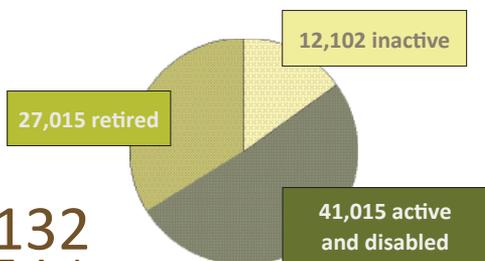


2016 ANNUAL REPORT HIGHLIGHTS

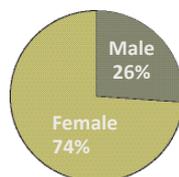
growing pensions for a secure tomorrow

2015/16 MEMBER HIGHLIGHTS

80,132
TOTAL
MEMBERS



Of the active members:



Of the total 80,132 plan members, 720 are members of the Private School Teachers' Pension Plan.



More than **34,000** telephone calls



47,805 pension estimates completed



More than **3,400** email responses



1,074 NEW PENSIONS



1,887 personal interviews

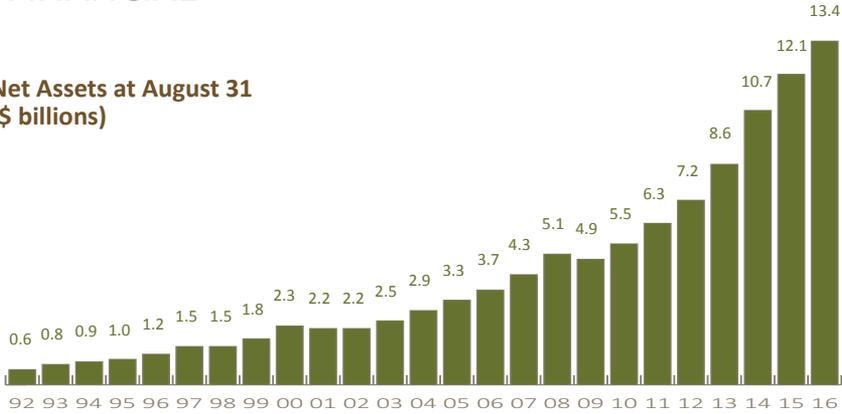


2,010 Seminar Attendees

240 retired members are age 95 or older
39 members are centenarians
The oldest female member is 108 years old
The oldest male is 102 years old

2015/16 FINANCIAL HIGHLIGHTS

Net Assets at August 31
(\$ billions)

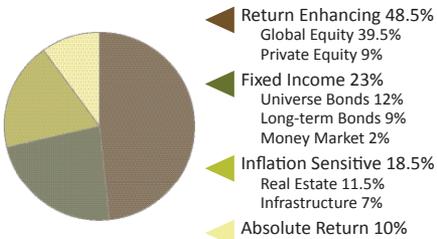


Market value of the Plans' assets grew to \$13.4 billion

\$9.7 BILLION
the increase
in assets over
the last 10 years

RATE OF RETURN
6.7%
FOUR-YEAR
RATE OF RETURN
11.8%

Policy Asset Mix (at August 31, 2016)



86% FUNDED
Teachers' Pension Plan

94% FUNDED
Private School Teachers' Pension Plan

BOARD CHAIR MESSAGE

The mission of the ATRF Board is clear; to secure the pensions of our 80,000 plan members. We never lose sight of the fact that ATRF members and employers depend on the Plans to pay pensions today and preserve pensions for tomorrow. This means that above all else the Plans must be stable, secure and sustainable.

I am pleased to report that the funding position of the Plans continued to improve in 2015/16. The market value of the Plans' assets grew to \$13.4 billion.

The Teachers' Pension Plan deficiency, which is the difference between the actuarial value of the Plan's assets and its liabilities, decreased by an estimated \$414 million to \$1.95 billion and the ratio of funding assets to funding liabilities increased to 86% from 82%. Furthermore, the Plan continues to have a very healthy reserve of \$1.11 billion to buffer lower than expected market returns in the future.

Similarly, for the Private School Teachers' Pension Plan, the funded position of the Plan improved significantly. The Plan's assets grew to \$65.5 million and the deficiency decreased by \$2.13 million to \$3.5 million. The ratio of funding assets to liabilities improved to 94% from 90%. A fluctuation reserve of \$5.41 million will help to offset any lower than expected market returns in the future.

Contribution Rates

Effective September 1, 2016, contribution rates were reduced by a combined total of 1.48% of teachers' salaries for the Teachers' Pension Plan and 1.66% of teachers' salaries for the Private School Teachers' Pension Plan. We expect that contribution rates will be sufficient to eliminate the remaining deficiency over the next 11 years as deficiencies that arose in the past continue to be amortized over the remainder of their respective 15-year funding periods.

While the results from the last fiscal year are encouraging and the Plans are moving towards fully funded status as planned, the Board remains ever mindful of the many challenges facing pension plans today.

Teachers are living longer than before. This good news puts added pressure on pension administrators to manage plan assets to provide retirement income for increasingly longer periods of time – on average for periods longer than members worked and contributed to the Plans. The challenge is heightened with interest rates remaining low and long-term expected returns trending downward.

The Board continues to closely monitor the Plans and prudently takes action as necessary to ensure long-term stability, security and sustainability.

"We never lose sight of the fact that ATRF members and employers depend on the Plans to pay pensions today and preserve pensions for tomorrow."

Greg Meeker

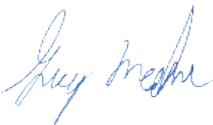
Acknowledgments

The Board recognizes and sincerely thanks the employees of ATRF for their continued dedication and focus on meeting Plan member needs. Their strong efforts led to another very successful year and the achievement of a number of new initiatives. The Board also thanks the external members of our Investment Committee for their valuable advice, insights and expertise. I also personally acknowledge the contributions of my fellow Board members for their strong focus on governing the Plans and the expertise they bring to the table.

Harry Buddle stepped off the Board in 2016, after providing more than five years of dedicated service. Gene Williams' term on the Board expired in November 2016, ending eight years of valuable service. We sincerely thank Harry and Gene for their wisdom and sage advice during their time on the Board.

A special thank you is also extended to Jai Parihar and Robert Maroney whose terms on the Investment Committee expired after six years. Their invaluable counsel on the investment policies and operations and their contributions are greatly appreciated.

In October 2016, Marvin Romanow was appointed to the Board. We welcome Marvin and look forward to working with him.



Greg Meeker
Board Chair

ATRF Board



Greg Meeker
Board Chair



Harry Buddle
(resigned April 2016)



Karen Elgert



Lowell Epp
Board Vice
Chair



Sandra Johnston



Marvin Romanow
(as of October 2016)



Gene Williams
(until November 2016)

CEO MESSAGE

2015/16 was a solid year for ATRF. While capital markets had a weak start to the fiscal year, they improved significantly in the second half of the year, led by a rally in global equity markets. As a result, the Pension Funds' assets earned a return of 6.7% (net of all investment costs), slightly exceeding the benchmark return of 6.6%. This return is more modest than the returns experienced over the past few years, but it is still a strong return and greater than the Plans' funding discount rate.

Over the past four years, ATRF's investment portfolio has generated an annual return of 11.8%, which is in excess of our long-term expectations.

On the member services side, true to our customer service statement, we provided what plan members need the first time, where, when and how they wanted it. We are continuously evolving and improving our services to plan members to support the changing demographics and growth in membership, continued expectations of excellent service and advances in tools and technology. Our satisfaction survey scores remain high and we again exceeded our service benchmarks.

On the actuarial front, the Plans' funded status continued to improve with unfunded liabilities coming down and funded ratios continuing the slow, steady climb to fully funded status. The Teachers' Pension Plan is now 86% funded, up from 74% funded only three years ago. The Private School Teachers' Pension Plan is 94% funded, up from 81% three years ago.

Looking forward

Our membership base has quietly grown by more than 20% in the past decade, with an almost 50% increase in retired members. This steady growth is expected to continue.

Further, after holding steady in the \$3.5 billion to \$5 billion range through the decade between 2000 and 2010, ATRF's assets have grown rapidly since; and now exceed \$13.4 billion. Because of the unique demographic profile of the post-1992 Teachers' Pension Plan, the Plans' assets will continue to grow for many more years to come. These assets are likely to at least double in the next 10 years.

In light of the expectation for continued growth, and with an eye on always striving to provide members with excellent customer service in the most effective and efficient ways possible, we spent considerable time last year developing a five-year vision – ATRF 2020 – to ensure that we are well positioned for the future.

As the investment portfolio becomes larger and more complex, we will continue to add to the investment team. We undertook a comprehensive review of the areas that support the investment team in order to position the organization for this continued growth. We will add staff, and develop processes and tools that best meet members' needs, whether that is face-to-face, by telephone or other technology. The corporate areas (such as information technology, finance and human resources) will be bolstered as necessary to enable the main lines of our business to function efficiently and effectively.

Acknowledgments

I thank and congratulate the entire team at ATRF for a very successful year. Their continued dedication and passion for serving our plan members is very much appreciated.

After more than 19 years of dedicated service, Ms. Peggy Corner, Vice President, Pension Services retired on August 31, 2016. We recognize and thank Peggy for her strong leadership and continuous focus on improving member services and the ways we meet the needs of all plan members. We wish Peggy well in her retirement.

We welcome Ms. Julie Joyal, who joined ATRF in August 2016 as our new Vice President, Pension Services.



Rod Matheson
Chief Executive Officer

"We know the world will evolve and the Plans will continue to grow beyond 2020.

We will continue to work diligently to earn and keep the trust of our plan members."

Rod Matheson

ATRF Executive



Rod Matheson
Chief Executive Officer



Derek Brodersen
Chief Investment Officer



Albert Copeland
Vice President,
Information and
Technology Services



Peggy Corner
Vice President,
Pension Services
(retired August 2016)



Margot Hrynyk
Vice President,
Corporate Services



Julie Joyal
Vice President,
Pension Services
(as of August 2016)



Myles Norton
Vice President,
Finance

PLAN MEMBER SERVICES

How we Serve

Personal interviews	1,086 throughout Alberta 801 in the ATRF office
Pension estimates completed	44,865 in <i>MyPension</i> 2,940 by Pension Counsellors
Seminar attendance	1,382 at Teachers' Convention 628 at 19 locations in Alberta
Incoming telephone calls	more than 34,000
Responses to emails	more than 3,400

Member Services

True to our customer service statement, ATRF strives to provide what plan members need the first time, where, when and how they want it. Our dedicated, caring and knowledgeable team provides personalized services to plan members and the assistance they need to understand their ATRF pension plan.

We are continuously evolving and improving our services to plan members to support the changing demographics and growth in membership, continued expectations of excellent service and advances in tools and technology. Plan members benefit from the following services provided by ATRF:

- Personal interviews
- Seminars
- Telephone and email
- ATRF.com
- *MyPension* online services

Member Feedback

Member feedback and suggestions are of utmost importance to meeting our goal of providing excellent service. Plan members can provide feedback in a number of ways, including through ATRF.com, email or letter, calling us and of course responding to member surveys.

Each of the 1,074 plan members who retired during the 2015/16 fiscal year received a New Retired Member Questionnaire. These newly retired plan members are asked questions about the quality of service they received from ATRF, the communication material they accessed during the pension application process, our website and online services.

The majority of comments were positive and focused on excellent customer service and knowledge of ATRF staff. Based on the comments and suggestions received, we will continue to improve the customer service we provide.

"I have found the support offered by ATRF invaluable as I have approached and planned my retirement."

ATRF Member

Membership Overview

80,132 Total Plan Members:

- 41,015 active and disabled plan members who are accruing pensionable service
- 27,015 retired plan members who are currently collecting a pension
- 12,102 inactive members who are not accruing pensionable service or collecting a pension

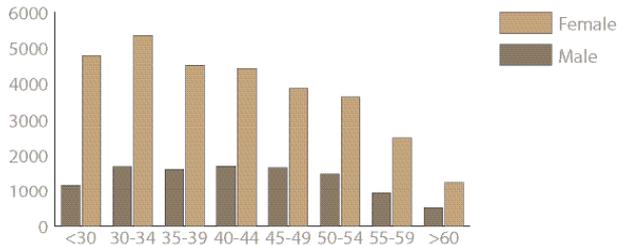
Of the total 80,132 plan members, 720 are members of the Private School Teachers' Pension Plan

Plan Member Statistics

	2016	2015	2010	2005	2000
Active member average age	41.7	41.8	41.7	42.4	42.7
Active member average years of pensionable service	11.2	10.3	11.1	12.2	12.0
Retired member average age	68.4	67.8	68.0	68.0	68.0
New retired member average age	60.2	60.0	59.0	58.0	57.8
Average pensionable service of new retired members	25.2	25.6	26.2	26.4	26.6

Age and Gender Distribution of Members

Active and Disabled



It is expected that the average number of new retired members will be stable for the next decade.

New pensions for the year ending August 31

2016	2015	2014	2013	2012
1,074	1,080	1,214	1,131	1,234

REPORTING FUNDING STATUS

Plan Structure

The Teachers' Pension Plan (TPP) and the Private School Teachers' Pension Plan (PSTPP) have unique liability structures and funding arrangements.

The liabilities relate to three distinct components:

- Teachers' Pension Plan pre-1992
- Teachers' Pension Plan post-1992
- Private School Teachers' Pension Plan

Plan member contributions pay for the benefits earned, 60% Cost of Living Adjustment (COLA) and the funding deficiencies of the Plans. It's a shared responsibility with the government for the Teachers' Pension Plan and with the employers for the Private School Teachers' Pension Plan. Plan members also pay for an additional 10% COLA.

Since post-1992 TPP pensions and PSTPP pensions are not guaranteed if the Plans are terminated, the primary objective is to ensure there are sufficient assets to pay all pensions.

The Plans, like other pensions, face risks such as long-term low interest rates, volatility, inflation and increasing plan members' longevity.

How the Plans are Funded

The ATRF Board has established a funding policy that sets out principles and guidelines that govern how the Plans are funded. The primary objective is benefit security, achieved by ensuring the Plans become and remain fully funded and are able to pay all current and expected pensions. The secondary objective is keeping contribution rates stable.

Plan Valuation

ATRF regularly conducts funding studies to assess the value of the Plans' liabilities compared to its assets and to ensure adequate funding.

Based on the funding study as at August 31, 2016:

Teachers' Pension Plan post-1992

Funding Value of Assets	\$12.18 billion
Funding Liabilities	\$14.13 billion
Funding Deficiency	\$1.95 billion
Funded Ratio	86%

Private School Teachers' Pension Plan

Funding Value of Assets	\$60.08 million
Funding Liabilities	\$63.58 million
Funding Deficiency	\$3.50 million
Funded Ratio	94%

The Plans' funding is based on long-term assumptions with provisions for potential adverse experience. The valuation method uses an actuarially accepted practice of smoothing market returns over a five-year period to moderate short-term adjustments to contribution rates. This is the fluctuation reserve (or the amount by which the fair value of net assets available exceeds the funding value of assets).

Strong investment performance over the past four fiscal years has provided both plans substantial ability to mitigate potential future market losses. As at August 31, 2016, the fluctuation reserve for the Teachers' Pension Plan was \$1.11 billion and \$5.41 million for the Private School Teachers' Plan.

Contribution Rates

Contribution rates were decreased effective September 1, 2016 based on the last filed actuarial valuation report as at August 31, 2015. These contribution rates remain adequate to fund the cost of the benefits to be accrued in 2016/17 and to fund the current deficiency over the next 11 years.

Teachers' Pension Plan Contribution Rates

% of salary	Sept 2016	Sept 2015
up to YMPE	10.74	11.44
above YMPE	15.34	16.34
Teacher Contributions	12.68	13.46
Government Contributions	11.95	12.65

Private School Teachers' Pension Plan Contribution Rates

% of salary	Sept 2016	Sept 2015
up to YMPE	9.09	10.22
above YMPE	12.98	14.60
Teacher Contributions	10.87	11.77
Employer Contributions	10.23	10.99

YMPE: Yearly Maximum Pensionable Earnings used by the Canada Pension Plan (\$54,900 in 2016).

Teachers' Pension Plan: The total contribution rate is 24.63% of teacher salaries, consisting of a current service cost of 17.12% of salaries and total deficiency contributions of 7.51% of salaries.

Private School Teachers' Pension Plan: The total contribution rate is 21.1% of teacher salaries, consisting of a current service cost of 18.28% of salaries and total deficiency contributions of 2.82% of salaries.

The total deficiency contributions are planned to decrease according to the following schedule determined in the last actuarial valuation report as at August 31, 2015.

Teachers' Pension Plan Deficiency Contributions Schedule

2016-18	7.5%
2019-20	7.1%
2021-22	6.9%
2023	6.0%
2024-25	3.8%
2026	2.7%
2027	0.0%

Private School Teachers' Pension Plan Deficiency Contributions Schedule

2016-24	2.8%
2025	1.5%
2026	0.7%
2027	0.0%

REPORTING INVESTMENTS

Investment Performance

For the past several years, most economies have struggled to generate significant economic growth. This proved to be the case for our 2015/16 fiscal year as, despite unprecedented efforts by central banks and government policy-makers to stimulate economic growth and inflation, both remained elusive.

Central banks in Europe and Japan were particularly aggressive, resulting in negative interest rates. Complicating the weak economic outlook was the uncertainty regarding the referendum vote in the United Kingdom. Geopolitical tensions added to an already unclear economic outlook, creating volatility in financial markets, while increasing the value of assets deemed to be less risky.

In this uncertain environment, fixed income assets generated strong returns, as falling interest rates had a positive effect on bond prices.

Equity markets were more mixed. European and Chinese markets were negatively affected by weaker than expected economic growth, while other Asian and North American markets fared somewhat better.

Infrastructure and real estate posted strong gains as investors saw these assets as a relatively safe, income-generating alternative to bonds.

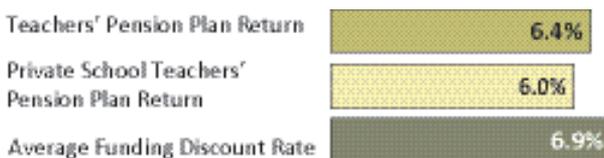
We diversify the portfolio by asset type, geography and risk profile in order to manage the impact of short-term volatility in investment markets to the extent possible. For 2015/16, the Funds' assets returned 6.7%, which slightly exceeded both the funding discount rate and the benchmark return of 6.6% (which is the return on the policy asset mix). Over the past four years, ATRF's investment portfolio has generated a return of 11.8%, which is in excess of our long-term expectations.

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 Plans has been reduced to 6% from 8% 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, 2016)



Rates of Return

as at August 31, 2016

Asset Class	1 Year (%)		4 Years (%)		10 Years (%)	
	ATRF	Benchmark	ATRF	Benchmark	ATRF	Benchmark
Fixed Income	6.7	7.5	4.4	4.7	5.5	5.7
Universe Bonds	5.5	5.8	4.3	4.2	5.4	5.3
Long-Term Bonds	11.0	11.7	5.7	6.2	—	—
Money Market	(1.8)	0.4	0.3	0.8	1.4	1.4
Return Enhancing	6.5	6.9	15.9	15.2	6.5	6.4
Global Equity	6.9	7.5	14.9	14.7	6.1	6.3
Private Equity	5.3	4.0	20.7	18.1	9.2	8.1
Inflation Sensitive	12.3	5.8	11.1	6.1	—	—
Real Estate	10.1	5.6	10.6	6.2	—	—
Infrastructure	16.4	6.2	12.1	6.1	—	—
Absolute Return	0.5	4.4	—	—	—	—
TOTAL PLAN	6.7	6.6	11.8	10.6	6.4	6.1

Investment returns are shown net of internal and external costs and fees.

To measure the overall effectiveness of our investment strategies, we use a set of Board-approved benchmarks as a comparison tool. The total Fund benchmark is calculated by aggregating the benchmark returns of each asset class and weighting them according to the Fund's policy asset mix.

Responsible Investing

ATRF's primary investment goal is to generate returns that are sufficient to fund the Plans over the long term while remaining within the risk tolerance of the plan sponsors.

Determining appropriate investments for the Fund involves evaluating many risks and opportunities, both financial and non-financial. The consideration of environmental, social and governance (ESG) factors is an important part of this evaluation process.

ATRF believes that over the long term, organizations that identify and manage ESG risks and opportunities well are more likely to represent good long-term investments. We apply this belief to our investment activities by integrating ESG factors into our evaluation of investments, being an active owner and taking a responsible approach to proxy voting.

Integrating ESG Factors

Integrating the identification and evaluation of ESG factors into the investment process allows for a more comprehensive understanding of the risks and opportunities of an investment.

Environmental factors such as water usage, greenhouse gas emissions and waste disposal practices can significantly impact a company's long-term sustainability.

Similarly, social factors such as human rights and labour safety can represent risks to the long-term success of an organization.

An organization's corporate governance practices, such as the composition of the board or the rights it grants to its shareholders can also have a significant impact on its risk profile and potential return.

ATRF PROFILE

The Alberta Teachers' Retirement Fund Board (ATRF) is a corporation established under Alberta's *Teachers' Pension Plans Act*.

ATRF functions as the trustee, administrator and custodian of the assets of the Teachers' Pension Plan for all Alberta teachers employed in school jurisdictions and charter schools, as well as teachers employed by private schools that have elected to join the Private School Plan.

The Plans are defined benefit pension plans registered under the *Income Tax Act* and are sponsored by the Government of Alberta and The Alberta Teachers' Association, as representatives of the plan members. These plan sponsors are responsible for changes to plan design, benefits and funding, and share in plan gains and losses.

Mission

Working in partnership to secure your pension income

Corporate Values

- High-quality service
- Accountability and responsibility
- Integrity and fairness
- Valuing employees

Customer Service Statement

We provide 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 DIRECTORY

Committees of the Board

Audit

Lowell K. Epp, Chair
Greg Meeker, Vice Chair
Sandra Johnston

Finance and Planning

Sandra Johnston, Chair
Greg Meeker, Vice Chair

Human Resources and Compensation

Gene Williams, Chair
Karen A. Elgert, Vice Chair
Lowell K. Epp
Sandra Johnston
Greg Meeker

Investment

Lowell K. Epp, Chair
Sandra Johnston, Vice Chair
Greg Meeker

External Members

Catherine Connolly
President and CEO,
Gist Capital Solutions

Richard Fortier
Formerly President and COO,
Desjardins Financial Security

Corporate Management

Rod Matheson
Chief Executive Officer

Derek Brodersen
Chief Investment Officer

Albert Copeland
Vice President, Information and
Technology Services

Margot Hrynyk
Vice President, Corporate Services

Julie Joyal
Vice President, Pension Services

Myles Norton
Vice President, Finance

**For more information,
please view the full Annual Report
online at ATRF.com**



**600 BARNETT HOUSE, 11010 142 ST NW
EDMONTON, ALBERTA T5N 2R1**

Telephone: 780.451.4166 Toll Free: 1.800.661.9582
Online: ATRF.com Email: info@ATRF.com

