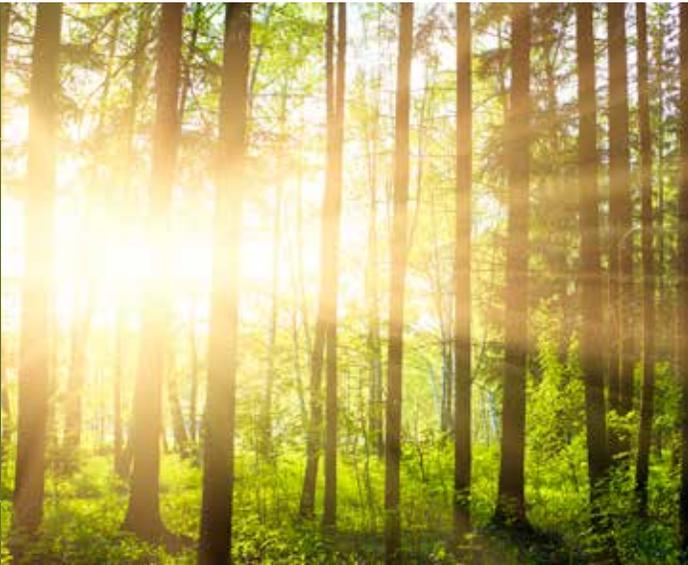




Alberta Teachers'  
Retirement Fund Board



# 2016 ANNUAL REPORT

---

growing pensions for a secure tomorrow



### **Alberta Teachers' Retirement Fund Board**

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.

# 2016 ANNUAL REPORT

---

## 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 VALUES

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

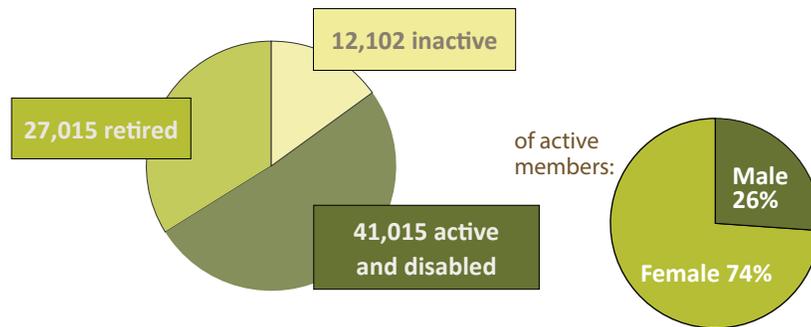
## TABLE OF CONTENTS

**MISSION**  
Working in  
partnership  
to secure your  
pension  
income

2015/16 Highlights .....	2
From the Board .....	5
From ATRF Management .....	9
Plan Member Services .....	13
Funding Status Reporting .....	19
Investments Reporting .....	25
Compensation Discussion and Analysis .....	33
Financial Reporting .....	43
2016 Financial Statements .....	49

# 2015/16 MEMBER HIGHLIGHTS

**80,132**  
TOTAL  
MEMBERS



240 retired members are age 95 or older; 39 members are centenarians  
Oldest female member is 108 years old; and the oldest male is 102 years old



**1,887**  
personal  
interviews



More than  
**34,000**  
telephone  
calls



**47,805**  
pension  
estimates  
completed



More than  
**3,400** email  
responses



**2,010**  
Seminar  
Attendees



**1,074** NEW  
PENSIONS

## Plan Member Statistics

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

# 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

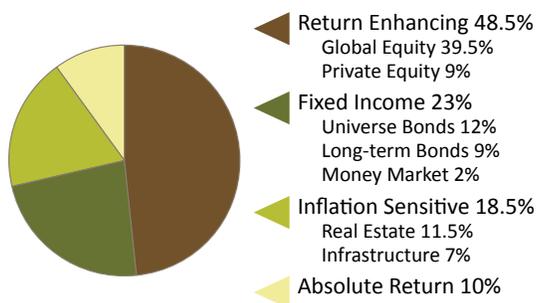
RATE OF RETURN

**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



# FROM THE BOARD

## 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 lower than expected market returns in the future.



**“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*



## 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.

## 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.

[Original Signed]

Greg Meeker  
Board Chair

The Board is committed to good governance and believes that ongoing improvement in the corporate governance of ATRF will lead to enhanced long-term value for plan members and sponsors. Our Statement of Corporate Governance Practices is available on [ATRF.com](http://ATRF.com).

# ATRF BOARD



**GREG MEEKER**  
Board Chair  
Assistant Principal, Ross Sheppard High School  
Edmonton Public School Board



**HARRY BUDDLE**<sup>1</sup>  
Retired President and CEO  
Capital City Savings/  
Servus Credit Union



**KAREN A. ELGERT**  
Principal  
Ecole Queen Elizabeth Jr. High  
Wetaskiwin Regional School  
Division



**LOWELL K. EPP**  
Board Vice Chair  
Assistant Deputy Minister,  
Treasury and Risk Management  
Alberta Treasury Board and Finance



**SANDRA JOHNSTON**  
Coordinator, Teacher Welfare  
The Alberta Teachers' Association



**MARVIN ROMANOW**<sup>2</sup>  
Corporate Director and  
Executive in Residence  
University of Saskatchewan



**GENE WILLIAMS**<sup>3</sup>  
Assistant Deputy Minister,  
System Excellence Division  
Alberta Education

<sup>1</sup> Resigned from the Board April 2016

<sup>2</sup> Joined the Board October 2016

<sup>3</sup> Term expired November 2016

See page 67 for committee membership.



# FROM ATRF MANAGEMENT

## CEO Message

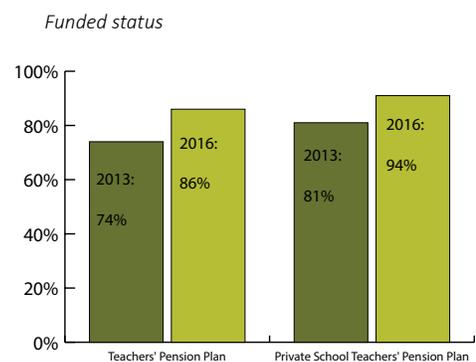
2015/16 was a solid year for ATRF.

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

One of the elements of ATRF that surprises plan members and others that I speak with is the ATRF growth story.

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.

[Original Signed]

Rod Matheson  
Chief Executive Officer

Over the four-year period that ended August 31, 2016, the fund earned a net rate of return of 11.8%.

This compares to the fund's 10.6% benchmark return resulting in a 1.2% or \$375 million of value add to the Plans' assets.

# ATRF EXECUTIVE



**Rod Matheson**  
Chief Executive Officer



**Derek Brodersen**  
Chief Investment Officer



**Albert Copeland**  
Vice President,  
Information & Technology Services



**Peggy Corner**<sup>1</sup>  
Vice President,  
Pension Services



**Margot Hrynyk**  
Vice President,  
Corporate Services



**Julie Joyal**<sup>2</sup>  
Vice President,  
Pension Services



**Myles Norton**  
Vice President,  
Finance

<sup>1</sup> Retired August 31, 2016

<sup>2</sup> As of August 29, 2016



**“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*





# PLAN 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.

Members who get timely and accurate information about their pension are better prepared for decisions they need to make at various stages of their careers.

Whether members prefer to speak directly with an ATRF representative or access information through ATRF.com on their own, we always strive to provide an exceptional member experience to help them understand and value their pension and make informed decisions.

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.

## How we Serve

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

### New Pensions

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

New pensions for year ending August 31				
2016	2015	2014	2013	2012
1,074	1,080	1,214	1,131	1,234



## Personal Interviews

Pension Counsellors meet one-on-one with members throughout the province to discuss any questions they have about their pension and their specific situation. The most convenient way to arrange an interview outside of the Edmonton office is through ATRF.com. Interviews in the Edmonton office are booked by calling ATRF directly.

Once the interview has been booked an interview package is mailed in advance that allows the member to make the best use of their time in the interview.

During 2015/16, **801** members visited our office for a personal interview. In addition, **1,086** interviews were conducted throughout the province.

## Seminars

Pension Counsellors also travel throughout the province to present seminars for members to learn more about their pension in a group setting. ATRF pension seminars provide a general overview of the Teachers' Pension Plan and include information about our website, ATRF.com; pensionable service and salary; increasing service; calculating the pension; the retirement application process; and the pension options.

Two seminars are offered to plan members:

**Your Pension Matters** is for members of all ages. Highlight information contained in the Annual Plan Member Statement is presented with a goal of raising awareness of the elements in the statement. Members are encouraged to bring their most recent Annual Plan Member Statement to the seminar.

**Steps to Retirement** is primarily for members who plan to retire within the next few years. The topics presented include the application process, completing application forms and pension options.

In 2015/16, we presented 35 seminars to 1,382 members at 19 locations throughout the province and to 628 teachers at 10 conventions. Many of the seminar presentations took place at workshops organized by the Retirement Consultants of The Alberta Teachers' Association.

## Telephone and Email

Obtaining pension information is as simple as contacting our office by phone or email. The ATRF team is available to assist with:

- pension and purchase estimates
- pension application process
- transfer of service and withdrawal of funds
- updating beneficiaries and personal information
- division of pension on marriage breakdown
- death benefits

## ATRF.com and Online Services

The ATRF website is the go-to destination for everything members need to know about their pension plan. It provides information of specific interest to members who are currently teaching or in between teaching positions or who are already retired. We have seen a steady increase in the number of members that are taking advantage of the services available through the website. Sections that appear most helpful to members include:

- Life Events (Information for every event in your life including: joining the Plan, marriage, leave of absence)
- About Your Plan (Plan provisions, pension formula, pension options)
- Increasing Your Pension (purchasing service following a leave, e.g., maternity leave)
- Resources (updating your information)

**44,865** pension estimates were completed online in 2015/16.



### Teachers' Lounge: Online Videos and Tools

The Teachers' Lounge is where members can watch videos and use interactive tools to learn about their pension plan. In the Teacher's Lounge, members can access:

- the Steps to Retirement Video
- a Pension Option Selection Tool
- Who Told You That?! Game
- a new video on how to complete the forms in the pension options package

### MyPension: Online Access

For secure and easy access to personal pension information members are encouraged to register for their own *MyPension* account. This allows members to immediately access their pension information at anytime, anywhere.

Options available on *MyPension* include:

- Submit pension application to start the retirement process
- Access Plan Member and Pension Information Statements
- Use the Secure Message Centre to post and receive electronic messages from ATRF
- Get real time pension estimates
- Get estimates on the amount required to purchase service
- Calculate Termination Benefit Estimates
- Print T4A

By signing into *MyPension*, members can register for email communication to receive electronic copies of newsletters, Annual Report Highlights and the Annual Report, as well as electronic notification of Annual Plan Member Statements.

More than **40%** of active plan members, **36%** of inactive plan members and **48%** of retired members are registered for *MyPension*.

### We want to hear from members

Member feedback and suggestions are of utmost importance to meeting our goal of providing excellent service. Members can provide feedback in a number of ways, including through ATRF.com, email, letter, telephone and responding to surveys.

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

*ATRF Member*

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

- 98% rated ATRF service and communication as good to excellent
- 92% indicated they were registered for *MyPension*
- 75% indicated they had used *MyPension* during the pension application process

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 to plan members, such as:

- Continue to enhance information on the website and make information easy to find and to understand
- Simplify language and present practical examples
- Add web-based interactive education material, tools and online functionalities to assist with retirement decisions
- Continue to provide personalized services to plan members and provide options on communication methods

## Timely Service to Plan Members

To ensure we deliver the required services to members in a timely manner, we have established benchmarks for key services. We measure our delivery against these benchmarks. We exceeded the benchmark in all processes in the 2015/16 fiscal year.

Service Provided	Benchmarks for 2015/16	Average Elapsed Time in 2015/16	Benchmark met
Ongoing pension payments	On the third last business day of the month	All payments made on time	100%
Pension options package	Within 7 days of application	3 days	93%
Payment for new pensions	Within 7 days	5 days	77%
Pension estimate	Within 7 days	1 day	99%
Purchase estimate	Within 7 days	1 days	98%
Termination benefit	Within 7 days	4 days	84%
Death benefit	Within 14 days	3 days	94%
Written inquiries	Within 5 days	1 day	98%
Telephone inquiries	Within 1 day	Within 1 day	100%

Striving for continuous improvement to provide excellent service, we have decreased the benchmark for pension options package, pension estimates and new pension payments to five days from seven. These new benchmarks will be applied starting with the 2016/17 year. Our service levels are some of the best in the industry.

## Plan Member Benefits

The growth in the number of retired members and the impact of cost-of-living adjustments resulted in an increase in total annual pension payments of 4.5% to \$835 million as at August 31, 2016.

The average new monthly pension in 2015/16 was \$3,280 compared to \$3,210 in the previous year.

## Cost-of-Living Adjustment

For pensionable service before 1993, retired members receive a cost-of-living adjustment (COLA) of 60% of the change in the Alberta Consumer Price Index (ACPI). COLA for pensionable service after 1992 is 70% of the ACPI change.

Effective January 1, 2017, pensions increase by 0.78% for pensionable service prior to 1993 and 0.91% for pensionable service after 1992. Pensions that commenced in 2016 will receive a pro-rated portion of COLA.

## Membership Overview

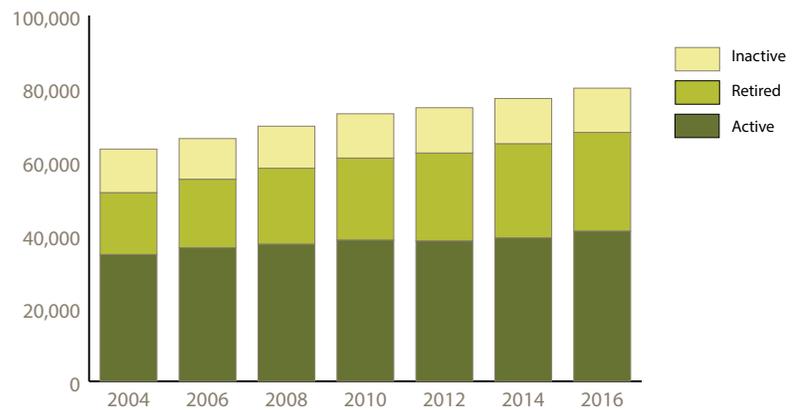
### 80,132 Total Plan Members

- 41,015 Active and Disabled members, currently accruing pensionable service
- 27,015 Retired members, currently collecting a pension
- 12,102 Inactive members, 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.

### Membership Over the Years

Membership has grown by more than 20% in the past decade, including an almost 50% increase in retired members.

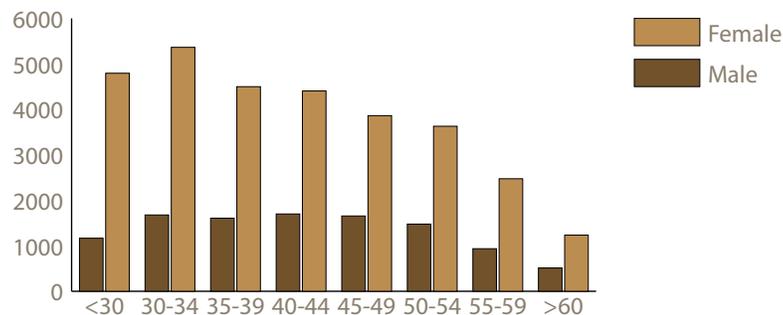


### Plan Member Statistics

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

### Age and Gender Distribution of Members

Active and Disabled







---

# REPORTING FUNDING STATUS

## Plan Structure

The Teachers' Pension Plan and the Private School Teachers' Pension Plan 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

## Teachers' Pension Plan

### Pre-1992

The 2007 Memorandum of Agreement between the Government of Alberta and the Alberta Teachers' Association specifies the government is responsible for the liabilities associated with the pensions for the period of service before September 1992. There are no assets 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 2015/16, the government provided \$467 million to meet this obligation.

### Post-1992

The cost of pension benefits earned for service after August 1992 is shared equally 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 responsible for funding the 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 15-year period. Since post-1992 pensions are not guaranteed if the Plan is terminated, the primary objective is to ensure there are sufficient assets to pay all post-1992 pensions.

## Private School Teachers' Pension Plan

While private school teachers have been able to participate in the pension plan since 1965, it wasn't until 1995 that legislation established a separate plan for private school teachers. Private school boards are able to choose whether they participate in this plan.

The cost of benefits being earned, including the 60% cost-of-living pension adjustment provision, is shared equally between active members and private school employers. Active members are responsible for an additional 10% cost-of-living pension adjustment provision. Funding deficiencies under the plan are amortized by additional contributions from active members and the private school employers over a 15-year period. Since pensions are not guaranteed if the Plan is terminated, the primary objective is to ensure there are sufficient assets to pay all pensions.

## How the Plans are funded

The ATRF Board has established a funding policy that sets out principles and guidelines that govern how both the Plans are funded. The overall objective is the funding sustainability of the Plans to ensure they will be able to pay the promised pensions to plan members and their beneficiaries. The funding policy is reviewed annually. There were no changes made in the past fiscal year.

The primary objective is benefit security by ensuring the Plans become and remain fully funded, meaning that there is enough money to be able to pay all current and expected pensions for all plan members.

Keeping contribution rates stable is the second objective. The cost of the Plans should be sustainable over time and should reflect the long-term view of the Plans' assets and liabilities. The goal is to keep required contributions relatively stable and not increase to unaffordable levels.



## Plan Valuation

ATRF regularly conducts funding studies to assess the value of the Plans' liabilities compared to its assets and to ensure adequate funding. Complete actuarial valuations and reports by the Plan Actuary are required to be prepared and filed with Canada Revenue Agency at least every three years.

The funding status of the Plans based on the funding study as at August 31, 2016:

### Teachers' Pension Plan post-1992

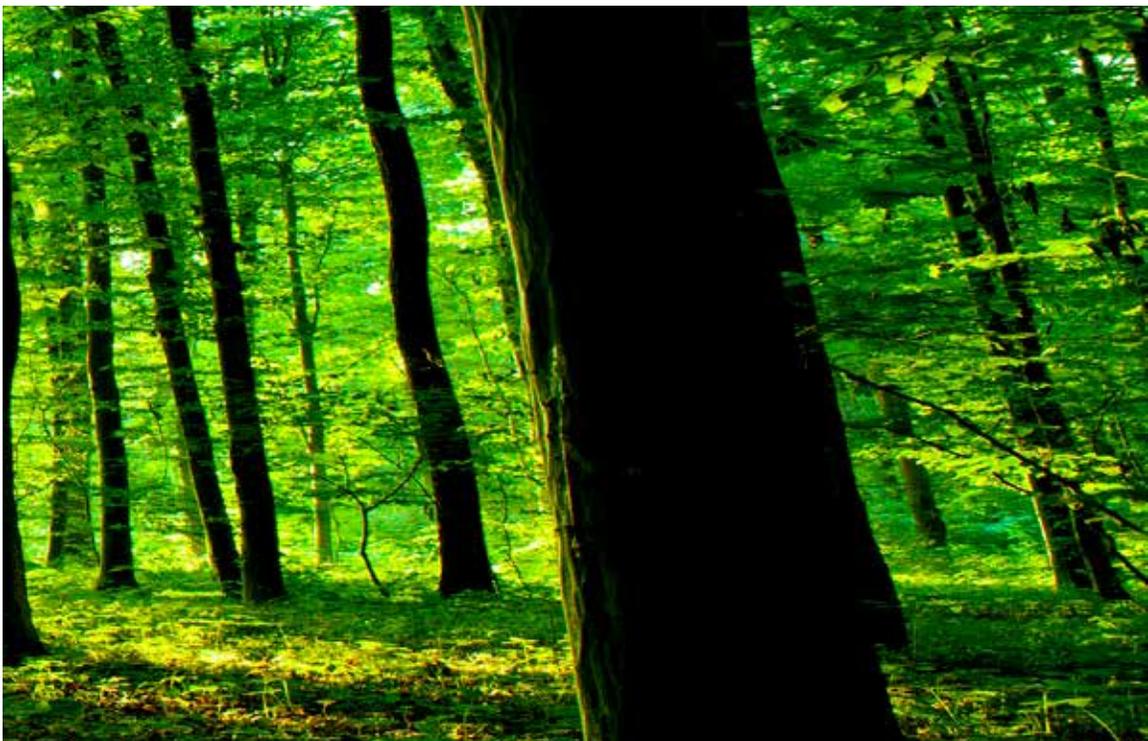
Funding Value of Assets	\$12.18 billion
Funding Liabilities	\$14.13 billion
Funding Deficiency	\$1.95 billion
Funded Ratio	86%

### 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 plan experience. From time to time, these assumptions are changed to reflect long-term expectations based on evolving economics and demographic environments. The funding valuation also uses an actuarially accepted practice of smoothing market returns over a five-year period to moderate short-term adjustments to contribution rates. This practice is intended to even out the impact of the volatility of market returns on the Plans' funded status. This is the fluctuation reserve (or the amount by which the fair value of net assets available exceeds the funding value of assets).

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.





---

---

## Funding Challenges Looking Forward

A key assumption in the funding of the Plans is that the fund will earn an average return each year of at least equal to the discount rate used for funding purposes. Actual investment returns year-to-year can be quite volatile and without adjustment could lead to frequent contribution rate changes. To reduce the impact of this volatility on the Plans, an actuarially accepted practice of smoothing is used.

This practice produces a funding value of plan assets that in any given year can be higher or lower than market value. The approach to smoothing investment gains and losses serves to dampen dramatic changes to contribution rates due to short-term market volatility. This was effective with investment losses stemming from the 2008/09 financial crisis, as it provided time for markets to recover and limited contribution rate changes. Similarly, the strong investment performance over the past four fiscal years has provided both plans substantial ability to mitigate against future returns being lower than expected.

While smoothing is effective in stabilizing contribution rates during short-term market volatility, failure to achieve the assumed funding discount rate on average over the long term would still result in contribution rate increases. The Plans, like other pensions, also face other risks, such as long-term low interest rates, inflation and increasing plan members' longevity. The funding studies and valuations are based on assumptions that are likely to differ from actual experience. Any difference between the assumptions and Plan experience will emerge as gains or losses in future funding studies and valuations.

The funding assumptions, more specifically the discount rate based on long-term expected investment rate of return, include margins for adverse plan experience, to achieve the funding objectives of contribution stability and benefits being fully funded.

## Financial Statement Valuation

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

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 rates 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 assess the costs and 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.



## 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 (i.e. current service cost) 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

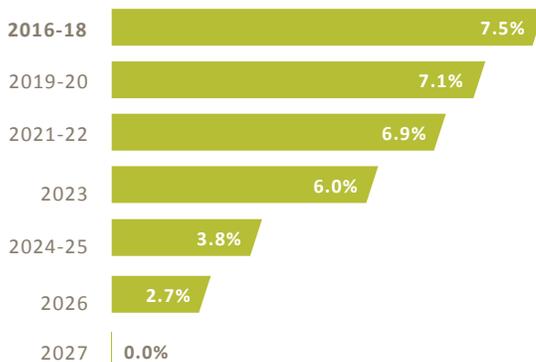
% of salary	Sept 2016	Sept 2015
up to YMPE	9.09	10.22
above YMPE	12.98	14.60
Teacher Contributions	10.87	11.77
Employer Contributions	10.23	10.99

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

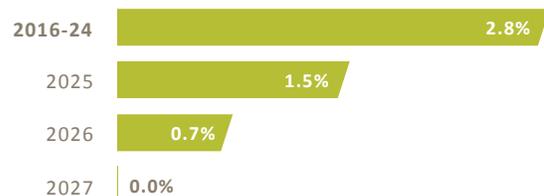
The total contribution rate is 24.63% of teacher salaries, consisting of a current service cost of 17.12% of salaries and total deficiency contributions of 7.51% of salaries. The deficiency contributions are planned to decrease according to the following schedule determined in the last actuarial valuation report as at August 31, 2015.

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 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 Estimated Total Deficiency Contribution Rates



### Private School Teachers' Pension Plan Estimated Total Deficiency Contribution Rates





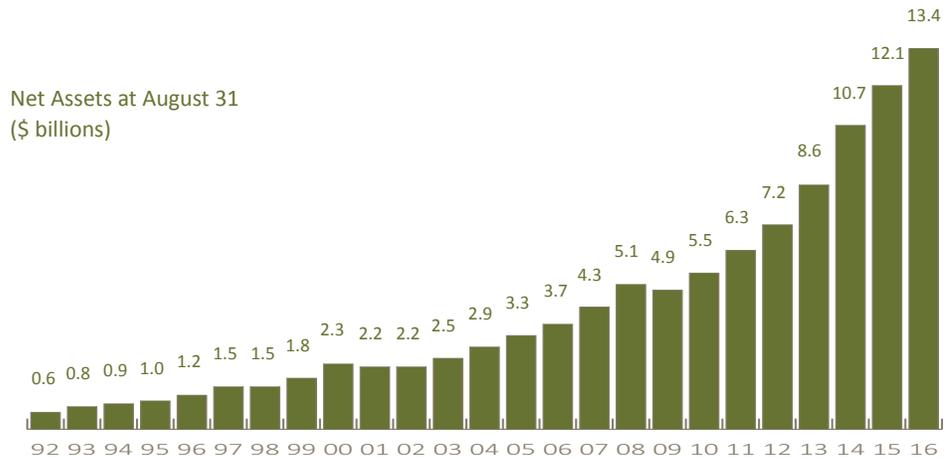


# REPORTING INVESTMENTS

## Investment Management

ATRF’s mandate is to ensure that all plan members can look forward to a predictable and reliable pension income when they retire. The investment management activities at ATRF are focused on ensuring that the plan has sufficient assets to fund that pension promise.

ATRF’s investment portfolio continues to grow rapidly, due in part to the strong investment returns of the past several years. In addition, the contributions currently being paid into the plan by active members exceeds the value of pension payments being paid out to retired members. ATRF’s assets have more than doubled in the past five years. As of August 31, 2016, the assets of the plan were \$13.4 billion.



Because of the unique demographic profile of the post-1992 Teachers’ Pension Plan, ATRF’s assets will continue to grow for many more years to come. It is likely the assets will more than double again in the next 10 years. As the investment portfolio becomes larger and more complex, ATRF has continued to add to the investment team. We currently have an in-house team of more than 40 investment professionals who develop and execute the investment strategies needed to effectively manage the portfolio.



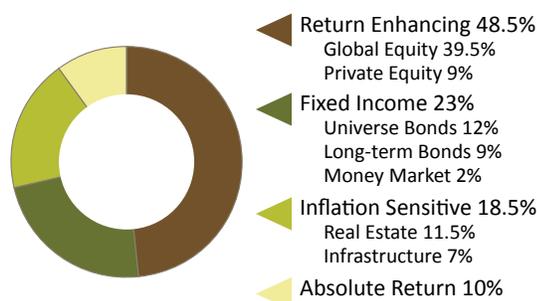
## Policy Asset Mix

Approximately every four years ATRF undertakes a comprehensive asset-liability modeling study. The goal of the study is to identify the most appropriate asset mix for the plan. The most recent study was completed in 2013.

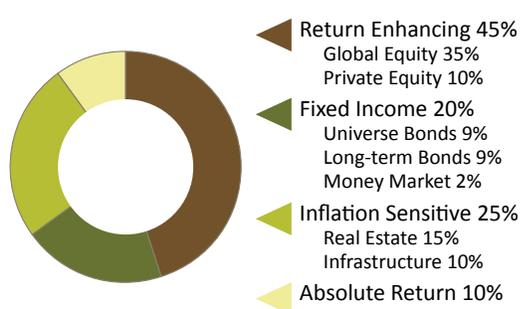
Based on the results of this study the Board adopted the current long-term, target policy asset mix. This policy asset mix includes not only traditional public market assets such as equities and bonds, but also private market assets such as real estate and infrastructure.

Building a well-diversified portfolio of private-market assets classes in a disciplined way can take several years. ATRF began investing in real estate and infrastructure in 2010 and we expect that it may take a few more years for our long-term target allocations to be reached. During this period, the policy asset mix is adjusted each year to reflect the actual growth in these asset classes.

### Policy Asset Mix (at August 31, 2016)



### Long-term Policy Asset Mix



## 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 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 that were 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 also 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 (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.

## Rates of Return

as at August 31, 2016

Asset Class	1 Year (%)		4 Years (%)		10 Years (%)	
	ATRF	Benchmark	ATRF	Benchmark	ATRF	Benchmark
<b>Fixed Income</b>	<b>6.7</b>	<b>7.5</b>	<b>4.4</b>	<b>4.7</b>	<b>5.5</b>	<b>5.7</b>
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
<b>Return Enhancing</b>	<b>6.5</b>	<b>6.9</b>	<b>15.9</b>	<b>15.2</b>	<b>6.5</b>	<b>6.4</b>
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
<b>Inflation Sensitive</b>	<b>12.3</b>	<b>5.8</b>	<b>11.1</b>	<b>6.1</b>	<b>—</b>	<b>—</b>
Real Estate	10.1	5.6	10.6	6.2	—	—
Infrastructure	16.4	6.2	12.1	6.1	—	—
<b>Absolute Return</b>	<b>0.5</b>	<b>4.4</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>TOTAL PLAN</b>	<b>6.7</b>	<b>6.6</b>	<b>11.8</b>	<b>10.6</b>	<b>6.4</b>	<b>6.1</b>

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

In order 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 individual asset class and weighting them according to the fund's policy asset mix.

The total fund return of 6.7% in the 2015/16 fiscal year slightly exceeded the benchmark return of 6.6%. For the four-year period ended August 31, 2016 the total fund return exceeded the benchmark return by 1.2%.

## 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 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)



Over the past 15 years, the investment return for the Teachers' Pension Plan was 6.4%, which was 0.5% below the average funding discount rate.

For the Private School Teachers' Pension Plan, the rate of return was 6% over the same time period. (The return differs slightly from the return on the Teachers' Pension Plan in that 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.)

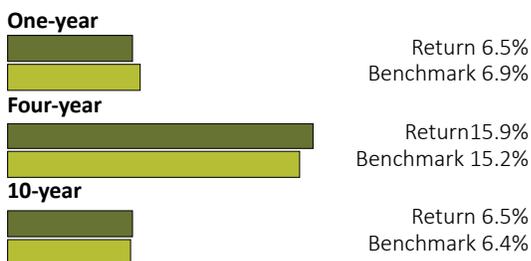
While investment returns in recent years have been positive, the significant market corrections experienced in 2000/02 and 2008/09 continue to impact the funding of the plans. The amortization of the funding shortfall, which resulted from this time period, combined with the reduction in the funding discount rate have been the largest contributors to the increase in funding contributions from active teachers, government and private schools over the last 15 years.

### Return Enhancing Assets

Return enhancing assets are generally expected to provide the highest return over the long term, but they are also typically the most risky assets in the plan. Return enhancing assets represent the largest investment category in the fund, and include a number of public and private equity portfolios.

In order to mitigate risk, these portfolios are highly diversified by investment style, company size, and geography. While our internal investment team manages a proportion of return-enhancing assets in-house, the majority are managed by our external investment partners who have specific expertise in certain markets or investment types.

### Return Enhancing Assets Return vs. Benchmark (as at August 31, 2016)



Following a weak start to the fiscal year, global public equity markets rallied significantly in the second half, led by stocks in emerging market countries. After several years of underperforming more developed markets, equities in Asia and Latin America recorded strong gains. However China's market fell as it struggled to adjust to more cautious economic growth forecasts.

European equities lagged North American markets as the unexpected outcome of the U.K. referendum combined with persistently weak economies drove equity investors to other markets. A recovery in energy and other commodity prices allowed resource-focused markets such as Australia and Canada to record positive returns for the year. In this somewhat uncertain environment, ATRF's global public equity portfolios returned 6.9%, which was slightly below the benchmark return of 7.5%.

Private equity market activity levels were strong, as the low interest rate environment continues to be supportive for financing buyout transactions. Our private equity program has grown considerably in the last several years, with invested assets nearing our long-term target of 10% of total assets. The portfolio has also matured considerably, and while we continue to invest in new private equity opportunities, we have also sold some assets in the past year and are receiving distributions from funds we invested in several years ago.

Private equity assets consist of a number of limited partnerships and direct investments. Valuations for private equity investments are usually reported by general partners on the basis of calendar quarters



rather than our fiscal quarters. As a result, our reported returns for these assets are time-lagged by two months. The 5.3% return reflects the 12-month period ended June 30, 2016.

In aggregate, ATRF’s return enhancing assets returned 6.5% for the 2015/16 fiscal year, falling below the benchmark return by 0.4%. Over the past four years these assets have returned 15.9%, exceeding the benchmark return by 0.7%.

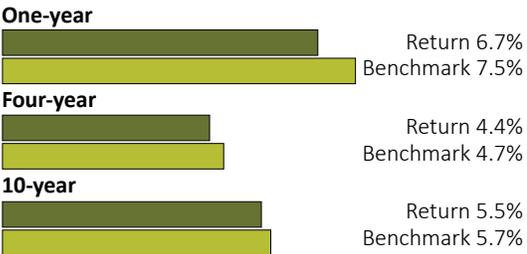
**Fixed Income Assets**

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 primarily held in Canada; diversified across short, medium and long-term maturity dates; and include both government and corporate bonds.

The majority of our fixed income assets are managed in-house by ATRF’s investment team; however, some asset management has been outsourced to external managers who are focused on particular segments of the markets.

**Fixed Income Assets vs. Benchmark Performance**



With interest rates continuing to fall, ATRF’s fixed income assets had a strong return of 6.7% for the year. This return fell below the benchmark return by 0.8% primarily because the portfolios were positioned with the expectation that interest rates would rise.

Over the past four years, fixed income assets have returned 4.4%; 0.3% below the benchmark return.

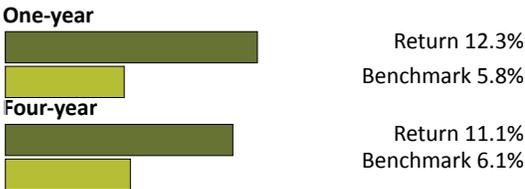
**Inflation Sensitive Assets**

Investments in the inflation sensitive category are intended to provide returns that are at least partially correlated to inflation over the very long term. This provides a degree of long-term funding protection as pension benefits under the plans are partially indexed to inflation. ATRF includes both real estate and infrastructure in this asset category.

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

Our real estate assets are primarily located in large urban centers in Canada, the U.S. and Europe. Most of the Canadian assets are properties that are directly owned by ATRF, while a small percentage are invested in real estate funds. Properties outside of Canada are primarily owned through funds, joint ventures and co-ownership arrangements. Infrastructure assets are located in North America and Europe, and are invested through funds and various co-ownership arrangements.

**Inflation Sensitive Assets vs. Benchmark Performance for the year ending August 31, 2016**



Real estate and infrastructure were ATRF’s two strongest performing asset classes in 2015/16 as historically low interest rates drove investors to search for income-generating alternatives to bonds.

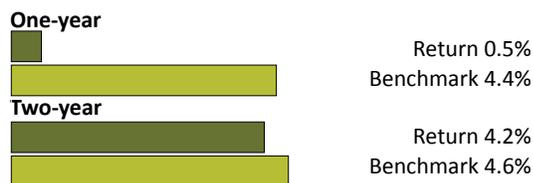
This high level of demand combined with low borrowing costs pushed asset values to new highs in most markets around the world. In this environment ATRF’s real estate portfolio returned 10.1% for the fiscal year while the infrastructure portfolio returned 16.4%.

Overall, ATRF's inflation sensitive assets generated a return of 12.3% for the 2015/16 fiscal year, exceeding the benchmark return by 6.5%. Over the past four years these portfolios have returned 11.1% versus 6.1% for the benchmark.

### Absolute Return Assets

Absolute return assets are highly diversified, reflect a wide range of risk-return profiles, and include managed futures, hedge funds and other multi-asset strategies. The primary purpose of ATRF's absolute return assets is to diversify risk by generating investment returns that are relatively stable and largely uncorrelated with more traditional assets (primarily return-enhancing assets). All of these strategies are managed by external investment partners.

#### Absolute Return Assets vs. Benchmark Performance for the year ending August 31, 2016



Absolute return assets were added to ATRF's policy asset mix in April 2014 as an outcome of the 2013 asset-liability modeling study. In the 2015/16 fiscal year central bank actions, weak global growth and negative interest rates provided a difficult backdrop for absolute return strategies. As a result these assets had a very modest 0.5% return, which lagged the benchmark return by 3.9%. For the two years ended August 31, 2016 the portfolio returned 4.2%, versus the benchmark return of 4.6%.

### 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 in three primary ways:

- integrating ESG factors into our evaluation of investments
- being an active owner
- 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.



### Active Owners

As an active owner, our internal and external investment managers regularly communicate with management teams and boards of companies in which we invest to discuss issues related to ESG. We also regularly participate with other institutional shareholders in shared ESG engagement initiatives, with a significant focus on corporate governance.

ATRF is a founding member of the Canadian Coalition for Good Governance (CCGG), which serves to promote good governance practices in Canadian public companies and improve the regulatory environment to best align the interests of boards and management with those of their shareholders.

ATRF is also a member of the Pension Investment Association of Canada, which promotes sound investment practices and good governance for the benefit of pension plan sponsors and beneficiaries. ATRF is a signatory to the CDP (formerly Carbon Disclosure Project), a global initiative to encourage companies to publicly disclose information on risks associated with greenhouse gas emissions, water and deforestation.

### Proxy Voting

ATRF considers proxy voting to be an important shareholder responsibility. Our proxy voting practice encourages companies to adopt best practices in corporate governance and improve their actions and disclosure related to issues of environmental and social responsibility.

ATRF regularly casts proxy votes in favour of shareholders' proposals advocating better disclosure around ESG issues. Examples from the 2016 proxy voting season include:

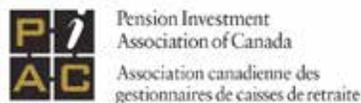
#### Suncor Energy Inc.

ATRF supported a shareholder's proposal requesting that the company report regularly on how it is assessing and managing risk associated with a future low-carbon economy. ATRF also supported a shareholder's proposal requesting that the company provide reporting on its lobbying policies and practices.

#### Alphabet Inc. (Google's parent company)

ATRF supported a shareholder's proposal requesting that the company implement a majority voting standard for the election of directors. Under a majority voting approach, shareholders vote separately for each nominated director. If a director nominee does not receive a majority of votes, he or she would resign from the board.

### Member of:







---

# DISCUSSION AND ANALYSIS

# COMPENSATION

## **Executive Compensation Program**

ATRF's executive compensation program objectives are to:

- Reward executives in a manner consistent with competitive market practice and thereby improve the organization's ability to attract and retain high quality professionals.
- Focus the executive team on critical business and investment issues identified in the strategic plan.
- Align interests of the executive team with pension plan member interests by encouraging and rewarding long-term performance. This is supported by promoting a pay-for-performance culture.
- Reward the executive team for superior performance on results.
- Ensure total pay reflects the shared efforts of the executive team by rewarding a collegial culture and teamwork that is assessed through individual performance assessments conducted by the Human Resources Compensation Committee and Board on an annual basis.

## **Human Resources and Compensation Committee**

The Human Resources and Compensation Committee (HRCC) assists the Board in fulfilling its oversight responsibilities in relation to the corporation's human resources and compensation matters.

In 2015/16 the HRCC was composed of all six members of the Board, each of whom is independent of management. The Committee meets a minimum of four times per year. The HRCC retains external advisors to provide executive compensation and any other expertise the Committee deems necessary.

The HRCC met four times during 2015/16 fiscal year. It conducted in camera sessions at the beginning and end of each meeting, without management present.



---

The HRCC's key responsibilities include:

- the appointment, performance evaluation, compensation structure and succession planning for the Chief Executive Officer
- approving the compensation of the Chief Executive Officer and Chief Investment Officer
- approving the compensation philosophy recommended by the Chief Executive Officer for non-executive staff of ATRF
- ensuring appropriate succession planning by the Chief Executive Officer for key staff positions
- reviewing human resource and compensation aspects of the corporation's business plan
- ensuring that the risk management framework appropriately considers human resource and compensation risks
- approving incentive and supplementary pension plans

## Compensation Philosophy

ATRF's executive compensation philosophy establishes the foundation for its compensation program. Its aim is to:

- support the organization's business strategies and desired culture
- state its desired competitive position and mix of compensation elements
- be responsive to the organization's objectives and employee's wants and needs

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. Of critical importance is the overarching strategy to achieve the maximum, risk-controlled, cost-effective, long-term investment returns required to meet the funding requirements of the Plans.

A meaningful portion of variable compensation is based on the overall success of the organization. The compensation program provides incentive rewards for value-added and absolute investment returns, as well as other important business objectives such as maintaining quality customer service, and the cost-effective and efficient use of resources.

ATRF believes in a pay-for-performance culture. Accordingly, 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. A significant portion of executive compensation is linked to longer-term, value-added and absolute performance.

## Managing Risk

ATRF considered the implications of the risks associated with its compensation policies and practices, to ensure its compensation program does not incent management behaviours outside the organization's risk appetite.



Compensation risk is managed by:

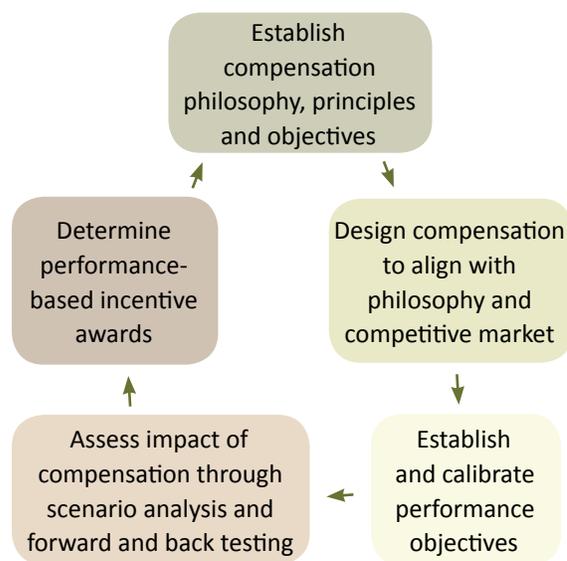
- the HRCC’s independence from management, and retention of its own external compensation advisor
- working within an enterprise-wide risk management framework and investing within the Investment Policy
- establishing appropriate performance measures that align to the business strategy
- setting individual and team accountabilities for achieving objectives
- setting threshold levels of performance for all incentive plans and not paying incentives until at least threshold performance is achieved
- using appropriate payout curves and capping incentive payout opportunities
- including long-term performance measures (i.e. four-year rates of return) in the Annual Incentive Plan, as well as the Long-term Incentive Plan to align compensation payouts with the time horizon of the fund
- including non-investment measures in the Annual Incentive Plan

**Comparator Groups Used to Set Competitive Pay**

ATRF’s overall objective is to provide competitive compensation compared to those organizations against which it competes 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, ATRF reviews compensation levels of comparable jobs, assesses performance against benchmarks, as well as the relative size and investment-structure complexity of its 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:



The HRCC is supported by independent, external human resources and independent compensation consultants that are retained by, and report directly to, the HRCC. In the 2015/16 fiscal year, the HRCC’s independent advisor for governance, human resource and compensation purposes was Global Governance Advisors (GGA). During the 2015/16 fiscal year, GGA assisted the HRCC in:

- reviewing executive compensation levels against the compensation philosophy and external market
- analyzing the correlation of executive pay for performance within the compensation program
- developing the CEO’s balanced scorecard
- drafting the Compensation Discussion and Analysis



---

GGA did not provide any other services to ATRF or to management. The HRCC reviews all fees and the terms of consulting services provided by its compensation consultant, and is responsible for its own decisions, which may take into consideration more than the information and recommendations provided by its compensation consultant or management.

### **Compensation Plan Structure**

The compensation structure for executives balances fixed and variable pay linked to longer-term performance. The elements of the executive compensation plan include a base salary, benefits, pension and performance-based short and long-term incentive plans to align executives with pension plan member interests. ATRF believes that longer-term investment success through prudent risk taking is more important than volatile short-term gains, and this philosophy is reflected in its short and long-term incentive plan designs.

### **Base Salary**

Base salaries are intended to be competitive with the market and are reviewed annually at the end of each fiscal year. Salaries are set based on individual performance and salary range adjustments within ATRF market comparators. Base salaries for executives are reviewed and approved by the HRCC annually.

### **Annual Incentive Plan**

The Annual Incentive Plan 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. Target investment incentive opportunities are set as a percentage of salary and reward 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

The Long-term Incentive Plan (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 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 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, professional memberships and car allowances.

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 and senior investment professionals.

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.





---

---

## Summary Performance

For the 2015/16 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 fiscal year.

### Investments

In the 2015/16 fiscal year, the fund earned a net rate of return of 6.7% slightly exceeding the fund's 6.6% benchmark. This resulted in \$11 million of value-added investment performance by ATRF, which will be reinvested into the fund.

Over the four-year period ended August 31, 2016, the fund earned a net rate of return of 11.8%. This compares to the fund's 10.6% benchmark return resulting in a 1.2% or \$375 million of value add to the assets of the plan.

### Corporate

ATRF's HRCC worked with its independent advisor and CEO to create a set of objectives that reflected the key milestones for the CEO. The objectives fell within similar categories as used previously, which included:

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

Each of these categories was weighted in a balanced scorecard that reflected ATRF's Annual Incentive Plan structure placing 50% of the annual incentive opportunity on investment performance and the remaining 50% of the annual incentive opportunity on the remaining four categories referenced above. On average, the HRCC deemed that the CEO achieved an above target result within each category and therefore he received an annual incentive payment between his target and maximum opportunity.

## Summary Compensation

The complete disclosure of salary, annual incentive payments, value of SEPP benefits and all other compensation earned for years ended August 31, 2016, 2015 and 2014 by the Chief Executive Officer, Chief Investment Officer and the three other most highly compensated senior staff.

(\$ dollars, audited)

Name and Position	Year	Salary	Annual Incentive	Long-term Incentive	SEPP <sup>2</sup>	All Other Compensation <sup>3</sup>	Total
<b>Rod Matheson</b> Chief Executive Officer <sup>1</sup>	2016	350,000	251,800	-	27,000	49,300	678,100
	2015	276,000	280,100	-	25,000	42,400	623,500
	2014	-	-	-	-	-	-
<b>Derek Brodersen</b> Chief Investment Officer	2016	322,900	301,100	540,000	(12,600)	48,400	1,199,800
	2015	315,000	343,300	540,000	33,100	48,100	1,279,500
	2014	315,000	321,300	382,500	(400)	47,400	1,065,800
<b>Rakesh Saraf</b> Head, Private Investments	2016	288,000	259,400	300,000	10,500	38,500	896,400
	2015	278,300	263,700	252,000	19,200	37,800	851,000
	2014	262,500	251,900	230,100	20,200	36,600	801,300
<b>Barry Petursson</b> Head, Real Estate Investments	2016	263,000	229,000	282,000	11,600	37,500	823,100
	2015	256,600	214,900	248,000	30,400	37,000	786,900
	2014	244,400	223,500	234,000	9,600	36,300	747,800
<b>Charlie Kim</b> Senior Portfolio Manager, Equities	2016	240,000	193,500	268,300	(3,500)	37,400	735,700
	2015	238,000	174,100	252,000	13,100	36,900	714,100
	2014	230,000	194,500	244,800	10,800	35,900	716,000

<sup>1</sup> Employment commenced November 17, 2014.

<sup>2</sup> The present value of the accrued benefits of the SEPP is estimated based on the projected benefit method prorated on service, incorporating the same assumptions used for the Plans (see Note 5(a) to the financial statements), and represent entitlements that may change over time. In particular, the present value for the named employees is based on benefit amounts that have been projected for salary increases to retirement and as of August 31, 2016 the amount, recorded in accounts payable, is \$914,200 (2015 - \$815,900). The present value of accrued benefits, based on the accrued pensionable salary earned to August 31, 2016, that would be paid if all named employees left employment is \$791,900 (2015 - \$627,800). Change in Present Value of Accrued Benefit due to:

( <i>\$ dollars, audited</i> ) Name and Position	Present Value of Accrued Benefits August 31, 2016	Benefit Accrual and Change in Plan	Interest Cost and Change in Assumptions	Present Value of Accrued Benefits August 31, 2016
<b>Rod Matheson</b> Chief Executive Officer	27,300	27,000	4,400	58,700
<b>Derek Brodersen</b> Chief Investment Officer	488,300	(12,600)	36,300	512,000
<b>Rakesh Saraf</b> Head, Private Investments	108,000	10,500	8,900	127,400
<b>Barry Petursson</b> Head, Real Estate Investments	104,700	11,600	8,700	125,000
<b>Charlie Kim</b> Senior Portfolio Manager, Equities	87,600	(3,500)	7,000	91,100

Pensions under the SEPP will be paid when they come due. Accordingly, no pre-funding occurs. SEPP financing costs are included in pension expense.

<sup>3</sup> All other compensation includes vacation payouts and the employer's share of all employee benefits, contributions and payments made on behalf of employees [including pension (excluding SEPP), health and dental care, life insurance, long-term disability, professional memberships and car allowances].

### 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 five most highly compensated senior staff. The future value of the awards granted but not yet vested are estimated as at August 31, 2016, based on:

- actual performance multipliers for fiscal years 2013/14, 2014/15 and 2015/16, and pro-forma multipliers of one (1x) for future years; and
- actual fund rates of return for fiscal years 2013/14, 2014/15 and 2015/16, and no assumed growth in future years.

(\$ dollars, audited) Name and Position	Year of Grant	Award (Target Value) <sup>1</sup>	Maximum Value <sup>2</sup>	Estimated future payouts		
				2017	2018	2019
<b>Rod Matheson</b> Chief Executive Officer	2015/16	210,000	630,000	-	-	224,600
	2014/15	210,000	630,000	-	445,700	-
	2013/14	-	-	-	-	-
<b>Derek Brodersen</b> Chief Investment Officer	2015/16	193,700	581,200	-	-	207,200
	2014/15	189,000	567,000	-	401,100	-
	2013/14	189,000	567,000	465,600	-	-
<b>Rakesh Saraf</b> Head, Private Investments	2015/16	115,200	345,600	-	-	123,200
	2014/15	111,300	333,900	-	236,200	-
	2013/14	105,000	315,000	258,700	-	-
<b>Barry Petursson</b> Head, Real Estate Investments	2015/16	105,200	315,600	-	-	112,600
	2014/15	102,600	307,900	-	217,800	-
	2013/14	97,800	293,300	240,800	-	-
<b>Charlie Kim</b> Senior Portfolio Manager, Equities	2015/16	96,000	288,000	-	-	102,700
	2014/15	95,200	285,700	-	202,100	-
	2013/14	92,000	276,000	226,600	-	-

<sup>1</sup> Represents the target value at the time of grant, no award payable if performance is below a threshold value-add hurdle.

<sup>2</sup> Represents the maximum value payable at the end of the four-year vesting period.

### 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.

The HRCC reviews the succession plan for the entire leadership team on an annual basis. The succession plan for the Chief Executive Officer was updated in 2015/16 to reflect the updated leadership team.



## Board 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. The Board annually reviews and sets the remuneration for Board members who are 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. Only one Board member was eligible to receive remuneration in the 2015/16 fiscal year.

In the past year, Board remuneration was paid according to the following schedule: an annual Board member retainer of \$15,000; an annual committee chair retainer of \$4,000; a Board meeting fee of \$1,200, and committee meeting fees of \$800, for meetings up to four hours in any one day, and \$1,200 for meetings in excess of four hours in any one day. Separate fees are not paid for committee meetings held the same day as a Board meeting.

Board members are reimbursed for reasonable expenses for travel, meals and accommodation, as required.

*(\$ dollars, audited)*

Name	Retainer	Meetings Attended		Meeting Fees	Remuneration	
		Board	Committee		2015/16	2014/15
Harry Buddle <sup>1</sup>	\$ 11,250	4/8	9/12	\$ 10,400	\$ 21,650	\$32,600
Karen A. Elgert	-	8/8	3/4	-	-	-
Lowell K. Epp	-	7/8	12/12	-	-	-
Sandra Johnston <sup>2</sup>	-	8/8	7/11	-	-	-
Greg Meeker <sup>3</sup>	-	8/8	14/14	-	-	-
Gene Williams	-	8/8	4/4	-	-	-

<sup>1</sup> Resigned from Board in April 2016

<sup>2</sup> Joined the Investment Committee in April 2016

<sup>3</sup> Joined the Finance and Planning Committee in April 2016







# REPORTING FINANCIAL

## Plan Member Service Costs

Plan member service costs increased to \$6.12 million, from \$5.76 million in the previous year.

The cost of providing services to plan members in the 2015/16 fiscal year was \$90 per member\*, significantly less than the average cost of \$149 per member\* for a peer group of Canadian public sector pension organizations.

### Plan Member Service Costs

(\$ thousands)

	2016	2015
Salaries and benefits	\$ 3,989	\$ 3,846
Professional and consulting services	735	583
Premises and equipment	609	562
Communication and travel	433	448
Actuarial fees	131	136
Board and committee	111	98
Custodial and banking	38	39
Other	78	51
<b>Total</b>	<b>\$ 6,124</b>	<b>\$ 5,763</b>
<b>Cost (\$ dollars) per plan member*</b>	<b>\$ 90</b>	<b>\$ 87</b>

\*active and retired

Operating costs increase as the value of investments grows and the number of plan members rises. We remain committed to:

- implementing prudent, cost-effective investment and administration structures
- carefully managing both investment and administrative costs
- providing plan members with high-quality service and investment returns that meet the long-term funding requirements of the plans

## Operating Expenses

### Investments Costs

(\$ thousands)

	2016	2015
External investment management fees	\$ 70,940	\$ 59,827
Salaries and benefits	11,051	10,765
Professional and consulting services	2,131	1,518
Custodial and banking	1,799	1,841
Communication and travel	957	750
Premises and equipment	739	749
Board and committee	103	143
Actuarial fees	14	14
Other	198	43
<b>Total</b>	<b>\$ 87,932</b>	<b>\$ 75,650</b>
<b>Cost (\$ dollars) per \$100 of assets</b>		
External investment management costs	\$ 0.49	\$ 0.45
Internal investment management costs	0.17	0.18
<b>Total</b>	<b>\$ 0.66</b>	<b>\$ 0.63</b>

## 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 2015/16 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, 2016, that materially affected, or are reasonably likely to materially affect, internal control over financial reporting.



## 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, that 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 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 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 and 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



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, 2016, 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, 2016, 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 electronically signed by Merwan N. Saher FCPA, FCA]

Auditor General

December 14, 2016

Edmonton, Alberta



## 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, 2016. 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 August 31, 2016 and adjusted to reflect anticipated new hires as at September 1, 2016;
- 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, 2016, 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]

Ryan Welsh  
Fellow, Canadian Institute of Actuaries  
Fellow, Society of Actuaries

[Original Signed]

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

November 10, 2016



# 2016 FINANCIAL STATEMENTS

## Statement of Financial Position

As at August 31 (\$ thousands)

	<b>2016</b>		<b>2015</b>
<b>Assets</b>			
Investments (Note 3)	\$ 13,412,260	\$	12,277,583
Contributions receivable	25,553		19,660
Other assets	1,819		1,377
	<b>13,439,632</b>		<b>12,298,620</b>
<b>Liabilities</b>			
Investments related liabilities (Note 3)	50,848		196,850
Accounts payable (Note 4)	31,843		32,344
	<b>82,691</b>		<b>229,194</b>
<b>Net assets available for benefits</b>	<b>13,356,941</b>		<b>12,069,426</b>
<b>Accrued pension obligations (Note 5)</b>	<b>12,118,229</b>		<b>11,281,137</b>
<b>Surplus</b>	<b>\$ 1,238,712</b>	<b>\$</b>	<b>788,289</b>

The accompanying notes are part of these financial statements.

Approved by the Board

[Original Signed]

Greg Meeker  
Chair

[Original Signed]

Lowell K. Epp  
Vice Chair

## Statement of Changes in Net Assets Available for Benefits

For the Year Ended August 31 (\$ thousands)

	<b>2016</b>	<b>2015</b>
<b>Net assets available for benefits, beginning of year</b>	<b>\$ 12,069,426</b>	<b>\$ 10,716,794</b>
<b>Investment operations</b>		
Change in fair value of investments (Note 6)	575,567	639,024
Investment income (Note 6)	345,802	330,601
Investment expenses (Note 7)	(87,932)	(75,650)
<b>Net investment operations</b>	<b>833,437</b>	<b>893,975</b>
<b>Member service operations</b>		
Contributions (Note 8)		
Teachers	449,058	429,539
The Province	418,107	399,527
Private School Boards	2,374	2,592
Transfers from other plans	12,066	10,983
	881,605	842,641
Benefits paid (Note 9)	(421,403)	(378,221)
Member service expenses (Note 7)	(6,124)	(5,763)
<b>Net member service operations</b>	<b>454,078</b>	<b>458,657</b>
<b>Increase in net assets available for benefits</b>	<b>1,287,515</b>	<b>1,352,632</b>
<b>Net assets available for benefits, end of year</b>	<b>\$ 13,356,941</b>	<b>\$ 12,069,426</b>

## Statement of Changes in Pension Obligations

For the Year Ended August 31 (\$ thousands)

	<b>2016</b>	<b>2015</b>
<b>Accrued pension obligations, beginning of year</b>	<b>\$ 11,281,137</b>	<b>\$ 10,190,593</b>
<b>Increase (decrease) in accrued pension obligations</b>		
Interest on accrued benefits	791,511	715,504
Benefits accrued	473,739	436,758
Changes in actuarial assumptions	21,339	203,484
Experience (gains)/losses	(28,094)	113,019
Benefits paid	(421,403)	(378,221)
	837,092	1,090,544
<b>Accrued pension obligations, end of year (Note 5)</b>	<b>\$ 12,118,229</b>	<b>\$ 11,281,137</b>

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), a corporation of the Province of Alberta (the Province) operating 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.

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.

### 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 assumed full responsibility for obligations related to pre-1992 period pensionable service and provides the required amounts to ATRF to pay the obligations on a monthly basis.

### 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 August 31, 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. Plan costs are funded by contributions from the employers and the teachers.

### d) Retirement pensions

Retirement pensions are based on the number of years of pensionable service and the highest consecutive five-year average salary. 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 85. With certain restrictions, reduced early retirement pensions are payable to teachers who retire on 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.

**f) Termination benefits**

Refunds or commuted value transfers are available when a teacher ceases employment.

**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 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.

**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 is inconsistent with Section 4600, Section 4600 takes precedence.

The relevant new guidance IFRS 9, Financial Instruments, issued by the International Accounting Standards Board replaces most of guidance in IAS 39, Financial Instruments: Recognition and Measurement, effective January 1, 2018. Management does not expect any significant impact on the Plans' financial position or investment income when adopting the new standard.



## b) 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
<b>Money-market securities</b>	Cost plus accrued interest approximates fair value due to the short-term nature of these securities.
<b>Bonds and debentures</b>	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.
<b>Public equity</b>	Closing quoted market price. Where a market price is not available, market value is determined using appropriate valuation methods.
<b>Real estate</b>	Real estate assets and liabilities are held directly and through limited partnerships. Fair value for direct investments is determined using appropriate valuation techniques such as discounted cash flows and comparable purchases and sales transactions. 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 manager using similar accepted industry valuation methods.
<b>Private equity/ infrastructure</b>	Investments in private equity/infrastructure 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 manager using accepted valuation methods and adjusted for any transactions during the interim period up to the reporting date of these financial statements.
<b>Derivatives</b>	Market prices are used for exchange-traded derivatives. Where quoted market prices are not available, appropriate valuation techniques are used to determine fair value.
<b>Absolute return</b>	Absolute return funds are recorded at fair value obtained from external fund managers.



## ii) INCOME RECOGNITION

Income is recognized as follows:

CATEGORY	BASIS OF RECOGNITION
<b>Interest income</b>	Accrual basis
<b>Dividend income</b>	Accrual basis on the ex-dividend date
<b>Income from real estate, private equity, infrastructure and absolute return</b>	Income includes distributions recognized as interest income, dividend income or other income, as appropriate
<b>Realized gains and losses on investments</b>	Difference between proceeds on disposal and the average cost
<b>Unrealized gains and losses on investments</b>	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 incremental costs attributable to the acquisition, issue or disposal of investment assets or liabilities. Transaction costs are expensed as incurred, on initial recognition of investments acquired.

## c) Fair value disclosures

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:

### Level 1

Unadjusted quoted prices in active markets for identical assets or liabilities;

### Level 2

Those involving inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly;

### Level 3

Those with inputs for the asset or liability that are not based on observable market data.

Determination of fair value and the resulting hierarchy requires the use of observable market data whenever available. The classification of a financial instrument in the hierarchy is based upon the lowest level of input that is significant to the measurement of fair value.

## 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 these translations are included within change in fair value of investments in investment earnings.



**e) Contributions**

Contributions from the teachers, the Province and the private school boards are recorded on an accrual basis. Cash received from members 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 benefits**

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

**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. Actual results could differ from those estimates.

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.

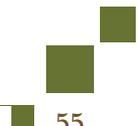
Measurement uncertainty exists in the valuation of the Plans' private investments as values may differ significantly from the values that would have been used had a ready market existed for these investments.

**j) Salaries and benefits**

Details of senior staff compensation and Board member remuneration 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. 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 cost and fair value of the Plans' investments before allocating the market exposure related to derivative financial instruments.

(\$ thousands)

	2016		2015	
	Fair Value	Cost	Fair Value	Cost
<b>Fixed income</b>				
Cash	\$ 143,215	\$ 143,215	\$ 165,310	\$ 165,310
Money-market securities	369,176	369,623	413,545	413,545
Bonds and debentures	2,527,893	2,318,408	2,670,374	2,522,071
	3,040,284	2,831,246	3,249,229	3,100,926
<b>Equity</b>				
Public	5,350,528	4,504,536	4,872,734	3,984,009
Private	1,195,747	885,881	1,145,886	745,256
	6,546,275	5,390,417	6,018,620	4,729,265
<b>Infrastructure</b>	946,898	790,650	543,483	446,308
<b>Real estate</b>	1,518,098	1,229,843	1,090,145	846,571
<b>Absolute return</b>	1,280,067	1,030,908	1,297,873	1,027,329
	3,745,063	3,051,401	2,931,501	2,320,208
<b>Investment related assets</b>				
Accrued income	9,420	9,420	8,408	8,408
Due from brokers	20,294	20,290	63,485	62,693
Unrealized gains and amounts receivable on derivative contracts	50,924	128	6,340	146
	80,638	29,838	78,233	71,247
<b>INVESTMENT ASSETS</b>	13,412,260	11,302,902	12,277,583	10,221,646
<b>Investment related liabilities</b>				
Due to brokers	31,254	31,254	34,038	34,038
Unrealized losses and amounts payable on derivative contracts	19,594	616	162,812	114
	50,848	31,870	196,850	34,152
<b>NET INVESTMENTS</b>	<b>\$ 13,361,412</b>	<b>\$ 11,271,032</b>	<b>\$ 12,080,733</b>	<b>\$ 10,187,494</b>

a) Fair value hierarchy

Financial instruments are categorized within the fair value hierarchy as described in Note 2 as follows:

**2016**

(\$ thousands)

	Level 1	Level 2	Level 3	Total
Fixed income	\$ 143,215	\$ 2,770,193	\$ 126,876	\$ 3,040,284
Equity	5,350,528	—	1,195,747	6,546,275
Infrastructure	—	—	946,898	946,898
Real estate	—	—	1,518,098	1,518,098
Absolute return	—	—	1,280,067	1,280,067
Net investment-related receivables	—	29,790	—	29,790
Net investments	\$ 5,493,743	\$ 2,799,983	\$ 5,067,686	\$ 13,361,412
	41%	21%	38%	100%

**2015**

(\$ thousands)

	Level 1	Level 2	Level 3	Total
Fixed income	\$ 165,310	\$ 2,953,221	\$ 130,698	\$ 3,249,229
Equity	4,872,734	—	1,145,886	6,018,620
Infrastructure	—	—	543,483	543,483
Real estate	—	—	1,090,145	1,090,145
Absolute return	—	—	1,297,873	1,297,873
Net investment-related payables	—	(118,617)	—	(118,617)
Net investments	\$ 5,038,044	\$ 2,834,604	\$ 4,208,085	\$ 12,080,733
	42%	23%	35%	100%

The following table represents a reconciliation of financial instruments included in Level 3 of the fair value hierarchy:

**2016**

(\$ thousands)

	Fixed Income	Equity	Infrastructure	Real Estate	Absolute Return	Total
Balance, beginning of year	\$ 130,698	\$ 1,145,886	\$ 543,483	\$ 1,090,145	\$ 1,297,873	\$4,208,085
Purchases	15,731	305,100	404,352	612,954	59,166	1,397,303
Sales	(18,201)	(320,317)	(69,394)	(246,168)	(62,897)	(716,977)
Realized gain	—	155,842	9,383	16,485	7,310	189,020
Unrealized gain/(loss)	(1,352)	(90,764)	59,074	44,683	(21,385)	(9,745)
Balance, end of year	\$ 126,876	\$ 1,195,747	\$ 946,898	\$ 1,518,098	\$ 1,280,067	\$5,067,686

**2015**

(\$ thousands)

	Fixed Income	Equity	Infrastructure	Real Estate	Absolute Return	Total
Balance, beginning of year	\$ 94,434	\$ 855,390	\$ 404,558	\$ 725,933	\$ 864,814	\$2,945,129
Purchases	39,050	316,543	102,777	247,914	165,240	871,524
Sales	(5,746)	(326,895)	(19,295)	(65,551)	(4,044)	(421,531)
Realized gain	—	131,885	652	7,333	—	139,870
Unrealized gain	2,960	168,963	54,791	174,516	271,863	673,093
Balance, end of year	\$ 130,698	\$ 1,145,886	\$ 543,483	\$ 1,090,145	\$ 1,297,873	\$4,208,085

## NOTE 4 ACCOUNTS PAYABLE

(\$ thousands)

	<b>2016</b>		<b>2015</b>
Trade payables	\$ 11,156	\$	11,068
Tax withholdings	10,792		9,908
Long-Term Incentive Plan	5,665		6,027
Supplementary Employee Pension Plan	2,522		2,380
Contributions due to the Province	-		1,179
Other	1,708		1,782
	<b>\$ 31,843</b>	<b>\$</b>	<b>32,344</b>

## NOTE 5 ACCRUED PENSION OBLIGATIONS

### a) Best-estimate valuations and assumptions

An actuarial valuation of the Teachers' Pension Plan for the post-1992 period and the Private School Teachers' Pension Plan was performed as at August 31, 2016. Valuations for the Plans were also prepared as at August 31, 2015. The present value of accrued benefits was determined using the projected benefit method prorated on service. The assumptions used in the valuations are based on management's best estimate of future events.

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

	<b>2016</b>	<b>2015</b>
Rate of return on invested assets	7.00%	7.00%
Rate of Alberta inflation	2.50%	2.50%
Real wage increases	1.00%	1.00%

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

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

	Teachers' Pension Plan		Private School Teachers' Pension Plan	
	0.50% decrease in rate of return on invested assets	0.50% increase in rate of inflation	0.50% decrease in rate of return on invested assets	0.50% increase in rate of inflation
Increase in current service costs (% of total teacher salaries)	1.43%	1.15%	0.76%	0.47%
Increase in accrued pension benefits	\$967 million	\$711 million	\$4 million	\$3 million

The current service cost (excluding 0.2% for administrative expenses) as a percent of total teacher salaries for the Teachers' Pension Plan was 13.78% and for the Private School Teachers' Pension Plan was 14.37%.

### c) Results based on valuations

The valuation for the post-1992 period of the Teachers' Pension Plan as at August 31, 2016 determined a surplus of \$1,228 million. The valuation for the Private School Teachers' Pension Plan to August 31, 2016 determined a surplus of \$11 million.

(\$ thousands)

	2016			2015		
	Teachers' Pension Plan	Private Teachers'	Total	Teachers' Pension Plan	Private Teachers'	Total
Net assets at beginning of year	\$ 12,010,712	\$ 58,714	\$ 12,069,426	\$ 10,665,258	\$ 51,536	\$ 10,716,794
Contributions	876,824	4,781	881,605	837,338	5,303	842,641
Benefits	(419,374)	(2,029)	(421,403)	(375,825)	(2,396)	(378,221)
Investment earnings	916,887	4,482	921,369	964,962	4,663	969,625
Investment and member services expenses	(93,598)	(458)	(94,056)	(81,021)	(392)	(81,413)
Net assets at end of year	13,291,451	65,490	13,356,941	12,010,712	58,714	12,069,426
Actuarial value of accrued pension obligations	(12,063,702)	(54,527)	(12,118,229)	(11,230,996)	(50,141)	(11,281,137)
Surplus	\$ 1,227,749	\$ 10,963	\$ 1,238,712	\$ 779,716	\$ 8,573	\$ 788,289

### NOTE 6 INVESTMENT EARNINGS

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

(\$ thousands)

	2016			2015		
	Investment Income	Change in Fair Value <sup>1</sup>	Total	Investment Income	Change in Fair Value <sup>2</sup>	Total
Fixed income						
Cash and money-market securities	\$ 5,130	\$ (6,961)	\$ (1,831)	\$ 5,167	\$ —	\$ 5,167
Bonds and debentures	76,274	107,768	184,042	79,568	65,969	145,537
Equity						
Public	147,562	245,260	392,822	138,646	112,672	251,318
Private	20,951	65,078	86,029	28,271	300,848	329,119
Infrastructure	38,620	68,457	107,077	30,672	55,443	86,115
Real estate	57,265	61,167	118,432	48,277	181,849	230,126
Absolute return	—	(14,075)	(14,075)	—	271,863	271,863
Derivatives	—	48,873	48,873	—	(349,620)	(349,620)
Investment Earnings	\$ 345,802	\$ 575,567	\$ 921,369	\$ 330,601	\$ 639,024	\$ 969,625

<sup>1</sup> Change in fair value includes a realized net gain of \$378,423 and an unrealized net gain of \$197,144.

<sup>2</sup> Change in fair value includes a realized net gain of \$378,740 and an unrealized net gain of \$260,284.

## NOTE 7 OPERATING EXPENSES

### 2016

(\$ thousands)

	<b>Investment</b>		<b>Member Service</b>		<b>Total</b>
External investment management fees	\$ 70,940	\$	—	\$	70,940
Salaries and benefits	11,051		3,989		15,040
Professional and consulting services	2,131		735		2,866
Custodial and banking	1,799		38		1,837
Communication and travel	957		433		1,390
Premises and equipment	739		609		1,348
Board and committee	103		111		214
Actuarial fees	14		131		145
Other	198		78		276
	<u>\$ 87,932</u>	\$	<u>6,124</u>	\$	<u>94,056</u>

### 2015

(\$ thousands)

	<b>Investment</b>		<b>Member Service</b>		<b>Total</b>
External investment management fees	\$ 59,827	\$	—	\$	59,827
Salaries and benefits	10,765		3,846		14,611
Professional and consulting services	1,518		583		2,101
Custodial and banking	1,841		39		1,880
Communication and travel	750		448		1,198
Premises and equipment	749		562		1,311
Board and committee	143		98		241
Actuarial fees	14		136		150
Other	43		51		94
	<u>\$ 75,650</u>	\$	<u>5,763</u>	\$	<u>81,413</u>



## NOTE 8 CONTRIBUTIONS

(\$ thousands)

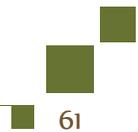
	<b>2016</b>		<b>2015</b>
<b>Teachers</b>			
Current service	\$ 259,777	\$	248,376
Current service additional 10% COLA	16,558		15,833
Past service	4,307		4,413
Deficiency	168,416		160,917
	<b>449,058</b>		<b>429,539</b>
<b>The Province</b>			
Current service	258,150		246,698
Past service	2,107		1,982
Deficiency	157,850		150,847
	<b>418,107</b>		<b>399,527</b>
<b>Private School Boards</b>			
Current service	1,876		2,050
Deficiency	498		542
	<b>2,374</b>		<b>2,592</b>
<b>Transfers from other plans</b>	<b>12,066</b>		<b>10,983</b>
	<b>\$ 881,605</b>	<b>\$</b>	<b>842,641</b>

## NOTE 9 BENEFITS PAID

(\$ thousands)

	<b>2016</b>		<b>2015</b>
Pension benefits	\$ 351,794	\$	320,469
Termination benefits	59,714		51,278
Transfers to other plans	9,895		6,474
	<b>\$ 421,403</b>	<b>\$</b>	<b>378,221</b>

During the year \$467 million (2015: \$461 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:

#### *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 investment assets or liabilities which are held 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)

Currency	2016			2015
	Foreign Currency Exposure	Currency Derivatives	Net Foreign Currency Exposure	Net Foreign Currency Exposure (Restated)
United States Dollar	\$ 3,597,610	\$ (2,427,618)	\$ 1,169,992	\$ 845,043
Euro	775,968	(256,334)	519,634	340,520
British Pound Sterling	418,593	(154,624)	263,969	215,713
Hong Kong Dollar	235,965	—	235,965	230,130
Japanese Yen	95,850	(2,406)	93,444	175,939
Swiss Franc	74,833	—	74,833	143,328
Other	733,376	804	734,180	627,470
	\$ 5,932,195	\$ (2,840,178)	\$ 3,092,017	\$ 2,578,143

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 \$31 million as at August 31, 2016 (2015: \$26 million). The foreign currency exposure for 2015 has been restated to incorporate mark to market for all derivatives.



*Interest rate risk*

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

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

The term to maturity classifications of interest-bearing investments, based upon the contractual maturity of the securities are as follows:

(\$ thousands)

	2016				Average Effective Yield	2015	
	Term to Maturity			Total		Total	Average Effective Yield (restated)
	Within 1 Year	1 to 5 Years	Over 5 Years				
Money-market securities	\$ 369,176	\$ —	\$ —	\$ 369,176	0.79%	\$ 413,545	0.55%
Bonds and debentures	\$ 23,218	\$ 507,877	\$ 1,996,798	\$ 2,527,893	2.38%	\$ 2,670,374	2.79%

A 1% increase/decrease in nominal-interest rates, with all other variables held constant, would result in an approximate decrease/increase in the value of interest bearing investments of \$267 million (2015: \$261 million). The average yield for money market securities for 2015 has been restated to incorporate change in methodology.

*Equity price risk*

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

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 all public equity, with all other variables held constant, would result in an approximate increase/decrease in the value of public-market exposure of \$551 million (2015: \$482 million).



## b) Credit risk

Credit risk is the potential of loss should a counterparty fail to meet its contractual obligations, or a reduction in the value of assets due to diminished credit quality of the counterparty, guarantor or the collateral supporting the credit exposure. The Plans are exposed to credit risk through investment in securities, securities lending and balances receivable from sponsors and counterparties to derivative transactions. The Plans are exposed to risk through over-the-counter (OTC) derivative transactions, arising from a default or insolvency of a counterparty. 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 plan to realize any collateral placed with it in the case of default of the counterparty.

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 portfolio and *BBB* for the portfolio 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. Fixed-income investments and over-the-counter derivatives exposed to credit risk, by credit rating, is as follows:

	2016	2015
Investment grade (AAA to BBB-)	93%	94%
Speculative grade (BB+ or lower)	2%	1%
Unrated	5%	5%

## 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. Liquidity requirements of the Plans are met through income generated from investments, employee and employer contributions, and by holding publicly traded liquid assets traded in active markets that are easily sold and converted to cash. These investments include money-market securities, bonds and publicly-traded equities.

### NOTE 11 CAPITAL

Capital is the net assets of the Plans. In accordance with the *Teachers' Pension Plans Act*, the actuarial surplus or deficit is determined by an actuarial funding valuation 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 Plans' surplus or deficiency is determined on the fair-value basis for accounting purposes. However for funding valuation purposes, asset values are adjusted for fluctuations in fair values to moderate the effect of market volatility on the Plans' funded status.

In accordance with the *Teachers' Pension Plans Act*, the actuarial deficiencies as determined by actuarial funding valuations are expected to be funded by August 31, 2027.



#### NOTE 12 COMMITMENTS

The Board has committed to fund certain investments over the next several years in accordance with the terms and conditions agreed to; as at August 31, 2016, the sum of these commitments equaled \$1,849 million (2015 - \$1,730 million).

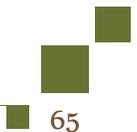
#### NOTE 13 NET INVESTMENT RETURNS AND RELATED BENCHMARK RETURNS

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

	<b>2016</b>	<b>2015</b>
Net Investment Return	6.7%	8.3%
Benchmark Return	6.6%	6.5%

#### NOTE 14 COMPARATIVE FIGURES

Comparative figures have been reclassified, where necessary, to conform to the 2016 presentation.



## 11-year Financial and Statistical Review (unaudited)

as at August 31	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
<b>Investments</b> (\$ millions)											
Public Equity	5,350.5	4,872.7	4,860.2	4,626.7	3,821.8	3,545.3	3,298.8	2,873.7	3,279.6	3,529.3	3,086.6
Private Equity	1,195.7	1,145.9	855.4	591.7	358.6	277.5	208.8	127.7	120.6	53.9	22.6
Infrastructure	946.9	543.5	404.6	278.2	186.9	123.9	—	—	—	—	—
Real Estate	1,518.1	1,090.1	725.9	446.0	334.9	60.6	—	—	—	—	—
Absolute Return	1,280.1	1,297.9	864.8	—	—	—	—	—	—	—	—
Other Investment Assets/ (Liabilities)	29.8	(118.6)	30.4	15.0	24.2	7.8	—	—	—	—	—
Fixed Income	3,040.3	3,249.2	2,980.6	2,629.6	2,464.4	2,328.2	1,995.2	756.2	777.7	714.2	624.2
<b>Net Investments</b>	<b>13,361.4</b>	<b>12,080.7</b>	<b>10,721.9</b>	<b>8,587.2</b>	<b>7,190.8</b>	<b>6,343.3</b>	<b>5,502.8</b>	<b>3,757.6</b>	<b>4,177.9</b>	<b>4,297.4</b>	<b>3,733.4</b>
Loan Receivable from the Province	—	—	—	—	—	—	—	1,184.7	944.1	—	—
Contributions Receivable	25.5	19.7	21.4	19.4	17.2	12.0	11.3	11.2	9.0	13.7	12.5
Other Assets and Liabilities	(30.0)	(31.0)	(26.5)	(25.6)	(14.0)	(20.2)	22.9	3.0	6.4	(3.1)	4.5
<b>Net Assets Available for Benefits</b>	<b>13,356.9</b>	<b>12,069.4</b>	<b>10,716.8</b>	<b>8,581.0</b>	<b>7,194.0</b>	<b>6,335.1</b>	<b>5,537.0</b>	<b>4,956.5</b>	<b>5,137.4</b>	<b>4,308.0</b>	<b>3,750.4</b>
<b>Actuarial Value of Accrued</b>											
<b>Pension Obligations</b>	12,118.2	11,281.1	10,190.6	9,406.3	9,108.7	8,294.4	7,467.7	6,861.7	6,321.9	11,316.3	10,702.2
<b>Surplus/(Deficiency)</b>	<b>1,238.7</b>	<b>788.3</b>	<b>526.2</b>	<b>(825.3)</b>	<b>(1,914.7)</b>	<b>(1,959.3)</b>	<b>(1,930.7)</b>	<b>(1,905.2)</b>	<b>(1,184.5)</b>	<b>(7,008.3)</b>	<b>(6,951.8)</b>
<b>Activity during year ended August 31</b> (\$ millions)											
<b>Benefit and Investment Operations</b>											
Investment earnings	921.4	969.6	1,717.2	1,024.6	512.0	440.4	274.3	(443.5)	(209.4)	440.3	259.0
Amount assumed by the Province	—	—	—	—	—	—	—	—	784.5	—	—
Net contributions	881.6	842.6	823.8	692.2	596.3	577.5	499.2	433.7	402.8	600.8	581.0
Pension benefits	(421.4)	(378.2)	(337.0)	(291.2)	(220.9)	(194.5)	(173.0)	(153.0)	(130.0)	(465.3)	(425.0)
Administrative expenses	(94.1)	(81.4)	(68.2)	(38.6)	(28.4)	(25.3)	(20.0)	(18.2)	(18.5)	(18.3)	(11.5)
<b>Increase in Net Assets</b>	<b>1,287.5</b>	<b>1,352.6</b>	<b>2,135.8</b>	<b>1,387.0</b>	<b>859.0</b>	<b>798.1</b>	<b>580.5</b>	<b>(181.0)</b>	<b>829.4</b>	<b>557.5</b>	<b>403.5</b>
<b>Increase/(Decrease) in Accrued</b>											
<b>Pension Obligations</b>	837.1	1,090.5	784.3	297.6	814.4	826.7	606.0	539.7	(4,994.3)	614.0	417.0
<b>Increase/(Decrease) in Surplus</b>	<b>450.4</b>	<b>262.1</b>	<b>1,351.5</b>	<b>1,089.4</b>	<b>44.6</b>	<b>(28.5)</b>	<b>(25.5)</b>	<b>(720.7)</b>	<b>5,823.7</b>	<b>(56.5)</b>	<b>(13.5)</b>
<b>Post-1992 TPP*</b>											
Net Investment Returns	6.7%	8.3%	18.9%	13.6%	7.5%	7.5%	5.3%	-8.8%	-3.2%	11.0%	7.3%
Benchmark	6.6%	6.5%	18.4%	11.5%	6.3%	7.3%	5.4%	-6.8%	-2.7%	10.9%	8.1%
Funding Objective	6.3%	6.3%	6.6%	6.7%	7.1%	7.1%	7.0%	7.6%	7.6%	7.6%	7.5%
<b>Funding Shortfall</b>											
pre-1992 TPP*	—	—	—	—	—	—	—	—	—	6,592.0	6,367.0
post-1992 TPP*	1,950.0	2,364.0	2,289.0	2,859.0	2,880.0	1,751.0	1,787.0	1,766.0	1,048.0	742.0	742.0
Private School TPP*	3.5	5.6	5.6	9.1	8.4	5.6	6.0	5.0	(0.4)	0.1	0.1
	1,953.5	2,369.6	2,294.6	2,868.1	2,888.4	1,756.6	1,793.0	1,771.0	1,047.6	7,334.1	7,109.1
<b>Plan members</b>											
Active	41,015	39,997	39,185	38,346	38,336	38,242	38,578	38,422	37,627	37,577	36,640
Inactive	12,102	12,252	12,411	12,364	12,404	12,384	12,119	11,769	11,713	10,852	11,260
Retired Members	27,015	26,308	25,545	24,667	23,892	22,989	22,302	21,563	20,796	19,837	18,718
<b>Number of New Pensions</b>	1,074	1,080	1,214	1,131	1,234	986	1,056	1,060	1,257	1,419	1,263
<b>Member Service Costs (per member)</b>											
Comparator Group	\$ 149	\$ 149	\$ 153	\$ 148	\$ 145	\$ 155	\$ 148	\$ 138	\$ 132	\$ 120	\$ 116
Investment Costs (per \$100 of assets) **	\$ 0.66	\$ 0.63	\$ 0.58	\$ 0.39	\$ 0.32	\$ 0.33	\$ 0.29	\$ 0.28	\$ 0.38	\$ 0.30	\$ 0.22
<b>Administrative Expenses **</b>											
Member Services	6.5%	7.1%	8.3%	14.1%	17.9%	16.7%	20.9%	23.4%	21.7%	21.4%	34.7%
Investments	93.5%	92.9%	91.7%	85.9%	82.1%	83.3%	78.9%	76.6%	78.3%	78.6%	64.3%

Note: Since 2008 amounts relate to transactions of post-1992 Teachers' Pension Plan and of the Private School Teachers' Pension Plan  
\*Teachers' Pension Plan

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



# CORPORATE DIRECTORY

## Committees of the Board

### AUDIT

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

### FINANCE AND PLANNING

Chair Sandra Johnston, Vice Chair Greg Meeker

### HUMAN RESOURCES AND COMPENSATION

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

### INVESTMENT

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

### External Members

Catherine Connolly

President and CEO, Gist Capital Solutions

Richard Fortier

Formerly President and

COO, Desjardins Financial Security

## Corporate Management

Chief Executive Officer    Rod Matheson

Chief Investment Officer    Derek Brodersen

### Vice Presidents

Corporate Services    Margot Hrynyk

Finance    Myles Norton

Information and  
Technology Services    Albert Copeland

Pension Services    Julie Joyal





---

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

Telephone: 780.451.4166 Toll Free: 1.800.661.9582  
Online: [ATRF.com](http://ATRF.com) Email: [info@ATRF.com](mailto:info@ATRF.com)

