UNIVERSITIES ACADEMIC PENSION PLAN

2019 ANNUAL REPORT

TABLE OF CONTENTS

Plan Profile

The Universities Academic Pension Plan (UAPP) was established in 1978 as a defined benefit pension plan for members of the academic and professional staff of Alberta universities and Banff Centre. The UAPP was set up under the Public-Sector Pension Plans Act (Alberta) and the Provincial Treasurer was the trustee until December 31, 2000. The plan became an independent pension plan registered under the Employment Pension Plans Act (Alberta) and the Income Tax Act (Canada) as of January 1, 2001. The UAPP is now established under the Sponsorship and Trust Agreement signed by the Plan's sponsors: the academic staff associations and the boards of governors of the University of Alberta, University of Calgary, University of Lethbridge, Athabasca University, and Banff Centre (Sponsors).

- The Board of Trustees (Board), as established under the Sponsorship and Trust Agreement, is responsible for administering the Plan and investing the Fund.
- The UAPP is financed by employer and employee contributions, and by investment earnings. The Alberta Government also contributes towards eliminating the unfunded liability for service before 1992.
- At December 31, 2019, the UAPP has 8,151 active members, 2,352 deferred members, and 5,851 pensioners.
- The UAPP Fund's market value at the end of 2019 was $5,477 million.

GOVERNANCE OF THE PLAN

Board Mandate

The Board is responsible for administration of the UAPP, investment of UAPP funds, setting contribution rates required to fund the UAPP, and assisting Sponsors in developing appropriate changes to the UAPP. In carrying out its mandate, the Board is assisted by a small management team.

Board Composition

The Board of the UAPP is composed of five employer trustees and four employee trustees. The total votes carried by the employer trustees are the same as the votes carried by the employee trustees. The offices of Chair and Vice-Chair alternate every two years between employer and employee trustees.

Mission

It is the mission of the Board to deliver on its mandate in a manner that is consistent with:

- high quality services to the UAPP members and stakeholders,
- prudent investment of the fund,
- seeking stable contribution rates within the funding requirements of the Employment Pension Plans Act (Alberta),
- best practices in pension plan governance and management, and
- all applicable rules, laws, and regulations.

Values

In carrying out its mission, the Board is guided by the following values:

- work in full partnership with Sponsors,
- be member/stakeholder focused,
- be open, accountable, and responsible for its actions,
- conduct UAPP business with trust, fairness, and integrity,
- adhere to the highest ethical standards,
- value and treat its employees as a vital resource, and
- strive to adopt best business practices.

GOVERNANCE OF THE PLAN

BOARD OF TRUSTEES

Aditya Kaul
University of Alberta
Employee Appointee

Bruce Byford
Banff Centre
Employer Appointee

Deborah Meyers
Athabasca University
Employer Appointee

Geoffrey Hale
(Vice Chair)
University of Lethbridge
Employee Appointee

Gitta Kulczycki
University of Alberta
Employer Appointee

Lawton Shaw
Athabasca University
Employee Appointee

Linda Dalgetty
(Chair)
University of Calgary
Employer Appointee

Nancy Walker
University of Lethbridge
Employer Appointee

Paul Rogers
University of Calgary
Employee Appointee

COMMITTEES OF THE BOARD

Actuarial Committee

Paul Rogers (Chair)
Deborah Meyers
Lawton Shaw
Nancy Walker

Investment Committee

Aditya Kaul (Chair)
Geoffrey Hale (Vice Chair)
Gitta Kulczycki
Linda Dalgetty
External members:
Andrew Tambone
Bob Normand
Laurence Waring

Audit Committee

Gitta Kulczycki (Chair)
Bruce Byford
Paul Rogers
External member:
Megan Costiuk

PLAN SERVICE PROVIDERS

Administration Service Provider
Buck
(UAPP Administration Centre)
Member Pension Inquiries:
201 City Center Drive Suite 1000
Mississauga, ON L5B 4E4
Phone: 1.866.709.2092
Email: uapp.pensions@buck.com

Pensioner Payroll
CIBC Mellon Global Securities Services
Pensioner Payroll Inquiries:
CIBC Mellon Pension Benefits Dept.
PO Box 5858, Station B
London, ON N6A 6H2
Phone: 1.800.565.0479
Website: www.CIBCMellon.com

Investment Management
Alberta Investment Management Corp. (AIMCo)
Beutel, Goodman & Company Ltd.
Fiera Capital Corporation

Asset Consultants & Actuary
Aon Hewitt

Auditor
KPMG LLP

Contact the Board

Management Team

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COVID-19 VIRUS UPDATE

COVID-19 Virus Update

The following Annual Report was written as at December 31, 2019 with the accompanying financial statements accurately reflecting the financial position of the Universities Academic Pension Plan (UAPP) at December 31, 2019.

However, as you know, Canada has been experiencing the impact of the global COVID-19 pandemic. While we do not want to diminish the impact that COVID-19 is having on individuals, we do want to provide an update on the impact COVID-19 is having on the UAPP.

Investment Fund

2020 has started out as a very difficult year for investors. With the world now facing the global spread of the COVID-19 virus along with the collapse in the price of oil, equity markets worldwide have declined significantly.

While there was no way to anticipate the impact of the COVID-19 virus, the UAPP Fund is broadly diversified which helps lessen the impact of the equity market downturn. Investments include a diversified portfolio of public equities, fixed income, and alternative assets such as real estate and infrastructure. The challenges currently facing investors reinforce the importance of following a disciplined, long-term investment approach. While the COVID-19 virus has been a shock to the global economy, we believe that it is a short-term issue which will resolve itself over time.

This decline in the value of the UAPP's investments should not impact the security of your pension from UAPP. The defined benefit pension earned by members is not solely dependent on the performance of the financial markets.

Operations

The UAPP relies on various service providers (both administrative and investment) for the day to day operation of the Plan. The service providers have activated their business continuity plans to ensure that all critical functions remain fully operational. This includes having personnel work from home and other personnel remaining on site to ensure critical systems continue to function.

The UAPP Trustees' Office has been temporarily closed with all staff working from home. We expect all service levels to be maintained during this crisis.

Monthly pension payments will continue to be paid on time.

The UAPP Board is monitoring the impacts of the COVID-19 virus on an ongoing basis and will take whatever steps are necessary to ensure the provision of pension benefits to members and their beneficiaries.

MESSAGE FROM THE CHAIR

The Board made progress during 2019 toward attainment of a stable financial position for UAPP with the goal of securing member benefits.

During the year, the Board undertook an actuarial valuation, providing an opportunity to evaluate the Plan's financial status as at the end of 2018 with comprehensive updated member information. After considerable discussion of the valuation results under several scenarios, the Board decided to maintain the Plan's total contribution rate by further strengthening the basis underlying its calculation. Based on an extrapolation of the valuation by the Plan's actuary, the UAPP's actuarial liabilities increased to $6.18 billion at the end of 2019 while the actuarial value of assets grew to $5.33 billion through the year. The result was an actuarial deficit of $848.5 million at the end of 2019, declining by $72.1 million from the start of the year. The funding position of the Plan, measured as the ratio of assets to liabilities, improved from 84.3% to 86.3%. The brightened fiscal picture includes a small actuarial surplus for post-1991 service though there remains a significant actuarial deficit relating to pensions accrued prior to 1992. A healthier overall financial position is valuable in helping to secure promised pension benefits, to keep contribution rates from disruptive fluctuations, and to create a buffer to protect the Plan from future adverse experience.

Markets performed well during the year with the UAPP fund returning 13.5% in 2019, a substantial improvement from 2018 when the fund lost 0.5%. The fund's annualized ten- and twenty-year returns are 8.8% and 6.4% respectively, compared to the annualized assumed returns of 6.1% and 6.5% over the same periods. Going forward, the Board anticipates challenges in sustaining these good returns and has reduced the assumed annual future return to 5.46%. This reduction in the rate helps to build a level of conservatism into the Plan's funding.

The Fund's asset mix continued its evolution to reduce the public equities allocation and increase alternative asset classes, stemming from the results of the Plan's most recent asset/liability modelling study. This transition is expected to be fully completed during 2020. The Plan's asset mix targets include an allocation of 35% to fixed income, 45% to public equities, and the remaining 20% to alternative classes. To assess the effectiveness of the Plan's current mix, the Board has decided to undertake a new asset/liability study during 2020. In the meantime, the Board continues to monitor changes in markets and review the Fund's performance on a quarterly basis with the assistance of the Investment Committee and its investment consultant.

The parties involved in the daily plan administration continue to meet through the Board's Pension Benefits Administration User Group which acts as a forum for consultation and interaction among the employers, the pension administrators, and the Board through its Trustees' Office. The Board also continues to work with Plan Sponsors on issues related to the Plan, particularly funding, the unfunded liability for pre-1992 service, and benefits design.

MESSAGE FROM THE CHAIR

Effective member communications remain a key goal of the Board. To keep members informed about the UAPP, information is provided through multiple channels, including regular publications available on the website. The Member Handbook is updated annually and the Communiqué continues to be published quarterly to inform members about the Fund's investment performance and pension matters with regular features on the website, www.uapp.ca. The website continues to provide comprehensive Plan information and we are pleased that members are using the website in increasing numbers. The Retirement Planner is also available on the website and it allows members to estimate their UAPP pension by running an unlimited number of calculations with various retirement dates and projections of future service and salary. In-person seminars are provided by the Trustees' Office to any employer willing to organize a session. During the seminars, a live demonstration of the Retirement Planner is usually presented.

On behalf of the UAPP, it is my pleasure to thank Bob Normand, Andrew Tambone, and Laurence Waring as external members on the Investment Committee and Megan Costiuk as external member on the Audit Committee. All four external members give generously of their time and talents to the UAPP and their efforts are greatly appreciated by the Board.

Our relationship with the Plan's investment managers is critical to the effective implementation of the Board's investment policies. We want to thank the staff at the Alberta Investment Management Corporation (AIMCo), Beutel Goodman & Company Ltd., and Fiera Capital Corporation for their work during the year and we look forward to continuing cooperative and productive relationships with all three managers.

I want to thank my colleagues on the Board for their service to the UAPP and for their personal support and guidance to me in my role as Chair. As my term as Chair ends, I would like to welcome and extend my best wishes to Geoffrey Hale as the new Chair of the Board.

The UAPP relies on a small team to carry out its mandate and related functions. On behalf of the Board, it is my pleasure to thank our Trustees' Office team for their service and dedication to the UAPP.

Linda Dalgetty
Chair, Board of Trustees

Financial Position of the Plan

The Plan's Assets

Following the poor performance of 2018, the Plan's investments rebounded impressively during 2019, returning 13.5% as the market value of assets grew by $646.3 million to end the year at $5,477.3 million. After starting the year at $4,830.9 million, the market value crossed the $5,000 million threshold before the end of February 2019 and continued on an upward trend through the rest of the year with eleven of twelve months providing positive returns.

One of the responsibilities of the UAPP Board is to ensure the Plan has net assets that fully support the total pension obligation to its members. The assets and obligations in the Plan are managed over a very long term. Through most of the 1990s, the post-1991 portion of the Plan was almost fully funded. The collapse of the information technology bubble during 2001-02 saw a fall in stock markets and the Plan's net assets declined while the pension obligation continued to grow. By 2007, the Plan's financial position had partially recovered until the world credit crisis in 2008 caused a large gap between the growing pension obligation and the net assets of the Plan. Market returns were strong in 2019 though a slightly stronger Canadian dollar hindered the Plan's foreign investments. Overall, the Plan's total funded status improved to levels not seen in almost two decades.

As a result of the good performance, investment expenses climbed significantly during 2019, primarily due to performance in the infrastructure asset class. Fees were $29.9 million, up from $23.5 million in 2018. The Plan's focus continues to be on receiving risk-adjusted returns net of expenses and the healthy net return provides evidence this goal is being achieved. The fund's allocation to more expensive alternative investments continued to grow during the year and is expected to do the same in 2020.

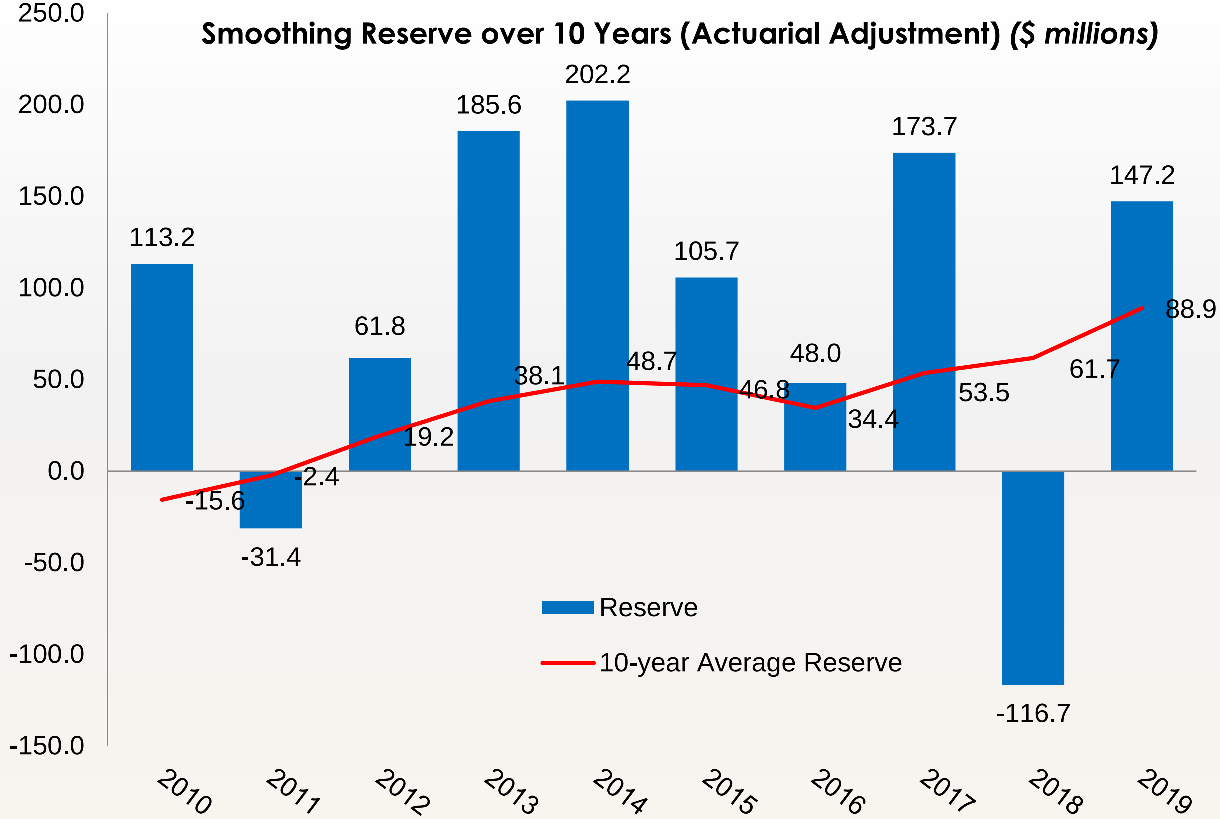
For funding purposes, assets are often calculated using an actuarial value basis that allows pension plans to filter the short-term market fluctuations out of the calculation of the financial position. Given the long-term nature of the liabilities, the Employment Pension Plans Act of Alberta provides the opportunity to apply a smoothing method. The UAPP uses an averaging of the differences between the rates of return assumed in the actuarial valuation and the market rates of return experienced by the fund. Unlike in 2018, actual investment returns exceeded the expected returns in 2019, contributing to the smoothing reserve increasing by $263.9 million during the year, with the Plan having a positive reserve of $147.2 million at December 31, 2019 from a negative reserve of $116.7 million at the end of 2018. The actuarial value of the assets increased by $382.5 million to $5,330.1 million from $4,947.6 million at the start of 2019.

	December 31, 2019			December 31, 2018		
	Pre-1992	Post-1991	Total	Pre-1992	Post-1991	Total
Fair Value of Net Assets	647.8	4,829.5	**5,477.3**	655.8	4,175.1	**4,830.9**
Actuarial Adjustment	(20.6)	(126.6)	**(147.2)**	11.8	104.9	**116.7**
Actuarial Value of Net Assets	627.2	4,702.9	**5,330.1**	667.6	4,280.0	**4,947.6**
Accrued Pension Liability	1,478.8	4,699.8	**6,178.6**	1,498.7	4,369.6	**5,868.3**
Actuarial Surplus (Deficiency)	(851.6)	3.1	**(848.5)**	(831.1)	(89.6)	**(920.7)**
Funded Ratio	42.4%	100.1%	**86.3%**	44.5%	97.9%	**84.3%**

(all figures in $millions)

FINANCIAL POSITION OF THE PLAN

A detailed description of the method used to calculate the actuarial value of assets is included in the most recent actuarial valuation report as at December 31, 2018 posted on our website www.uapp.ca, and in Note 14 of the Financial Statements. The actuarial value is equal to the average of the actual market value at December 31, 2019 and the projected market values at the same date rolled forward from the two most recent year-end dates December 31, 2018 and December 31, 2017.



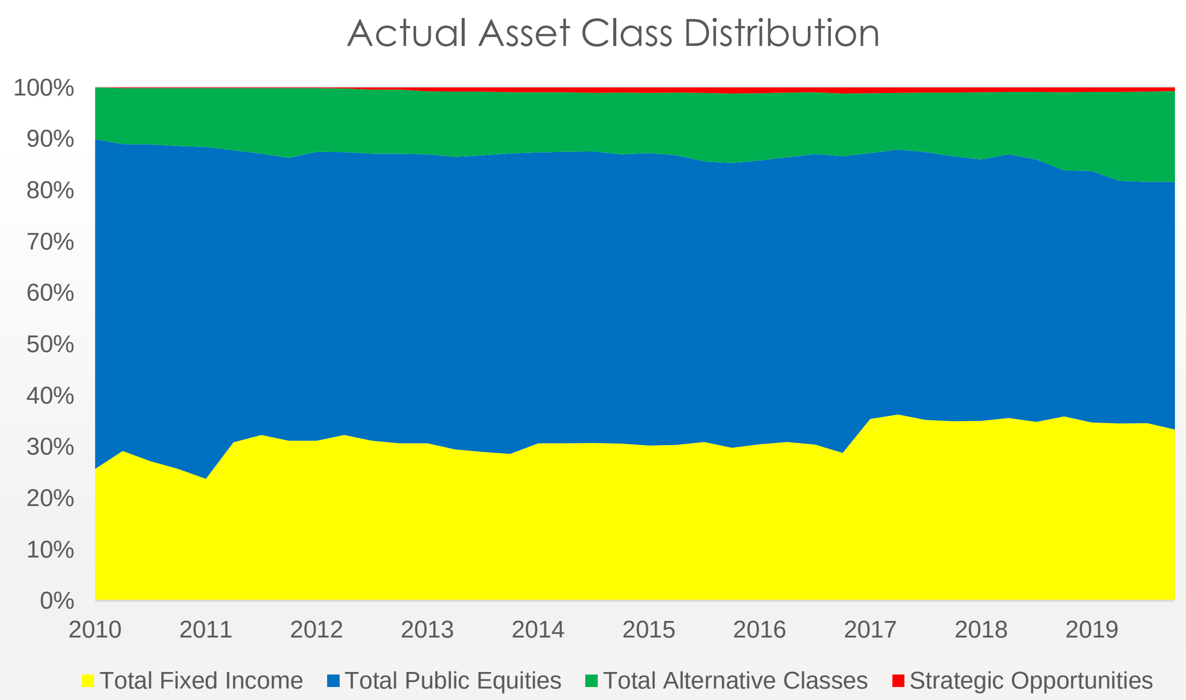
The 10-year average smoothing reserve has increased from $61.7 million to $88.9 million, since the 2019 positive reserve replaced the 2009 negative reserve of $124.7 million in the 10-year average calculation. As with last year, the highest annual reserve over the last ten years continues to be $202.2 million at December 31, 2014. The lowest reserve over the same time frame is the negative reserve of $116.7 million from 2018.

At the December 2019 UAPP Board of Trustees meeting, a motion was passed to proceed with an asset/liability modelling study during 2020. This study follows one prepared in 2015-16 which resulted in changes to the Plan's target asset mix, specifically a reduction in public equities with a small increase in fixed income and a larger increase in alternative asset classes.

FINANCIAL POSITION OF THE PLAN

Since the end of 2009, the fixed income allocation has grown from 25.5% of the fund to 33.4% at December 31, 2019. Over the same time period, public equities have decreased from 63.8% to 48.2% and alternative asset classes have increased from 10.7% to 17.7%. The strategic opportunities and currency portion of the fund has never exceeded 1.2% of the total fund and, today, comprises only the remaining 0.7%.

The fund is expected to continue moving towards the target allocations as outlined in the Statement of Investment Policies and Goals during 2020 but a plan to transition to a new mix, if needed, will commence at the conclusion of the new study.



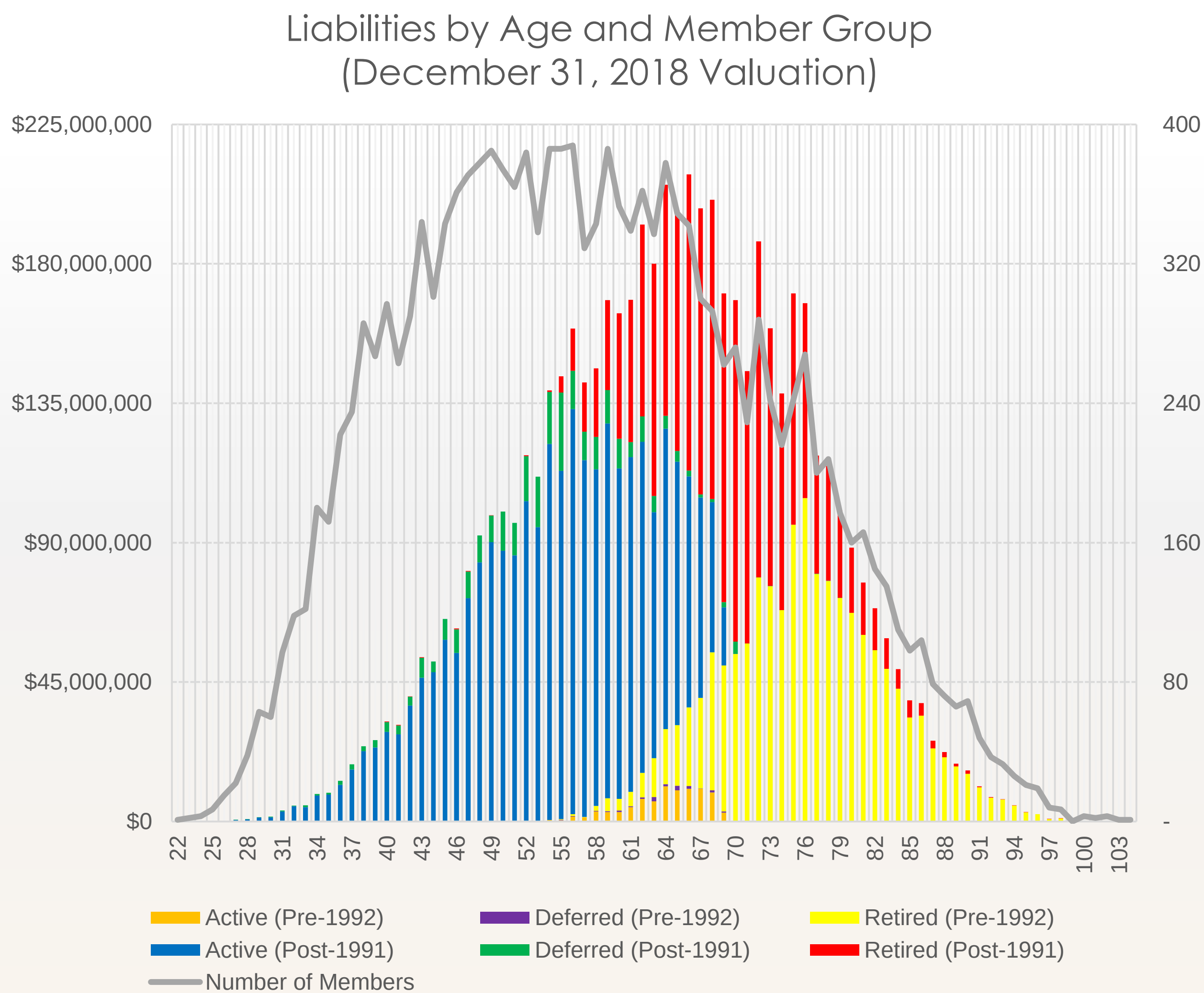
The Plan's Liabilities

The Plan's accrued liabilities as of December 31, 2019 are estimated at $6,178.6 million, increasing by 5.3% from the December 31, 2018 liability estimate of $5,868.3 million. The 2019 liability was calculated based on an extrapolation by the Plan's actuary using the membership data and methods utilized in the December 31, 2018 actuarial valuation, which was completed during 2019 but after the 2018 Financial Statements were finalized. The 2018 liability was determined from an extrapolation of the December 31, 2016 actuarial valuation. The assumptions used in each extrapolation are determined separately with a summary of key assumptions found in Note 5 of the Financial Statements.

FINANCIAL POSITION OF THE PLAN

Prior to 1992, pension benefits in UAPP were not fully funded. At that time, the unfunded liability for service accrued to 1992 was to begin being funded between members, employers, and the Government of Alberta based on an amortization to 2043. Today, the deficit for pre-1992 service continues to be funded with the Government of Alberta making contributions equal to 1.25% of active membership total salary. Members and employers share the remaining cost, as determined at each actuarial valuation. From the latest valuation report, members and employers will each contribute 1.52% of payroll. The pre-1992 liability now comprises 23.9% of the total for the plan.

The lifecycle of a member's actuarial liability in a pension plan like UAPP generally is one of gradual growth while actively accruing additional years of pensionable service, culminating in a peak at the time of retirement. As pensions are paid, the value of the liability will usually decline steadily before equalling zero when the pension ceases upon the member's (or in many cases, the surviving spouse's) death.



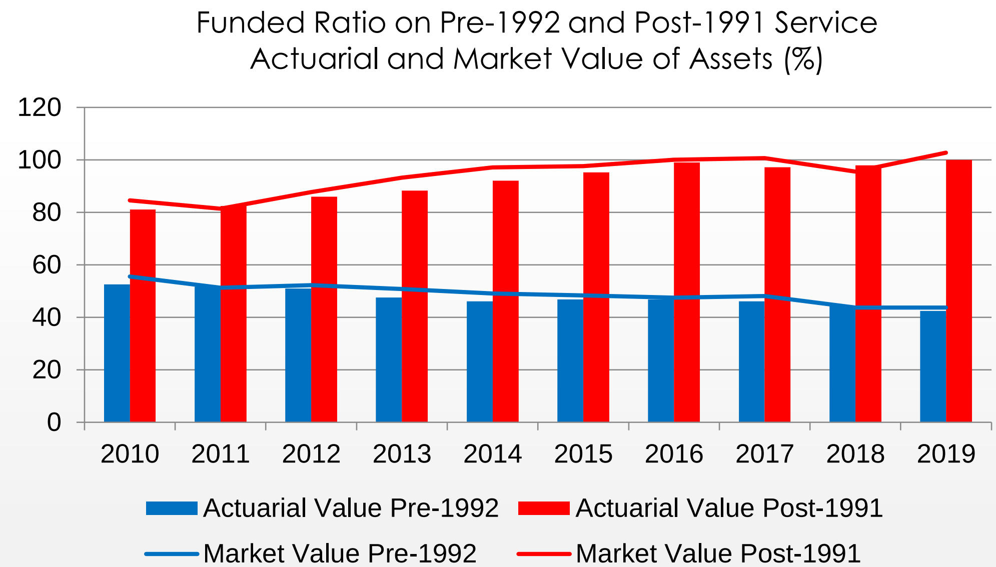
FINANCIAL POSITION OF THE PLAN

The Plan's Funded Ratio

Despite the increase in actuarial liabilities during 2019, in part from the strengthening of the valuation assumptions, the Plan's funded ratio (i.e. assets divided by liabilities) still improved as a result of excellent returns on Plan assets. On a market value basis, the funded ratio for all service is 88.6% (2018: 82.3%) and on an actuarial value basis is 86.3% (2018: 84.3%).

The pensionable service accrued by members prior to 1992 is accounted for separately because, under rules established by the provincial government at that time, the unfunded liability was amortized over 50 years, such that the deficit is retired no later than 2043. The funded ratios for pre-1992 service are 43.8% (2018: 43.8%) on a market value basis and 42.4% (2018: 44.5%) on an actuarial value basis. The ratio struggles to improve due to the long amortization period, improvements in life expectancy, and decreases in the discount rate over the years. Initially, the Government's share of the pre-1992 unfunded liability contribution was approximately 50% but their contribution represents about 30% today.

The Plan's funded status history for post-1991 service is significantly brighter. Despite some setbacks, this portion of the Plan has been fully funded in the past. Today, the funded ratio on a market value basis is 102.8% (2018: 95.5%) and the funded ratio on an actuarial value basis is 100.1% (2018: 97.9%). Unfunded liabilities for this service period are amortized over 15 years with the costs equally shared between members and employers.



The liabilities for 2019 are based on an extrapolation of the results calculated for the December 31, 2018 actuarial valuation completed during the year. Assumptions used in that valuation were reviewed and updated by the Board. The financial position of the Plan had improved to the end of 2018 so the Board elected to adjust the assumptions by lowering the discount rate to 5.46% from 5.60% and by adopting the latest mortality projection scale, allowing the Plan to maintain contribution rates to help continue moving the Plan to a more secure financial footing. Legislation requires an actuarial valuation be completed at least once every three years, but it has been a long-standing practice for UAPP to perform valuations every two years to ensure contribution rates are adjusted in a timely manner.

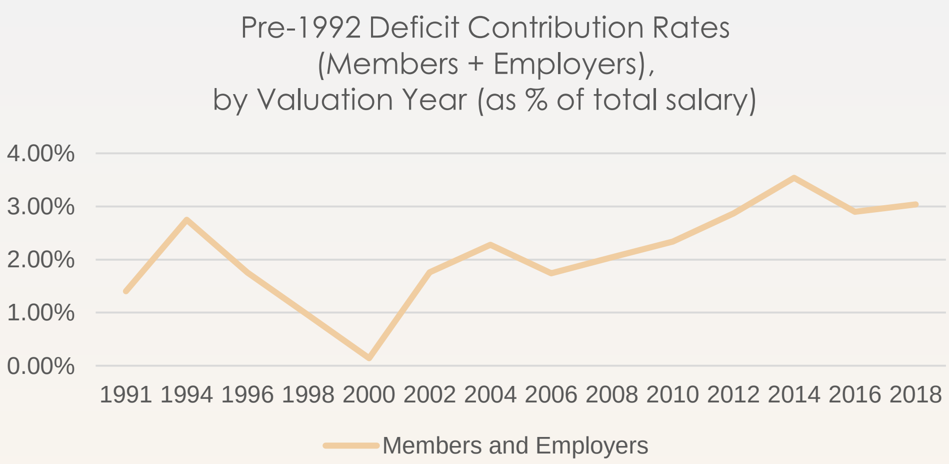
FINANCIAL POSITION OF THE PLAN

Looking to the Future

As the UAPP looks forward, the Plan continues to face many of the same risks that have impacted the funded status in the past. The Board addresses these risks through an ongoing process of identification and mitigation as it seeks to achieve its long-term goal to ensure the provision of pension benefits to Plan members and their beneficiaries.

In only two of the eleven years since the 2008 financial crisis, 2011 and 2018, did the Plan experience investment returns that did not exceed its target. Over that period, markets have performed very well and the Plan has also benefited from a diversified portfolio of assets that are professionally managed with policy guidance from the Board. Interest rates continue to slide downwards, creating some difficulties in attaining higher returns.

Liabilities continue to grow as the Plan contends with its demographic challenges. Members are living longer than ever before, meaning pensions are paid for longer periods. For the first time since 2014, the Plan experienced a decline at year-end in the number of active members. Lower discount rates reflect more subdued expectations of investment returns but they also lead to increases in the liabilities as they represent the present value of all future pension payments.



The demographic challenges have especially impacted the funding of the pre-1992 liability. The 50-year amortization of that deficit reached its halfway mark with the December 31, 2018 valuation and continues to affect total contribution rates.

The Board monitors investment returns closely and, while performance fluctuates where a negative return in one year, such as 2018, can be followed quickly by a great return the next year, the focus continues to be on the long-term. Indeed, the promise to pay accrued pensions for the lifetime of the Plan's youngest members is factored into current funding requirements. To safeguard these promises, the Plan's asset mix reflects a combination of the Board's funding goals and its appetite for investment risk. The Board looks forward to the 2020 asset/liability modelling study with results used to update the asset mix as appropriate.

Investment Beliefs and Approach

As discussed in previous Annual Reports, the development of the UAPP's strategic, long-term investment policy is based on several key beliefs.

1. There is a relationship between risk and return. Achieving higher returns generally requires exposure to higher risks. The relationships between risk and return are more predictable over the longer term. Equities will, in the long-term, provide greater returns than fixed income investments although with greater short-term volatility. The long-term strategic asset allocation decision is the most important factor in determining investment risk and return.

2. In establishing the asset mix policy of the Fund, the liabilities of the Plan should be taken into consideration. As an example, inflation has a direct impact on the UAPP's liabilities. Investments in inflation-sensitive assets like Real Return Bonds, Real Estate, and Infrastructure are a way of managing the inflation risk.

3. Diversification within and across asset classes can reduce risk over the long term without compromising expected returns and is a prerequisite to prudent fund management. Exposure to foreign currencies as a result of moderate levels of foreign investments can provide diversification benefits. Currency hedging should only be undertaken on an opportunistic basis.

4. Over the long term, longer term bonds will outperform cash and short-term bonds. Longer term bonds will outperform during periods of stable and declining rates but will underperform during periods of significantly rising interest rates. Relative to shorter term bonds, longer term bonds generally provide better matching with the Plan's liabilities thus reducing the volatility of the required contributions and funded status.

5. Active management will serve the Plan better than passive management in most asset classes. Markets are efficient to varying degrees, and short-term deviations from long-term fundamentals can occur. Therefore, there is an expectation for skilled managers to add value and/or reduce risk relative to passive exposure to the market. The opportunity for value added and/or reduced risk from active management should be weighed against the incremental cost relative to passive market exposure.

6. Over the long-term, but not necessarily in most years, investment in a value stock portfolio will tend to produce performance similar to or better than investment in a growth stock portfolio and the performance of the value stock portfolio will be less volatile.

7. A specialist manager structure offers a number of benefits over a balanced manager structure including the potential to hire the best manager for each asset class, greater flexibility to replace underperforming funds, and the ability to make use of passive investment funds for appropriate asset classes.

8. With respect to foreign equities, global mandates are preferred over combinations of U.S. and international equity mandates because global mandates allow managers more flexibility and greater opportunities to add value.

9. Market timing is not seen as an effective strategy for generating consistent returns. Therefore, a rebalancing protocol around the strategic asset mix is seen as the most effective way of ensuring that portfolio risk does not drift materially above or below the intended risk level.

10. Investment managers should be monitored regularly for changes in ownership, investment process and philosophy, key investment personnel, and for investment returns against relevant peer groups and indices. Managers may be terminated on the basis of qualitative issues even if investment returns are acceptable. Investment returns should be evaluated over at least a 4-year period. Emphasis should be placed, not only on the level of returns, but also on the amount of risk taken to achieve those returns. Tracking error should be assessed in terms of the impact on volatility of the Plan's required contributions and funded status.

These beliefs require an investment approach that seeks to obtain higher long-term returns while containing the volatility in short-term results. This goal underlies the UAPP's investment policy and risk management measures.

Investment Policy

The UAPP's investment policies are based on the investment beliefs and expectations of the Board and are set out in the Statement of Investment Policies & Goals (SIP&G). The asset mix policy, or the Fund's long-term allocation to the different asset classes, is a key component of the SIP&G. It is through the asset allocation decision that the Board diversifies its investments across asset classes and attempts a balance between the objective of higher long-term returns and the need to reduce shorter term volatility in those returns.

The Board, through its Investment Committee, monitors on an ongoing basis the performance of the Fund, the funded status of the Plan, capital markets and economic developments and expectations. Based on this monitoring, the Board may make adjustments to the asset mix and take other appropriate measures to control risk or improve returns. The Board reviews the SIP&G at least once a year.

The following table compares the Board's current Long-term Policy Asset Mix benchmark and ranges to the actual asset mix of investments for 2019 and 2018. A copy of the full text of the UAPP's SIP&G is available on the UAPP website www.uapp.ca under Publications.

Long-term Policy Asset Mix
(percentage of Fund)

Asset Class	2019 Benchmark [1]	2019 Min	2019 Max	2019 Actual	2018 Benchmark [1]	2018 Min	2018 Max	2018 Actual
	%			%	%			%
Money market and fixed Income								
Cash & short term	0.0	0.0	1.0	0.2	0.0	0.0	1.0	0.4
Universe bonds	11.5	8.0	14.0	11.3	11.5	8.0	14.0	13.4
Private mortgages	5.0	3.0	7.0	4.2	5.0	3.0	7.0	4.1
Long duration bonds	11.5	8.0	14.0	11.0	11.5	8.0	14.0	11.0
Real return bonds	7.0	5.0	9.0	6.7	7.0	5.0	9.0	7.0
	35.0	**26.0**	**41.0**	33.4	35.0	**26.0**	**41.0**	35.9
Public equities								
Canadian	12.0	10.0	20.0	12.1	16.0	10.0	20.0	11.3
Foreign								
Global	26.0	22.0	31.0	29.0	28.0	22.0	31.0	29.5
Emerging markets	7.0	5.0	9.0	7.1	8.0	5.0	9.0	7.2
	45.0	**40.0**	**60.0**	48.2	52.0	**40.0**	**60.0**	48.0
Alternative investments								
Real estate	8.0	5.0	11.0	7.9	8.0	5.0	11.0	8.8
Infrastructure	7.0	3.0	9.0	5.6	4.0	3.0	9.0	3.8
Timberland	0.0	0.0	1.0	0.8	1.0	0.0	1.0	0.9
Private equity	5.0	0.0	7.0	3.4	0.0	0.0	7.0	1.7
	20.0	**12.0**	**25.0**	17.7	13.0	**12.0**	**25.0**	15.2
Strategic opportunities and currency	-	-	-	0.7	-	-	-	0.9
Total	100.0			100.0	100.0			100.0

(1) The benchmark in 2018 represents the interim policy weighting as the Plan transitions to reduced long-term weightings in Canadian and global equities and increased weightings in private equity and infrastructure investments. The benchmark in 2019 represents the long-term policy weighting as the Plan moves closer to completing the transition.

As can be seen from the table, the Plan holds a highly diversified portfolio of investments in fixed income securities, Canadian and foreign equities, alternative investments, and strategic opportunities. This includes participation in both passively and actively managed pooled investment funds. The Plan invests in units of pooled investment funds which are created and managed by investment managers. Pooled fund units have a market-based unit value that is used to allocate income to participants in the pool and to value purchases and sale of units. There are thousands of securities held in various pooled investment funds. Securities may be bought and sold on a daily basis. The Plan has a broad global diversification across publicly traded and private equities which increases opportunities to add value. In addition, the Fund's investments in real estate and infrastructure provide better cash yields that grow with inflation.

The Plan's money market and fixed income portfolio is exposed to credit risk and interest rate risk through bond and mortgage holdings and derivative products. Based on the view that currencies are a zero-sum game in the long-run, currency exposure to foreign equity markets is largely unhedged. Up to 25% of the Plan's foreign currency exposure can be hedged. Therefore, unless currency exposure is hedged, the returns from foreign markets will be impacted by changes in the exchange rate of the Canadian dollar.

INVESTMENT REPORT

Investment Management

UAPP engages three investment managers to manage its investment portfolio. Beutel, Goodman & Company Ltd. and Fiera Capital Corporation manage its Canadian long bond and the majority of the universe bond portfolios totaling 21.2% of total investments. The majority of UAPP's investments, totaling 78.8%, are managed by Alberta Investment Management Corporation (AIMCo). AIMCo manages UAPP's public equity investments, alternative investments, private mortgages, real return bonds, along with some universe bonds.

Beutel, Goodman & Company Ltd. is a privately-owned Canadian company founded in 1967, with over $40 billion in assets under management. Fiera Capital Corporation was established in 2003 and has more than $165 billion in assets under management. AIMCo is an Alberta provincial corporation established in 2008, reporting to the President of Treasury Board, Minister of Finance. In total, AIMCo administers investment portfolios of around $120 billion on behalf of other public sector pension plans and the Government of Alberta. These investment managers invest the UAPP's assets subject to the investment policies set out in the Board's SIP&G. The majority of investments are managed through pooled investment funds.

To mitigate implementation risk, clearly defined benchmarks, guidelines, standards, and controls have been established at both the total Fund and asset class levels. Investment managers have the flexibility to act within the prescribed limits in order to add value over the policy. Both compliance with the SIP&G and performance against the specified benchmarks are monitored formally on a quarterly basis. The Board has retained an independent asset consultant, Aon Hewitt, to provide evaluation of investment managers on a regular basis.

Proxy Voting

Proxy voting is an important tool in corporate governance. The Board delegates responsibility for proxy voting to investment managers. Pension funds are to be managed in the best interests of beneficiaries. This principle governs the voting of proxies. The UAPP Board considers proxy voting to be a key element of responsible investing and that thoughtful voting is a contributor to optimizing the long term value of investments.

Risk Management

The Board recognizes that in order to meet the return objectives of the Plan, UAPP must take on risk inherent in the assets in which UAPP invests. UAPP invests in a diverse set of asset types to help improve the likelihood of achieving our desired results for a given level of risk.

Investment risk management is a key focus for the Board and the investment managers. Investment managers seek to measure and monitor both historic and possible future risks, allocating risk as a scarce resource to the most promising investment opportunities. A quantitative investment risk system is designed to operate across all asset classes and a variety of risk types such as credit risk, price risk, interest rate risk, currency risk, and liquidity risk.

UAPP monitors the risk of the Plan's liabilities in relation to the investment assets.

INVESTMENT REPORT

Evaluating Investment Performance

A key assumption in calculating the Plan's pension obligation is the discount rate. The estimated value of the Plan's pension obligation is highly sensitive to this assumption. According to the audited financial statements, a decrease in the discount rate by 1% increases the pension obligation by approximately $957 million. The current discount rate of 5.46% includes a long-term real return rate of 3.21% and an assumed inflation rate of 2.25%. This rate represents the Plan's long-term investment return objective for funding purposes. In the 2018 actuarial valuation, the discount rate decreased to 5.46% from 5.60% used in the 2016 valuation.

The Plan's investment performance can also be assessed in terms of whether investment managers are adding value above their respective benchmarks. In this case, the performance of the Plan is measured against a policy benchmark return calculated using the Plan's policy allocation to each asset class and the market index return for the specific class.

While investment performance can be compared to other funds, this comparison is meaningful only to the extent that the funds being compared have similar investment objectives, risks and constraints and policies. A fund that is 100% invested in fixed income, for example, does not provide a valid comparison to a fund that is 100% invested in equities.

2019 Investment Performance

Investments: $5,454.2 million
(2018: $4,808.4 million)

Return on Investments: 13.5%
(2018: (0.5)%)

Investment Income: $678.4 million
(2018: $2.3 million Loss)

Investment Expense: $29.9 million
(2018: $23.5 million)

At December 31, 2019, the fair value of the Plan's investments totaled $5,454.2 million, up from $4,808.4 million at the end of the previous year.

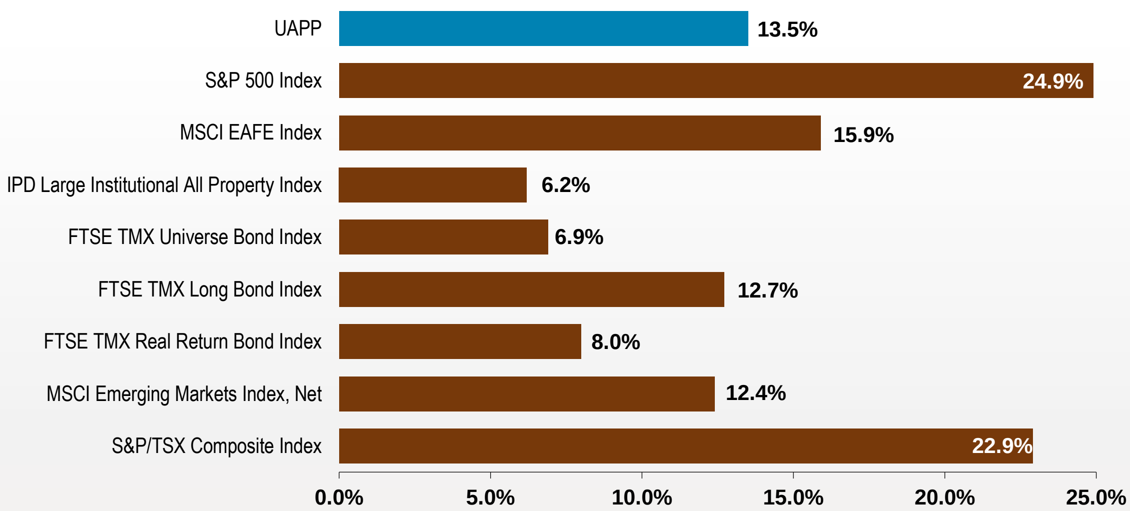
Overall, UAPP finished the 2019 year with a return on investments, after expenses, of 13.5% compared to a loss of 0.5% in 2018.

After a dismal 2018, which saw the Plan post a loss on its investment portfolio, markets bounced back for a strong showing in 2019. UAPP began the year with a robust 6.4% gain in the 1st quarter. Returns leveled off over the next six months, posting 2.0% and 1.2% in the 2nd and 3rd quarters, respectively, before finishing the year strong with a 3.3% return in the 4th quarter.

The strong gains were driven mainly by an incredible turnaround in equity markets. UAPP realized a gain of 18.2% on their public equity investments compared to a loss of 4.8% on the same portfolio in 2018. Despite the strong returns in the current year, UAPP investments underperformed the benchmark return of 14.4%.

The following chart summarizes the market returns in Canadian dollars from various indices around the world and the overall return of UAPP for 2019.

Returns for Major Markets and the UAPP (in $CDN)



The stronger Canadian dollar was unfavorable to foreign investment returns. The Standard & Poor's (S&P) 500 Index, which tracks the performance of the top 500 American companies, gained 24.9% in Canadian dollars (31.5% in U.S. dollars) compared to a gain of 4.2% in Canadian dollars (loss of 4.4% in U.S. dollars) in 2018.

Approximately 18% of the Plan's investments (2018: 18%) are denominated in U.S. dollars. The stronger Canadian dollar in relation to U.S. dollar had a negative impact on the value of U.S. dollar investments held by the Plan. At December 31, 2019, one U.S. dollar was worth $1.30 Canadian compared to $1.36 Canadian at the beginning of the year. As a result, U.S. dollar investments were worth less when translated into Canadian dollars at December 31, 2019 resulting in less favorable returns in Canadian dollars.

The Morgan Stanley Capital International (MSCI) EAFE Index covering Europe, Australasia and the Far East, gained 15.9% in Canadian dollars compared to a loss of 6.0% in 2018. Approximately 18% (2018: 18%) of the Plan's investments are denominated in currencies other than the Canadian and U.S. dollar including the Euro which comprises 3% (2018: 3%) of the Plan's investments. At December 31, 2019, one Euro was worth $1.46 Canadian compared to $1.56 Canadian at the beginning of the year.

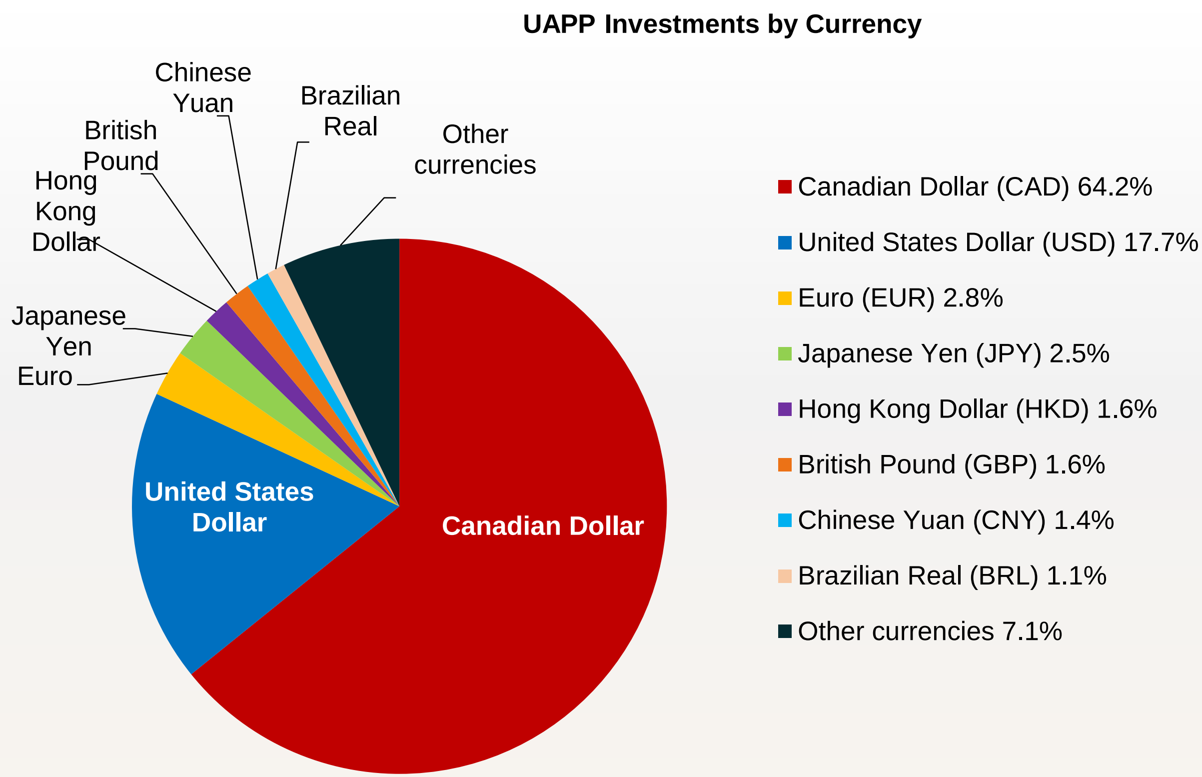
Outside of the global developed equity markets, the MSCI Emerging Markets Index returned 12.4% in 2019 in Canadian dollars compared to a loss of 6.9% in 2018.

The Canadian public equities, represented by the S&P Toronto Stock Exchange (TSX) Composite Index, gained 22.9% in 2019 compared to a loss of 8.9% in 2018.

The Canadian real estate market represented by the IPD Large Institutional All Property Index increased by 6.2% in 2019 compared to an increase of 7.7% in 2018.

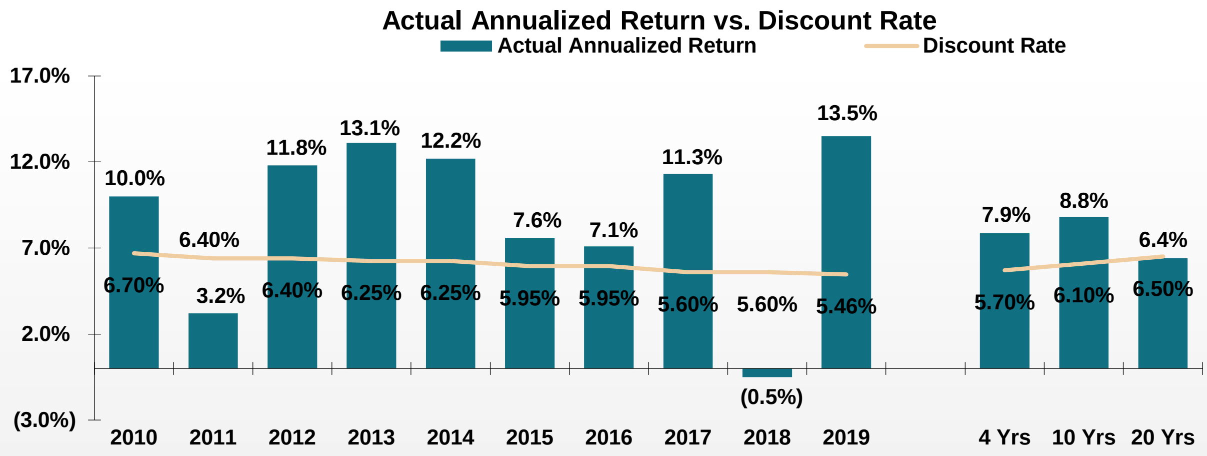
The FTSE TMX Universe Bond Index and the FTSE TMX Long Bond Index posted gains of 6.9% and 12.7% respectively compared to gains of 1.4% and 0.3% in 2018. The FTSE TMX Real Return Bond Index returned 8.0% compared to a return of 0.0% in 2018.

The table below shows UAPP's exposure to foreign currencies and its investments in Canadian dollars.



INVESTMENT REPORT

The chart below compares the Plan's actual return over one year and annualized returns over four, ten, and twenty years against the Plan's actuarial discount rate for funding purposes.

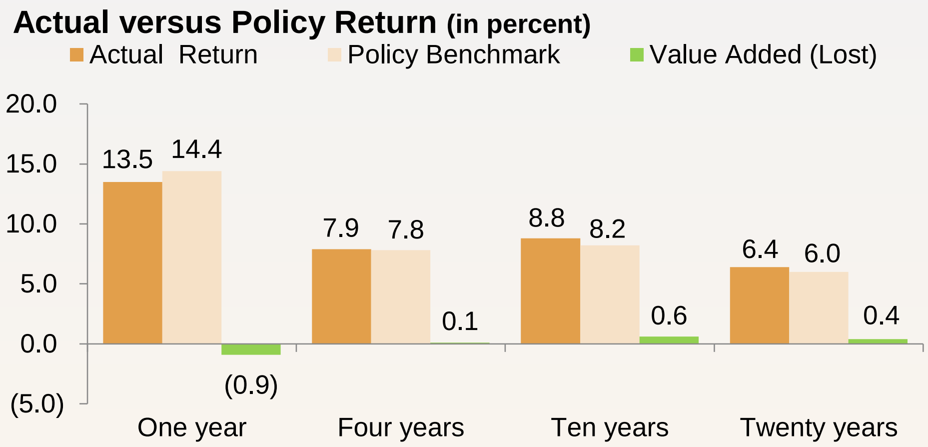


The Plan's annualized returns over four, ten, and twenty years are 7.9%, 8.8% and 6.4% respectively. Over four, ten and twenty years the Plan's actual investment return is greater than the long-term return objective for funding purposes.

Actual versus Policy Return

According to the Plan's SIP&G, the Board has set a performance goal based on the expectation that investment management will add 0.5% per annum over a four-year period beyond the passively managed market-based policy benchmark.

Over the past four years, the value added by investment management decisions was 0.1% per annum.

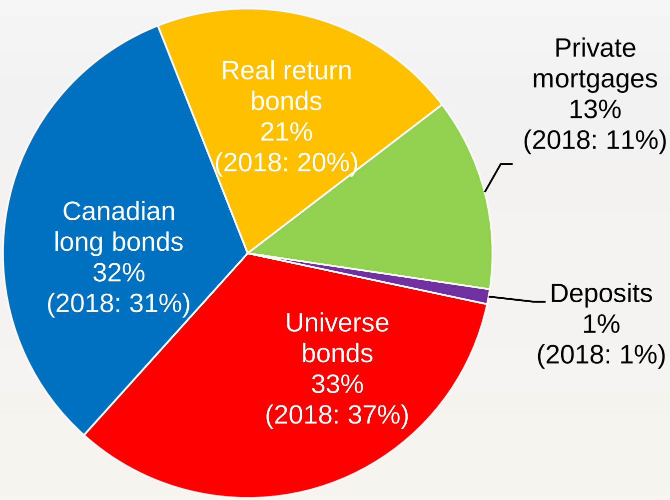


PERFORMANCE BY ASSET CLASS

Fixed Income

At December 31, 2019, fixed income holdings comprise 33.4% of the Plan's total investments or $1,820 million compared to 35.9% or $1,729 million at December 31, 2018. The Canadian long bond portfolio and the majority of the universe bond portfolio are managed by Beutel, Goodman & Company Ltd. and Fiera Capital Corporation. AIMCo manages private mortgages, real return bonds, universe bonds, and deposits in the Consolidated Cash Investment Trust Fund.

Summary of Fixed Income Holdings (by pooled investment fund)



In 2019, the Plan's total fixed income securities gained 8.9%, underperforming against the combined benchmark gain of 9.1% by 0.2%.

Total Fixed Income	Actual Return %	Benchmark Index Combined Benchmark* %	Net Value Added %
One year	8.9	9.1	(0.2)
Four year	4.2	4.0	0.2

* The combined benchmark includes the FTSE TMX Long Bond Index, FTSE TMX Real Return Bond Index, FTSE TMX Universe Bond Index, and FTSE TMX 91-Day T-Bill Index.

Canadian Equities

At December 31, 2019, Canadian public equities represented 12.1% of the Plan's total investments or $660 million up from 11.3% or $544 million at the end of the previous year. The Plan's Canadian equity portfolio is invested in AIMCo's Canadian Equities Master Pool, which in turn invests in the Global Alpha Strategy (GLAS) and structured equity products which replicate Canadian public equities. The purpose of GLAS is to gain access to more markets than would be available if the pool were locked to specific countries or industries, providing more value-add return (alpha). GLAS's portfolio includes directly held investments in public companies in the U.S., Europe, Australasia, and the Far East (EAFE) with smaller allocations to emerging markets and Canada. Non-Canadian exposure is swapped out to provide exposure to the Standard and Poor's Toronto Stock Exchange (S&P/TSX) while still maintaining the alpha earned in GLAS. Interest bearing securities support the notional value of index swaps and futures contracts.

Canadian Equities Master Pool Industry Exposure Relative to Benchmark December 31, 2019	Benchmark S&P/TSX Composite Index	Over (Under) Benchmark
Sector	%	%
Communication services	5.5	1.1
Consumer discretionary	4.1	0.0
Consumer staples	3.9	0.1
Energy	17.0	(0.5)
Financials	32.1	(0.5)
Health care	1.3	(0.1)
Industrials	11.0	(1.1)
Information technology	5.7	0.2
Materials	11.4	(0.1)
Real estate	3.5	0.1
Utilities	4.8	0.4
*	100.0	

* Total exposure may not add up to 100% due to rounding.

In 2019, the Canadian equity portfolio gained 20.8%, underperforming against the S&P/TSX Composite benchmark gain of 22.9% by 2.1%.

Total Canadian Equities	Actual Return %	Benchmark Index S&P/TSX Composite %	Net Value Added (lost) %
One year	20.8	22.9	(2.1)
Four year	9.6	10.3	(0.7)

Foreign Public Equities

At December 31, 2019, foreign public equities accounted for 36.1% of the Plan's total investments or $1,970 million, compared to 36.7% or $1,763 million the previous year. UAPP's global public equity portfolio consists of units owned in AIMCo's Global Equities Master Pool (80%) and Emerging Markets Equity Pool (20%).

Total Foreign Equities	Actual Return %	Benchmark Index Combined Benchmark* %	Net Value Added (lost) %
One year	17.5	19.6	(2.1)
Four year	9.2	9.6	(0.4)

* Combined benchmark incudes the MSCI World and MSCI Emerging Markets indices.

In 2019, the foreign public equity portfolio gained 17.5%, underperforming against the combined benchmark gain of 19.6% by 2.1%.

Global Equities Master Pool

The Plan's global equity portfolio is invested in units of AIMCo's Global Equities Master Pool. The Pool's investment in GLAS provides exposure to a diverse market which ideally provides a higher rate of return than what could be earned investing solely in traditional global markets. The Pool replicates exposure to foreign equity markets by investing in structured equity products using index swaps and futures contracts. Interest-bearing securities support the notional value of index swaps and futures contracts.

Global Equities Master Pool
Industry Exposure Relative to Benchmark
December 31, 2019

Sector	Benchmark MSCI World Total Return Index %	Over (Under) Benchmark %
Communication services	8.4	1.0
Consumer discretionary	10.3	0.0
Consumer staples	8.3	0.1
Energy	4.9	(0.4)
Financials	15.7	(0.5)
Health care	13.0	(0.1)
Industrials	11.0	(1.1)
Information technology	17.4	0.2
Materials	4.4	(0.1)
Real estate	3.2	0.1
Utilities	3.4	0.4
*	100.0	

* Total exposure may not add up to 100% due to rounding.

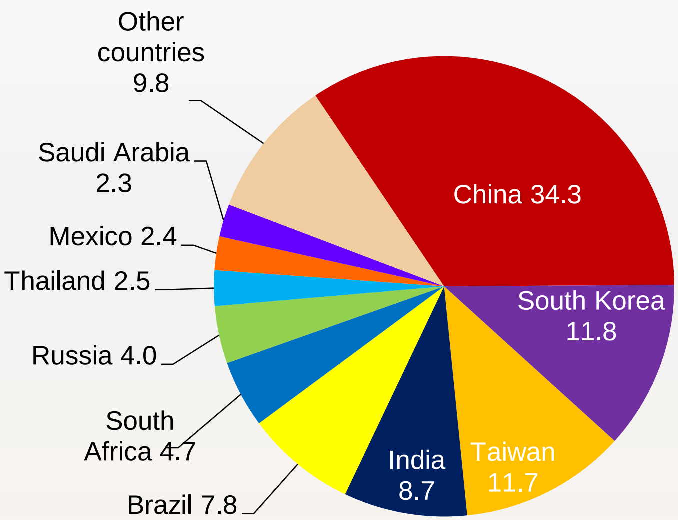
In 2019, the Plan's global equity portfolio gained 19.2%, underperforming against the MSCI World Index benchmark gain of 21.2% by 2.0%.

Total Global Equities	Actual Return %	Benchmark Index MSCI World Index %	Net Value Added (lost) %
One year	19.2	21.2	(2.0)
Four year	9.0	9.4	(0.4)

Emerging Markets Pool

Approximately 20% of UAPP's foreign equity portfolio includes an investment in AIMCo's Emerging Market Pool which holds an investment in GLAS with the non-emerging market exposure being swapped out to the MSCI Emerging Markets Index.

Top Ten Countries in Emerging Markets Pool
(in percent)



In 2019, the Plan's emerging markets portfolio gained 10.6%, underperforming against the MSCI Emerging Markets Index benchmark gain of 12.4% by 1.8%.

Emerging Markets	Actual Return %	Benchmark Index MSCI Emerging Markets Index %	Net Value Added (lost) %
One year	10.6	12.4	(1.8)
Four year	9.5	9.6	(0.1)

INVESTMENT REPORT

Alternative Investments

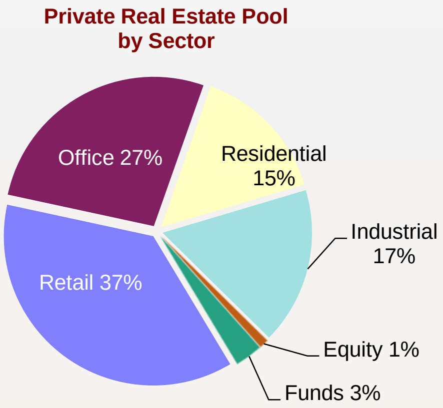
Alternative investments totaling $966 million or 17.7% (2018: $731 million or 15.2%) of the Plan's total portfolio includes real estate, infrastructure, private equity, and timberland investments. In 2019, the Plan's actual gain from alternative investments was 8.8%, 1.0% more than the combined benchmark gain of 7.8%. Over four years, the annualized return was 8.9%, 1.7% more than the combined benchmark gain of 7.2%.

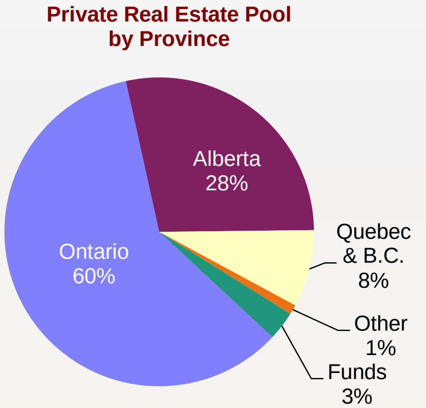
Real Estate

At December 31, 2019, real estate investments comprised 7.9% of the Plan's total investments or $430 million compared to 8.8% or $425 million the previous year. Real estate investments provide diversification and high cash flow and are expected to provide protection from inflation. The UAPP invests in AIMCo's Private Real Estate Pool which includes a mix of office, retail, industrial, and residential properties located in Ontario, Alberta, Quebec, and British Columbia.

In 2019, the Plan's actual gain from real estate investments was 5.5%, underperforming against the IPD Large Institutional All Property Index benchmark gain of 6.2% by 0.7%.

Real Estate	Actual Return %	Benchmark Index IPD Large Institutional All Property Index %	Net Value Added %
One year	5.5	6.2	(0.7)
Four year	7.7	6.7	1.0





Private Income (Infrastructure)

At December 31, 2019, the UAPP's investment in AIMCo's Infrastructure pools comprised 5.6% of total Plan investments or $308 million, up from 3.8% or $183 million at the end of the previous year. Investments include projects in transportation (e.g. toll roads, airports, ports, and rails), power (e.g. contracted power generation and power transmission pipelines), and utilities (e.g. water, waste water and natural gas networks).

In 2019, investments in infrastructure gained 10.6%, outperforming against the Consumer Price Index plus 6% benchmark gain of 8.2% by 2.4%.

Infrastructure	Actual Return %	Benchmark Index Consumer Price Index (CPI) plus 6% %	Net Value Added (lost) %
One year	10.6	8.2	2.4
Four year	9.0	7.8	1.2

Timberland

At December 31, 2019, the UAPP's investment in AIMCo's Timberland Pool comprised 0.8% of total Plan investments or $46 million, compared to 0.9% or $43 million at the end of the previous year. The Timberland investment includes forestry land in Canada and globally. The investment in Canada represents an interest in a limited partnership which holds forestry land and land held for higher and better use in the Province of British Columbia. The foreign investment primarily includes forestry and agricultural land in Australia and New Zealand.

Timberland	Actual Return %	Benchmark Index Consumer Price Index (CPI) plus 4% %	Net Value Added %
One year	19.1	6.2	12.9
Four year	16.0	5.8	10.2

In 2019, the Timberland investment gained 19.1%, outperforming against the Consumer Price Index plus 4% benchmark gain of 6.2% by 12.9%.

Private Equities

The private equity portfolio includes investments in institutionally sponsored international private equity pools managed by experienced external investment advisors with proven track records. Investments in private equities were first made during the fiscal year ending December 31, 2017 so four-year returns are not available. At December 31, 2019, the Plan's investment in AIMCo's private equities comprised 3.4% of the Plan's total investment portfolio, or $183 million, up from 1.7%, or $81 million, in the previous year.

Private Equities	Actual Return %	Benchmark Index Consumer Price Index (CPI) plus 6.5% %	Net Value Added %
One year	10.1	8.7	1.4

In 2019, investments in private equities gained 10.1%, outperforming against the Consumer Price Index plus 6.5% benchmark gain of 8.7% by 1.4%.

Strategic Opportunities Pool and Currency Hedges

At December 31, 2019, the UAPP's investment in AIMCo's Strategic Opportunities Pool comprised 0.7% of total Plan investments or $36.9 million, down from 0.9% or $43.3 million at the end of the previous year. AIMCo's Strategic Opportunities Pool consists of investments in infrastructure and hydropower in emerging market countries in Brazil and Colombia. In 2019, the Strategic Opportunities Pool had a gain of 24.7%.

At December 31, 2019, the fair value of the UAPP's investment in directly held foreign forward exchange contracts was nil compared to a negative $2.4 million at the end of the previous year.

INVESTMENT REPORT

Table of Investment Returns

	December 31, 2019				Annual Returns		
	Investments (in millions)	Asset Mix (%)	2019 %	2018 %	2017 %	2016 %	Annualized 4 yr %
Total Fund	**$ 5,454.2**	**100.0%**	**13.5**	**(0.5)**	**11.3**	**7.1**	**7.9**
Policy Return			*14.4*	*(0.2)*	*10.1*	*7.0*	*7.8*
Value Added (Lost) from Active Management			*(0.9)*	*(0.3)*	*1.2*	*0.1*	*0.1*
Consumer Price Index (1)			*2.2*	*1.7*	*2.1*	*1.2*	*1.8*
Total Fixed Income	**$ 1,820.4**	**33.4%**	**8.9**	**1.4**	**3.7**	**2.7**	**4.2**
Combined Benchmarks			*9.1*	*0.9*	*3.7*	*2.3*	*4.0*
Short-term fixed income	12.9	0.2%	**1.9**	**1.7**	**1.0**	**0.9**	**1.4**
FTSE TMX 91-Day T-Bill Index			*1.7*	*1.4*	*0.6*	*0.5*	*1.0*
Universe Bonds	616.8	11.3%	**6.9**	**1.7**	**2.7**	**2.1**	**3.4**
FTSE TMX Universe Bond Index			*6.9*	*1.4*	*2.5*	*1.7*	*3.1*
Private Mortgages	227.9	4.2%	**6.0**	**4.7**	**2.5**	**2.1**	**3.8**
FTSE TMX Universe Bond Index plus 1%			*7.9*	*2.4*	*3.5*	*2.7*	*4.1*
Long Duration Bonds	598.3	11.0%	**12.5**	**0.5**	**7.0**	**2.9**	**5.7**
FTSE TMX Long Bond Index			*12.7*	*0.3*	*7.0*	*2.5*	*5.5*
Real Return Bonds	364.5	6.7%	**8.3**	**0.1**	**1.3**	**3.5**	**3.2**
FTSE TMX Real Return Bond Index			*8.0*	*0.0*	*0.7*	*2.9*	*2.8*
Total Public Equities	**$ 2,630.6**	**48.2%**	**18.2**	**(4.8)**	**17.0**	**9.6**	**9.6**
Combined Benchmark			*20.4*	*(3.3)*	*15.1*	*10.0*	*10.2*
Total Canadian Equities	660.2	12.1%	**20.8**	**(10.1)**	**10.5**	**20.3**	**9.6**
S&P/TSX Composite Capped Index			*22.9*	*(8.9)*	*8.9*	*21.1*	*10.3*
Foreign Equities			**17.5**	**(3.0)**	**19.2**	**4.6**	**9.2**
MSCI World Index and MSCI Emerging Markets Index			*19.6*	*(1.6)*	*17.0*	*4.7*	*9.6*
Global Equities	1,581.4	29.0%	19.2	(1.9)	16.6	3.4	**9.0**
MSCI World Index			*21.2*	*(0.5)*	*14.4*	*3.8*	*9.4*
Emerging Markets	389.0	7.1%	10.6	(8.2)	30.4	8.7	**9.5**
MSCI Emerging Markets Index			*12.4*	*(6.9)*	*28.3*	*7.3*	*9.6*
Alternative Investments	**$ 966.3**	**17.7%**	**8.8**	**11.0**	**9.2**	**6.5**	**8.9**
Combined Benchmark			*7.8*	*7.6*	*7.3*	*6.2*	*7.2*
Real Estate	429.5	7.9%	**5.5**	**11.5**	**8.5**	**5.4**	**7.7**
IPD Large Institutional All Property Index			*6.2*	*7.7*	*7.0*	*5.8*	*6.7*
Infrastructure	307.8	5.6%	**10.6**	**6.6**	**10.6**	**8.3**	**9.0**
CPI plus 6%			*8.2*	*7.7*	*8.1*	*7.2*	*7.8*
Timberland	45.8	0.8%	**19.1**	**17.7**	**17.5**	**10.1**	**16.0**
CPI plus 4%			*6.2*	*5.7*	*6.1*	*5.2*	*5.8*
Private Equities	183.2	3.4%	**10.1**	**12.9**	**n/a**	**n/a**	**n/a**
CPI plus 6.5%			*8.7*	*8.2*	*n/a*	*n/a*	*8.0*
Strategic Investments	**$ 36.9**	**0.7%**	**24.7**	**(2.2)**	**7.0**	**(3.2)**	**2.8**
Currency Hedges	**-**	**-**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**

(1) The Consumer Price Index (CPI) is reported on a one month lagged basis.

ADMINISTRATION REPORT

The Board of Trustees for the Universities Academic Pension Plan is responsible for the ongoing operation and administration of the pension plan, including the collection of relevant member data and contributions, the calculation and payment of pension benefits, and the communication of pension information to plan members and employers. The 2019 results in these areas are as follows.

MEMBERSHIP

There are three types of members currently in the UAPP:

- Active members are those currently employed by a participating employer in a UAPP-eligible position.
- Deferred members are those who have terminated employment and have accrued benefits remaining in the plan but have not yet withdrawn their entitlement nor commenced receiving a monthly pension.
- Pensioners are those who have commenced receiving a monthly pension, including surviving spouses.

Participation	2019	2018
Active members	8,151	8,172
Deferred members	2,352	2,273
Pensioners	5,851	5,602
TOTAL	**16,354**	**16,047**

Membership Participation Annual Growth Rates

Member Type	Active Members	Deferred Members	Pensioners
2009	4.6%	7.3%	4.0%
2010	-1.3%	7.6%	6.4%
2011	0.1%	7.9%	4.2%
2012	1.8%	6.1%	4.7%
2013	-1.0%	9.1%	6.0%
2014	-0.2%	2.9%	7.0%
2015	2.0%	7.5%	4.5%
2016	2.7%	6.9%	3.6%
2017	2.0%	6.9%	4.7%
2018	0.2%	7.5%	4.1%
2019	-0.3%	3.5%	4.4%

Active membership in the UAPP decreased 0.3% in 2019 to 8,151 at December 31, 2019 from 8,172 members at December 31, 2018. This year saw the first annual decline in the number of active members since 2014. However, over the last decade, active membership in the UAPP has grown at an average annual rate of 0.6%.

New Pensioner Retirement Type

Retirement Type	2019	2018
Retirements at Age 65 or Later	123	120
Retirements Before Age 65	226	199
Pensions to Surviving Spouses	2	7
TOTAL	**351**	**326**

New Pensioner Retirement Choices

Percentage Electing Option	2019	2018
Single life – with or without guarantee	19%	27%
Joint life – 2/3 spouse, no guarantee	13%	10%
Joint life – 2/3 spouse, 10-year guarantee	26%	17%
Joint life – 100% spouse, no guarantee	15%	17%
Joint life – 100% spouse, 10-year guarantee	27%	29%
TOTAL	**100%**	**100%**

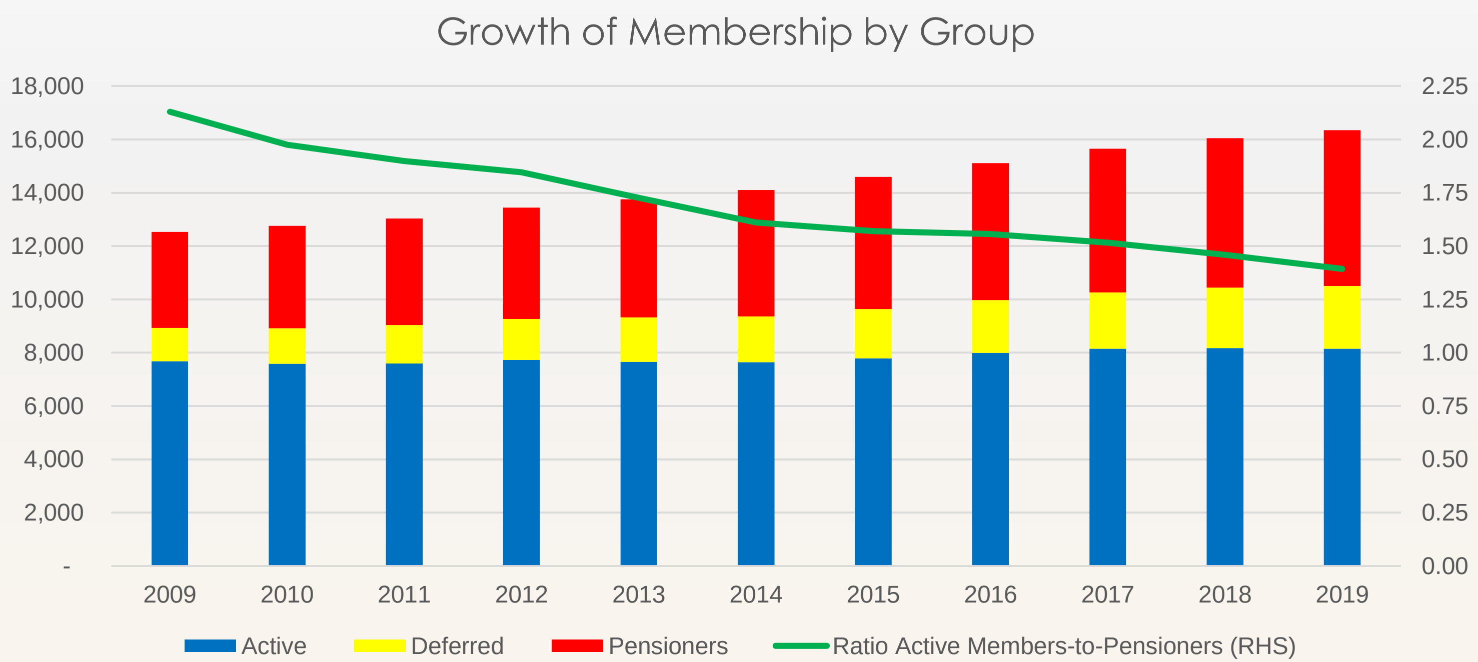
The number of retired members and surviving spouses of pensioners receiving a pension from the UAPP increased 4.4% during 2019, rising from 5,602 at December 31, 2018 to 5,851 at the end of the year. The retired membership totals have grown at an average annual rate of 4.7% since 2009.

The most popular pension choice among new retirees with a spouse continues to be a Joint Life pension.

Monthly Payment Distribution As At December 31, 2019

Dollar Value ($) Per Month	Member Pensions	Spouse Pensions	Total
1 to 999	1,000	30	1,030
1,000 to 1,999	801	37	838
2,000 to 2,999	706	31	737
3,000 to 3,999	715	26	741
4,000 to 4,999	745	16	761
5,000 to 5,999	637	8	645
6,000 to 6,999	485	7	492
7,000 and over	602	5	607
TOTAL	**5,691**	**160**	**5,851**

The number of deferred members who continue to have funds in the Plan increased to 2,352 at December 31, 2019 from 2,273 at the start of the year. This group continues to be the fastest growing group as it has increased at an average annual rate of 6.6% over the last ten years. Over the same period, the active and retired membership totals have grown at an average annual rate of 0.6% and 4.7% respectively.



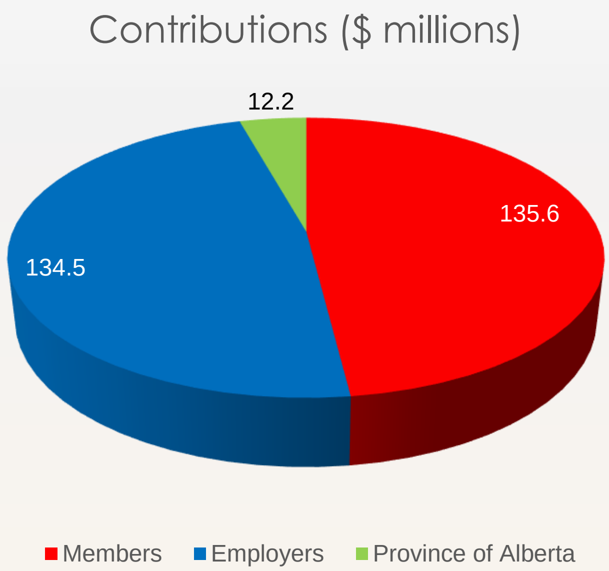
CASH FLOW

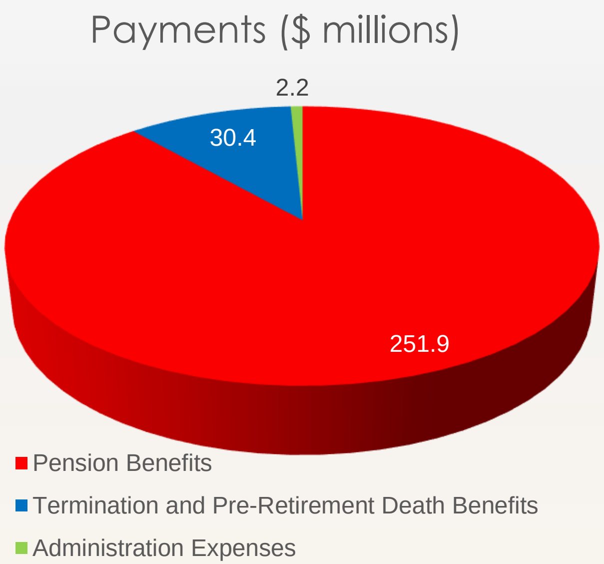
Total contributions received from employers, employees, and the Province of Alberta were higher by 0.7% in 2019 ($282.3 million) versus 2018 ($280.2 million) due to slightly higher salaries and contribution rates.

Total payments to pensioners grew by 4.9% during 2019 to $251.9 million from $240.0 million in 2018. Pensioners received a cost-of-living increase of 1.50% effective January 1, 2019.

Termination and pre-retirement death benefit payments to or on behalf of former members of the UAPP were $30.4 million for 2019 (2018: $32.3 million). The decrease is due to a decrease in the number of members who terminated and withdrew benefits.

Management strives to ensure service providers provide efficient and cost-effective services to the UAPP. The UAPP's general plan expenses amounted to $2.2 million during 2019 ($137 per member) compared to $2.2 million ($139 per member) in 2018.





Ten-Year Financial and Membership Review

Financial Position ($ millions)	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Fair Value of Net Assets	$5,477.3	$4,830.9	$4,851.1	$4,349.3	$4,043.7	$3,767.6	$3,357.2	$2,952.0	$2,627.5	$2,540.4
Actuarial Adjustment	-$147.2	$116.7	-$173.7	-$48.0	-$105.7	-$202.2	-$185.6	-$61.8	$31.3	-$113.2
Actuarial Value of Assets	**$5,330.1**	**$4,947.6**	**$4,677.4**	**$4,301.3**	**$3,938.0**	**$3,565.4**	**$3,171.6**	**$2,890.2**	**$2,658.8**	**$2,427.2**
Accrued Pension Liability	$6,178.6	$5,868.3	$5,626.8	$5,174.1	$4,961.0	$4,708.0	$4,339.4	$3,996.5	$3,819.0	$3,550.1
Actuarial Surplus (Deficit)	**-$848.5**	**-$920.7**	**-$949.4**	**-$872.8**	**-$1,023.0**	**-$1,142.6**	**-$1,167.8**	**-$1,106.3**	**-$1,160.2**	**-$1,122.9**
Funded Ratio	86.3%	84.3%	83.1%	83.1%	79.4%	75.7%	73.1%	72.3%	69.6%	68.4%
Pre-1992 Period Only										
Fair Value of Net Assets	$647.8	$655.8	$744.8	$750.4	$787.6	$824.9	$826.0	$819.5	$821.1	$886.3
Actuarial Adjustment	-$20.6	$11.8	-$31.9	-$11.1	-$25.5	-$51.0	-$52.5	-$20.1	$6.5	-$48.3
Actuarial Value of Assets	**$627.2**	**$667.6**	**$712.9**	**$739.3**	**$762.1**	**$773.9**	**$773.5**	**$799.4**	**$827.6**	**$838.0**
Accrued Pension Liability	$1,478.8	$1,498.7	$1,547.5	$1,577.7	$1,627.0	$1,677.6	$1,626.1	$1,566.7	$1,599.9	$1,592.0
Actuarial Surplus (Deficit)	**-$851.6**	**-$831.1**	**-$834.6**	**-$838.4**	**-$864.9**	**-$903.7**	**-$852.6**	**-$767.3**	**-$772.3**	**-$754.0**
Funded Ratio	42.4%	44.5%	46.1%	46.9%	46.8%	46.1%	47.6%	51.0%	51.7%	52.6%
Post-1991 Period Only										
Fair Value of Net Assets	$4,829.5	$4,175.1	$4,106.3	$3,598.9	$3,256.1	$2,942.7	$2,531.2	$2,132.5	$1,806.4	$1,654.1
Actuarial Adjustment	-$126.6	$104.9	-$141.8	-$36.9	-$80.2	-$151.2	-$133.1	-$41.7	$24.9	-$64.9
Actuarial Value of Assets	**$4,702.9**	**$4,280.0**	**$3,964.5**	**$3,562.0**	**$3,175.9**	**$2,791.5**	**$2,398.1**	**$2,090.8**	**$1,831.3**	**$1,589.2**
Accrued Pension Liability	$4,699.8	$4,369.6	$4,079.3	$3,596.4	$3,334.0	$3,030.4	$2,713.3	$2,429.8	$2,219.1	$1,958.1
Actuarial Surplus (Deficit)	**$3.1**	**-$89.6**	**-$114.8**	**-$34.4**	**-$158.1**	**-$238.9**	**-$315.2**	**-$339.0**	**-$387.8**	**-$368.9**
Funded Ratio	100.1%	97.9%	97.2%	99.0%	95.3%	92.1%	88.4%	86.0%	82.5%	81.2%
Contributions	$282.3	$280.2	$272.5	$259.4	$240.9	$231.1	$221.9	$212.0	$198.6	$190.0
Benefit Payments	$282.3	$272.3	$253.1	$236.3	$243.6	$223.6	$205.4	$194.8	$184.0	$174.2
Administrative Expenses	$2.2	$2.2	$2.1	$2.2	$2.1	$2.1	$1.7	$1.8	$1.9	$1.8
Investment Expenses	$29.9	$23.5	$21.0	$10.7	$13.8	$12.8	$11.8	$9.2	$6.9	$6.4
Total Return on Investments	13.5%	-0.5%	11.3%	7.1%	7.6%	12.2%	13.1%	11.8%	3.2%	10.0%
Discount Rate	5.46%	5.60%	5.60%	5.95%	5.95%	6.25%	6.25%	6.40%	6.40%	6.70%
January 1 Cost-of-Living Adjustment	1.50%	0.78%	0.78%	0.72%	1.56%	0.72%	0.96%	1.20%	0.60%	0.06%
Plan Members										
Active	8,151	8,172	8,153	7,997	7,790	7,640	7,652	7,727	7,592	7,582
Deferred	2,352	2,273	2,114	1,977	1,849	1,720	1,672	1,532	1,444	1,338
Pensioners	5,851	5,602	5,380	5,138	4,960	4,745	4,434	4,185	3,998	3,838
Total	**16,354**	**16,047**	**15,647**	**15,112**	**14,599**	**14,105**	**13,758**	**13,444**	**13,034**	**12,758**
Average Age (Active)	49.1	48.9	48.8	48.8	48.7	48.8	48.8	48.6	48.5	48.2
Average Service (Active)	9.8	9.7	9.6	9.6	9.6	9.5	9.5	9.5	9.3	9.0
Average Capped Salary	$117,186	$116,839	$115,241	$114,079	$111,971	$110,150	$107,733	$107,209	$104,245	$101,779
Average Age (Pensioners)	74.2	74.0	73.8	73.5	72.2	72.9	73.0	72.8	72.5	72.2
Average Annual Pension	$44,763	$44,426	$44,465	$44,782	$44,469	$43,966	$43,557	$42,953	$43,209	$42,940

ADMINISTRATION REPORT

Service to Members

Management strives to provide high-quality pension services in a timely manner to UAPP members. Service standards have been established and the delivery of services against those standards is closely monitored in an effort to assess and promote quality service.

Service standards of direct interest to members are as follows:

Responsibilities	Service Level Standards	2019 Results
Time to answer calls	80% of calls answered within 20 seconds with a call abandonment rate below 5%	97.3% of calls answered within 20 seconds with a call abandonment rate of 2.6%
Escalated calls and voice mails	Answered within 1 business day	98.6% of calls answered within 1 business day
Emails	Answered within 2 business days	98.4% of emails answered within 2 business days
Written enquiries	Answered within 5 business days	100.0% of written enquiries answered within 5 business days
Statement of options on termination	5 business days from receipt of all required information	99.8% of options on termination issued within 5 business days from receipt of all required information
Statement of options on retirement	5 business days from receipt of all required information	99.7% of options on retirement issued within 5 business days from receipt of all required information
Statement of options on death	5 business days from receipt of all required information	99.1% of options on death issued within 5 business days from receipt of all required information
MPO* estimate requests	5 business days from receipt of all required information	79.4% of MPO estimates issued within 5 business days from receipt of all required information
MPO* final calculations	10 business days from receipt of all required information	100% of MPO final calculations issued within 10 business days from receipt of all required information
MPO* payment authorization	3 business days from receipt of all required information	90.9% of all MPO payment authorizations issued within 3 business days from receipt of all required information

*Matrimonial Property Order

ADMINISTRATION REPORT

Plan Communications

The 2019 Member Handbook was prepared and posted to our website in February 2019, and the quarterly Communiqué was issued to update members and employers on topical subjects related to UAPP and pensions. The Handbook includes examples of pension calculations updated each year for changes in the maximum pensionable salary and YMPE. Annual member statements, highlighting individual pension entitlements as at December 31, 2018, were posted to the Retirement Planner for active members in May and mailed to retired members in June. The Trustees' Office presented pension seminars for groups of current active and retired employees as well as one-on-one information sessions promoting member understanding of the pension plan. A video version of the seminar is posted on the website.

The UAPP website experienced a small increase in number of visitors in 2019 as it had over 57,600 hits during the year. Popular areas of interest on the site included Frequently Asked Questions, Contact Us, Forms, and Member Handbook.

Plan members made great use of the Retirement Planner during 2019 as there were over 10,800 accesses during the year, representing a 19% increase from 2018. Plan members still made great use of the UAPP Administration Centre helpline for pension-related information during the year it received over 2,300 calls. The number of calls to the call center declined again from 2018 due to providing members with the ability to reset their own passwords.

Other Developments in 2019

- The ninth annual pensioner status confirmation project commenced in 2019 in accordance with audit guidelines.
- Triennial pension administration audits were completed by most of the plan's employers.
- Administration manuals updated on the Retirement Planner to assist employers.
- The Pension Benefits Administration User Group continued to meet regularly to discuss common issues.
- Implemented batch upload processes for pension adjustments and other relevant member data.
- Reviewed and implemented small enhancements to pension forms and standard letters.

The Year Ahead

Key plans for 2020 include:

- Complete triennial assessment of plan activities.
- Review user feedback on the employer administration manuals.
- Continue to offer member information seminars and one-on-one member sessions.
- Work with employers to review potential improvements to processes.
- Review performance of Buck as pension administration service provider and renew contract.
- Develop plan to locate and issue updated option forms to all members with Amounts-Held-On-Deposit.

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

The financial statements and information in the 2019 Annual Report are the responsibility of management and have been approved by the Board of Trustees.

The financial statements have been prepared in conformity with Canadian accounting standards for pension plans and, of necessity, include some amounts that are based on estimates and judgments. Financial information presented in the 2019 Annual Report that relates to the operations and financial position of the Universities Academic Pension Plan is consistent with that in the financial statements.

Alberta Investment Management Corporation (AIMCo), Beutel Goodman & Company Ltd., and Fiera Capital Corporation, acting as investment managers, and Buck and CIBC Mellon, acting as pension administrators, maintain systems of internal control, including written policies, standards, and procedures and formal authorization structures.

These systems are designed to provide management with reasonable assurance that transactions are properly authorized, reliable financial records are maintained, and assets are adequately accounted for and safeguarded.

The Audit Committee assists the Board of Trustees in discharging its responsibility to approve the annual financial statements. The Committee meets regularly with both management and external auditors to review the scope and timing of the audit as well as to review any internal control or financial issues and their resolution. The Committee reviews the annual financial statements and recommends them to the Board of Trustees for approval.

KPMG LLP (KPMG), the Plan's external auditor, provides an independent audit of the operations, investments, and financial statements. Their examination is conducted in accordance with Canadian generally accepted auditing standards and includes tests and other procedures that allow them to report on the fairness of the financial statements in accordance with Canadian accounting standards for pension plans. KPMG has full and unrestricted access to discuss the audit and related findings regarding the integrity of financial reporting and the adequacy of internal controls.

Dave Schnore
Executive Director

Chris Schafer
Director, Finance & Administration

INDEPENDENT AUDITORS' REPORT

KPMG LLP
2200, 10175 – 101 Street
Edmonton, AB T5J 0H3
Telephone (780) 429-7300
Fax (780) 429-7379
www.kpmg.ca

To the Board of Trustees of Universities Academic Pension Plan

Opinion

We have audited the financial statements of Universities Academic Pension Plan (the Entity), which comprise:

- the statement of financial position as at December 31, 2019
- the statement of changes in net assets available for benefits for the year then ended
- the statement of changes in pension obligation for the year then ended
- and notes to the financial statements, including a summary of significant accounting policies

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

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Entity as at December 31, 2019, its changes in net assets available for benefits and its changes in pension obligation for the year then ended in accordance with Canadian accounting standards for pension plans.

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the "***Auditors' Responsibilities for the Audit of the Financial Statements***" section of our auditors' report.

We are independent of the Entity in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

KPMG

Other Information

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

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

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit and remain alert for indications that the other information appears to be materially misstated.

We obtained the information, other than the financial statements and the auditors' report thereon, included in the Entity's Annual Report as at the date of the auditors' report.

If, based on the work we have performed on the other information, we conclude that there is a material misstatement of this other information, we are required to report that fact in the auditors' report.

We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

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

In preparing the financial statements, management is responsible for assessing the Entity's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

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

KPMG

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion.

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

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

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

We also:

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

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

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

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

INDEPENDENT AUDITORS' REPORT

KPMG

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Entity to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group Entity to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

KPMG LLP

Chartered Professional Accountants

Edmonton, Canada
May 8, 2020

Statement of Financial Position

As at December 31, 2019

	($ thousands) 2019	2018
Net assets available for benefits		
Assets		
Investments (Note 3)	$ 5,454,220	$ 4,808,357
Contributions receivable		
Employers	11,068	10,731
Employees	11,288	11,266
Province of Alberta	1,041	1,039
Accounts receivable	485	391
Total Assets	5,478,102	4,831,784
Liabilities		
Accounts payable and accrued liabilities	834	837
Total Liabilities	834	837
Net assets available for benefits	$ 5,477,268	$ 4,830,947
Pension obligation and deficit		
Pension obligation (Note 5)	$ 6,178,600	$ 5,868,300
Deficit (Note 6)	(701,332)	(1,037,353)
Pension obligation and deficit	$ 5,477,268	$ 4,830,947

The accompanying notes are part of these financial statements.

Statement of Changes In Net Assets Available For Benefits

For the year ended December 31, 2019

	($ thousands)	
	2019	**2018**
Increase in assets		
Contributions (Note 7)	$ 282,274	$ 280,225
Investment income (Note 8)	678,438	-
	960,712	280,225
Decrease in assets		
Investment loss (Note 8)	-	(2,288)
Benefit payments (Note 10)	(282,260)	(272,342)
Investment expenses (Note 11)	(29,931)	(23,531)
Administrative expenses (Note 12)	(2,200)	(2,185)
	(314,391)	(300,346)
Increase (decrease) in net assets	646,321	(20,121)
Net assets available for benefits at beginning of year	4,830,947	4,851,068
Net assets available for benefits at end of year	$ 5,477,268	$ 4,830,947

The accompanying notes are part of these financial statements.

Statement of Changes In Pension Obligation

For the year ended December 31, 2019

($ thousands)

	2019			2018
	Pre-1992	Post-1991	Total	Total
Increase in pension obligation				
Interest accrued on pension obligations	$ 83,900	$ 255,900	$ 339,800	$ 325,800
Benefits earned	-	200,500	200,500	190,700
Actuarial assumption changes (Note 5(a))	41,500	111,500	153,000	-
Cost-of-living experience loss	-	-	-	4,900
	125,400	567,900	693,300	521,400
Decrease in pension obligation				
Benefits paid, including interest	137,500	152,700	290,200	279,900
Net experience gains	3,100	78,200	81,300	-
Cost-of-living experience gain	4,700	6,800	11,500	-
	145,300	237,700	383,000	279,900
Net increase (decrease) in pension obligation	(19,900)	330,200	310,300	241,500
Pension obligation at beginning of year	1,498,700	4,369,600	5,868,300	5,626,800
Pension obligation at end of year	$ 1,478,800	$ 4,699,800	$ 6,178,600	$ 5,868,300

The accompanying notes are part of these financial statements.

Notes to the Financial Statements

For the year ended December 31, 2019

(*all $ figures in thousands except Note 13*)

NOTE 1 SUMMARY DESCRIPTION OF THE PLAN

Effective January 1, 2001, the Universities Academic Pension Plan (the "Plan") became a non-statutory pension plan subject to and registered under the *Employment Pension Plans Act* of Alberta. The Plan is also registered under the *Income Tax Act.* The Plan's registration number is 0339572. The Plan operates under a Sponsorship and Trust Agreement signed by the Plan Sponsors. A complete description of the Plan can be found in the Sponsorship and Trust Agreement. The Board of Trustees appointed by Plan Sponsors is responsible for administration of the Plan. The summary description of the Plan described below applies to members who contribute to the Plan on or after January 1, 2001.

a) GENERAL

The Plan is a contributory defined benefit pension plan for academic staff members and other eligible employees of the Universities of Alberta, Calgary, and Lethbridge, Athabasca University and Banff Centre.

In addition, employees of the Board of Trustees and the professional staff of the University of Calgary Faculty Association, the Association of Academic Staff University of Alberta, and the Athabasca University Faculty Association also participate in the Plan.

b) FUNDING POLICY

Contributions and investment earnings are expected to fund all benefits payable under the Plan. Employees and employers are responsible for fully funding service after 1991.

The unfunded liability for service prior to January 1, 1992 is financed by additional contributions from the Province of Alberta, employers and employees. These contribution rates are set on the basis that the additional contributions will eliminate the pre-1992 service unfunded liability on or before December 31, 2043. The Province pays 1.25% of salary and the balance of the required contributions are equally split between employees and employers.

Under the Employment Pension Plans Amendment Regulation 245/2003 (Order in Council 357/2003), the Plan is exempt from funding solvency deficiencies effective January 1, 2003 in respect of all service.

The Board of Trustees, in consultation with the Plan's actuary, reviews the contribution rates at least once every three years.

The contribution rates in effect from July 1, 2018 for employees of the Universities of Alberta, Calgary, and Lethbridge, employees of the Board of Trustees, and the professional staff of the University of Calgary Faculty Association and the Association of Academic Staff University of Alberta were 12.46% of pensionable salary up to the Year's Maximum Pensionable Earnings (YMPE), 16.23% on pensionable salary above the YMPE and up to the pensionable salary cap, and 1.45% on earnings above the pensionable salary cap. Employers contribute at the same rate as employees.

Note 1 (continued)

The contribution rates in effect from July 1, 2018 for employees of Athabasca University, Banff Centre and the professional staff of the Athabasca University Faculty Association were 11.96% of pensionable salary up to the YMPE and 15.73% on pensionable salary above the YMPE and up to the pensionable salary cap. Employers contribute at a rate 1.0% higher than employees. In addition, employees and employers provide equal matching contributions of 1.45% on earnings above the pensionable salary cap.

Effective July 1, 2020, contribution rates for employees of the Universities of Alberta, Calgary, and Lethbridge, employees of the Board of Trustees, and the professional staff of the University of Calgary Faculty Association and the Association of Academic Staff University of Alberta shall change to 12.37% of pensionable salary up to the YMPE, 16.32% on pensionable salary above the YMPE and up to the pensionable salary cap, and 1.52% on earnings above the pensionable salary cap. Employers contribute at the same rate as employees.

Also effective July 1, 2020, contribution rates for employees of Athabasca University, Banff Centre, and the professional staff of the Athabasca University Faculty Association shall change to 11.87% of pensionable salary up to the YMPE and 15.82% on pensionable salary above the YMPE and up to the pensionable salary cap. Employers contribute at a rate 1.0% higher than employees. In addition, employees and employers provide equal matching contributions of 1.52% on earnings above the pensionable salary cap.

c) RETIREMENT BENEFITS

The Plan provides for a pension based upon the average pensionable salary of the highest five consecutive years. For service before 1994, the pension is 2% for each year of pensionable service. From January 1, 1994, the Plan's benefits and contributions were integrated with the Canada Pension Plan. As a result, pensions for service after 1993 are reduced at age 65. The reduction is 0.6% of the average YMPE for the same five years as used in calculating the average pensionable salary of the highest five consecutive years. The maximum service allowable under the Plan is 35 years.

Members are entitled to an unreduced pension for service before 1994 if they have attained age 55.

Members are entitled to an unreduced pension for service after 1993 if they have either attained age 60 or have attained age 55 and the sum of their age and years of membership equals at least 80. Members are entitled to a reduced pension for service after 1993 if they have attained age 55.

Members who become disabled and are not in receipt of benefits from an approved disability plan are eligible to apply for a disability pension.

d) DEATH BENEFITS

Death benefits are payable on the death of a member. A surviving spouse may choose to receive a pension based on total service or a lump sum payment. For a beneficiary other than a spouse, a lump sum payment must be paid.

Note 1 (continued)

e) TERMINATION BENEFITS

Members who terminate and are not immediately entitled to a pension may elect to receive a deferred pension or a lump sum refund.

Refunds on service performed before 1994 equal employee and employer contributions plus interest, or the commuted value of the member's earned pension, whichever is greater.

Refunds on service performed after 1993 equal 1.75 times employee contributions plus interest, or the commuted value of the member's earned pension, whichever is greater.

Refunds are subject to the Plan's lock-in provisions and excess contribution rules.

f) DISABILITY BENEFITS

Members who become disabled and are in receipt of benefits from an approved disability plan continue to earn pensionable service credits under the Plan.

g) OPTIONAL SERVICE

Leaves of absence which are purchased before April 30th following a return to work are costed based on the contributions which would have been paid during the leave period plus interest. All other optional service purchases are costed on an actuarial reserve basis and are cost neutral to the Plan. Funds related to the transfer of service to other plans are based on the regular termination benefits.

h) COST-OF-LIVING ADJUSTMENTS

Pensions payable are increased each year on January 1st by an amount equal to 60% of the increase in the Alberta Consumer Price Index. The increase is based on the increase during the twelve-month period ending on October 31st in the previous year.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND REPORTING PRACTICES

a) BASIS OF PRESENTATION

These financial statements are prepared on the going concern basis in accordance with Canadian accounting standards for pension plans. The Plan has elected to apply International Financial Reporting Standards (IFRS) for accounting policies that do not relate to its investment portfolio or pension obligation. The statements provide information about the net assets available in the Plan to meet future benefit payments and are prepared to assist Plan members and others in reviewing the activities of the Plan for the year.

b) VALUATION OF INVESTMENTS

Investments are recorded at fair value. As disclosed in Note 3, the Plan's investments consist primarily of direct ownership in units of pooled investment funds ("the pools").

Contracts to buy and sell financial instruments in the pools are between the investment managers and the third parties to the contracts. Participants in the pools are not party to the contracts and have no control over the management of the pool and the selection of securities in the pool. The investment managers control the creation of the pools and the management and administration of the pools including security selection. Accordingly, the Plan does not report the financial instruments of the pools on its statement of financial position.

The Plan becomes exposed to the financial risks and rewards associated with the underlying financial instruments in a pool when it purchases units issued by the pools and loses its exposure to those financial risks and rewards when it sells its units. The Plan reports its share of the financial risks in Note 4.

The fair value of units held by the Plan is derived from the fair value of the underlying financial instruments held by the pools as determined by the investment managers (see Note 3(b)). Investments in units are recorded in the Plan's accounts. The underlying financial instruments are recorded in the accounts of the pools. The pools have a market-based unit value that is used to distribute income to the pool participants and to value purchases and sales of the pool units. The pools include various financial instruments such as bonds, equities, real estate, derivatives, investment receivables and payables and cash.

The Plan's cut-off policy for valuation of investments, investment income and investment performance is based on valuations confirmed by the investment managers on the fourth business day following the year end. Differences in valuation estimates provided to Treasury Board and Finance after the year end cut-off date are reviewed by management.

Investments in units are recorded in the Plan's accounts on a trade date basis. All purchases and sales of the pool units are in Canadian dollars.

Fair value is the amount of consideration agreed upon in an arm's length transaction between knowledgeable, willing parties who are under no compulsion to act.

Note 2 (continued)

c) INVESTMENT INCOME (LOSS)

(a) Investment income (loss) is recorded on an accrual basis.

(b) Investment income (loss) is reported in the statement of changes in net assets available for benefits and in Note 8 and includes the following items recorded in the Plan's accounts:

i. Income distributions from the pools, based on the Plan's pro-rata share of total units issued by the pools; and

ii. Changes in fair value of units including realized gains and losses on disposal of units and unrealized gains and losses on units determined on an average cost basis.

d) INVESTMENT EXPENSES

Investment expenses include all amounts incurred by the Plan to earn investment income (see Note 11). Investment expenses are recorded on an accrual basis. Transaction costs are expensed as they are incurred.

e) CONTRIBUTIONS, BENEFIT PAYMENTS AND ADMINISTRATIVE EXPENSES

Contributions, benefit payments, administrative expenses and related accounts receivable and payable are recorded on an accrual basis.

f) VALUATION OF PENSION OBLIGATION

The value of the pension obligation and changes therein during the year are based on an actuarial valuation prepared by an independent firm of actuaries. A valuation must be performed at least every three years and results from the most recent valuation are extrapolated, on an annual basis, to year-end. The valuation uses the projected benefit method pro-rated on service and management's best estimate, as at the valuation and extrapolation date, of various economic and non-economic assumptions.

Note 2 (continued)

g) MEASUREMENT UNCERTAINTY

In preparing these financial statements, estimates and assumptions are used in circumstances where the actual values are unknown. Uncertainty in the determination of the amount at which an item is recognized in the financial statements is known as measurement uncertainty. Such uncertainty exists when there is a variance between the recognized amount and another reasonably possible amount, as there is whenever estimates are used.

Measurement uncertainty exists in the valuation of the Plan's pension obligation and Level 3 investments. Uncertainty arises because:

i) the Plan's actual experience may differ, perhaps significantly, from assumptions used in the valuation and extrapolation of the Plan's pension obligation; and

ii) the estimated fair values of the Plan's Level 3 investments may differ significantly from the values that would have been used had a ready market existed for these investments.

While best estimates have been used in the valuation of the Plan's pension obligation and Level 3 investments, management considers that it is possible, based on existing knowledge, that changes in future conditions in the short term could require a material change in the recognized amounts.

Differences between actual results and expectations in the Plan's pension obligation are disclosed as assumption or other changes and net experience gains or losses in the statements of changes in pension obligation in the year when actual results are known.

Differences between the estimated fair values and the amount ultimately realized for investments are included in net investment income in the year when the ultimate realizable values are known.

h) INCOME TAXES

The Plan is a registered pension plan, as defined by the *Income Tax Act* (Canada) and, accordingly, is not subject to income taxes.

NOTE 3 INVESTMENTS

The Plan's investments are managed at the asset class level for purposes of evaluating the Plan's risk exposure and investment performance against approved benchmarks based on fair value. The Plan's assets are managed in accordance with the Statement of Investment Policies and Goals (SIP&G) approved by the Plan's Board of Trustees. The fair value of the pool units is based on the Plan's share of the net asset value of the pooled fund. The pools have a market-based unit value that is used to allocate income to participants of the pool and to value purchases and sales of the pool units. The investment managers are delegated authorities to independently purchase and sell securities in the pools and Plan, and units of the pools, within the ranges approved for each asset class (see Note 4).

($ thousands)

	Fair Value Hierarchy [a]		2019	2018
Asset class	Level 2	Level 3	**Fair Value**	**Fair Value**
Fixed Income				
Cash and short-term securities	$ 12,920	$ -	$ 12,920	$ 20,381
Bonds and mortgages	1,215,151	227,879	1,443,030	1,372,157
Real return bonds	364,479	-	364,479	336,505
	1,592,550	227,879	1,820,429	1,729,043
Public Equities				
Canadian	660,197	-	660,197	544,368
Global	1,581,437	-	1,581,437	1,418,841
Emerging markets	388,994	-	388,994	344,027
	2,630,628	-	2,630,628	2,307,236
Alternatives				
Real estate	-	429,508	429,508	424,859
Private equity	-	183,228	183,228	80,695
Infrastructure and private debt and loans	-	307,756	307,756	183,091
Timberland	-	45,798	45,798	42,556
	-	966,290	966,290	731,201
Strategic and currency investments*	(37)	36,910	36,873	40,877
Total investments	$ 4,223,141	$ 1,231,079	$ 5,454,220	$ 4,808,357

* This asset class is not listed separately in the SIP&G as it relates to strategic investments and currency overlays made on an opportunistic and discretionary basis (see Note 4).

Note 3 (continued)

a) **Fair Value Hierarchy**: The quality and reliability of information used to estimate the fair value of investments is classified according to the following fair value hierarchy with Level 1 being the highest quality and reliability.

- ***Level 1:*** fair value is based on quoted prices in an active market. Although the pools may ultimately hold publicly traded listed equity investments, the pool units themselves are not listed in an active market and therefore cannot be classified as Level 1 for fair value hierarchy purposes. Pool units classified by the Plan as Level 2 may contain investments that might otherwise be classified as Level 1.
- ***Level 2:*** fair value is estimated using valuation techniques that make use of market-observable inputs other than quoted market prices. This level includes pool units that hold public equities, debt securities and derivative contracts totaling $4,223,141 (2018: $3,836,277).
- ***Level 3:*** fair value is estimated using inputs based on non-observable market data. This level includes pool units that hold private mortgages and all alternative investments totaling $1,231,079 (2018: $972,080).

Reconciliation of Level 3 Fair Value Measurements:

	($ thousands)	
	2019	**2018**
Balance, beginning of year	$ 972,080	$ 823,334
Investment income *	97,682	78,502
Purchases of Level 3 pooled fund units	272,406	193,038
Sale of Level 3 pooled fund units	(111,089)	(122,794)
Balance, end of year	$ 1,231,079	$ 972,080

* Investment income includes unrealized gains of $37,203 (2018: $52,050).

Note 3 (continued)

b) Valuation of Financial Instruments in the Pools

The methods used to determine the fair value of investments recorded in the pools are explained in the following paragraphs:

- ***Fixed income:*** Public interest-bearing securities are valued at the year-end closing sale price or the average of the latest bid and ask prices quoted by an independent securities valuation company. Private mortgages are valued based on the net present value of future cash flows. Cash flows are discounted using appropriate interest rate premiums over similar Government of Canada benchmark bonds trading in the market. Real return bonds are valued similar to public interest-bearing securities.
- ***Public equities:*** Public equities are valued at the year-end closing sale price or the average of the latest bid and ask prices quoted by an independent securities valuation company.
- ***Alternatives:*** The estimated fair value of private real estate investments is reported at the most recent appraised value, net of any liabilities against the real property. Real estate properties are appraised annually by qualified external real estate appraisers. Appraisers use a combination of methods to determine fair value including replacement cost, direct comparison, direct capitalization of earnings and the discounted cash flows. The fair value of private equities is estimated by managers or general partners of private equity funds, pools and limited partnerships. Valuation methods may encompass a broad range of approaches. The cost approach is used to value companies without either profits or cash flows. Established private companies are valued using the fair market value approach reflecting conventional valuation methods including discounted cash flows and earnings multiple analysis. Infrastructure investments are valued similar to private equity investments. Private debt and loans are valued similar to private mortgages. The fair value of timberland investments is appraised annually by independent third party evaluators.
- ***Strategic and currency investments:*** The estimated fair value of infrastructure investments held in emerging market countries are valued similar to private equities. Currency investments consist of directly held currency forward and spot contracts.
- ***Foreign currency:*** Foreign currency transactions in pools are translated into Canadian dollars using average rates of exchange. At year end, the fair value of investments in other assets and liabilities denominated in a foreign currency are translated at the year-end exchange rates.
- ***Derivative contracts:*** The carrying values of derivative contracts in favourable and unfavourable positions are recorded at fair value and are included in the fair value of pooled investment funds (see Note 4(f)). The estimated fair values of equity and bond index swaps are based on changes in the appropriate market-based index net of accrued floating rate interest. Interest rate swaps and cross-currency interest rate swaps are valued based on discounted cash flows using current market yields and exchange rates. Credit default swaps are valued based on discounted cash flows using current market yields and calculated default probabilities. Forward foreign exchange contracts are valued based on discounted cash flows using current market yields and current forward exchange rates. Futures contracts are valued based on quoted market prices. Options to enter into interest rate swap contracts are valued based on discounted cash flows using current market yields and volatility parameters which measure changes in the underlying swap. Warrants and rights are valued at the year-end closing sale price or the average of the latest bid and ask prices quoted by an independent securities valuation company.

NOTE 4 INVESTMENT RISK MANAGEMENT

The Plan is exposed to financial risks associated with the underlying securities held in the pooled investment funds. These financial risks include credit risk, market risk and liquidity risk. Credit risk relates to the possibility that a loss may occur from the failure of another party to perform according to the terms of a contract. Market risk is comprised of foreign currency risk, interest rate risk and price risk. Liquidity risk is the risk the Plan will not be able to meet its obligations as they fall due.

The investment policies and procedures of the Plan are clearly outlined in the SIP&G approved by the Board of Trustees. The purpose of the SIP&G is to ensure the Plan assets are invested and managed in a prudent manner in accordance with current, accepted governance practices incorporating an appropriate level of risk. The Board of Trustees manages the Plan's return-risk trade-off through asset class diversification, target ranges on each asset class, diversification within each asset class, quality constraints on fixed income instruments and restrictions on amounts exposed to countries designated as emerging markets. Forward foreign exchange contracts may be used to manage currency exposure in connection with securities purchased in a foreign currency (see Note 4(b)).

Actuarial liabilities of the Plan are primarily affected by the long-term real rate of return expected to be earned on investments. In order to earn the best possible return at an acceptable level of risk, the Board of Trustees has established the following asset mix policy ranges:

		Actual Asset Mix			
Asset Class	**Target Asset Policy Mix**	**2019**		**2018**	
		($ thousands)	*%*	*($ thousands)*	*%*
Fixed income	26.0 - 41.0%	$ 1,820,429	33.4	$ 1,729,043	35.9
Public equities	40.0 - 60.0%	2,630,628	48.2	2,307,236	48.0
Alternatives	12.0 - 25.0%	966,290	17.7	731,201	15.2
Strategic and currency investments	(a)	36,873	0.7	40,877	0.9
		$ 5,454,220	100.0	$ 4,808,357	100.0

(a) An investment manager may, at its discretion, use currency overlays limited to a notional amount of 2.5% of that manager's mandate of the Plan's assets.

Note 4 (continued)

a) Credit Risk

i. Debt securities

The Plan is indirectly exposed to credit risk associated with the underlying debt securities held in the pools. Counterparty credit risk is the risk of loss arising from the failure of a counterparty to fully honour its financial obligations. The credit quality of financial assets is generally assessed by reference to external credit ratings. The credit rating of a debt security may be impacted by the overall credit rating of the counterparty, the seniority of the debt issue, bond covenants, maturity distribution and other factors. Credit risk can also lead to losses when issuers and debtors are downgraded by credit rating agencies usually leading to a fall in the fair value of the counterparty's obligations. Credit risk exposure for financial instruments is measured by the positive fair value of the contractual obligations with counterparties. The fair value of all investments reported in Note 3 is directly or indirectly impacted by credit risk to some degree. The majority of investments in debt securities have credit ratings considered to be investment grade. Unrated debt securities consist primarily of mortgages and private debt placements.

The table below summarizes the Plan's investments in debt securities by credit rating at December 31, 2019:

Credit rating	2019	2018
Investment Grade (AAA to BBB-)	85.9%	84.0%
Speculative Grade (BB+ or lower)	0.2%	0.1%
Unrated	13.9%	15.9%
	100.0%	100.0%

ii. Counterparty default risk - derivative contracts

The Plan is exposed to counterparty credit risk associated with the derivative contracts held in the pools. The maximum credit risk in respect of derivative financial instruments is the fair value of all contracts with counterparties in a favourable position (see Note 4(f)). The investment manager is responsible for selecting and monitoring derivative counterparties on behalf of the Plan. The investment manager monitors counterparty risk exposures and actively seeks to mitigate counterparty risk by requiring that counterparties collateralize mark-to-market gains for the Plan. Provisions are in place to allow for termination of the contract should there be a material downgrade in a counterparty's credit rating. The exposure to credit risk on derivatives is reduced by entering into master netting agreements and collateral agreements with counterparties. To the extent that any unfavourable contracts with the counterparty are not settled, they reduce the Plan's net exposure in respect of favourable contracts with the same counterparty.

Note 4 (continued)

iii. Security lending risk

To generate additional income, the Plan participates in a securities-lending program. Under this program, the custodian may lend investments held in the pools to eligible third parties for short periods. At December 31, 2019, the Fund's share of securities loaned under this program is $231,962 (2018: $239,611) and collateral held totals $249,388 (2018: $255,707). Securities borrowers are required to provide the collateral to assure the performance of redelivery obligations. Collateral may take the form of cash, other investments or a bank-issued letter of credit. All collateralization, by the borrower, must be in excess of 100% of investments loaned.

b) Foreign Currency Risk

The Plan is exposed to foreign currency risk associated with the underlying securities held in the pools that are denominated in currencies other than the Canadian dollar. Foreign currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The fair value of investments denominated in foreign currencies is translated into Canadian dollars using the reporting date exchange rate. As a result, fluctuations in the relative value of the Canadian dollar against these foreign currencies can result in a positive or negative effect on the fair value of investments. Approximately 35.8% (2018: 35.4%) of the Plan's investments, or $1,950,104 (2018: $1,702,596), are denominated in currencies other than the Canadian dollar, with the largest foreign currency exposure being to the US dollar at 17.7% (2018: 17.5%) and the Euro at 2.8% (2018: 3.0%).

If the value of the Canadian dollar increased by 10.0% against all other currencies, and all other variables are held constant, the potential loss in fair value to the Plan would be approximately 3.3% of total investments (2018: 3.2%).

The following table summarizes the Plan's exposure to foreign currency investments held in the pools:

($ thousands)

2019			2018		
Currency		**Fair Value**	**Currency**		**Fair Value**
US dollar	$	965,169	US dollar	$	842,281
Euro		153,025	Euro		142,381
Japanese yen		138,591	Japanese yen		123,972
Hong Kong dollar		86,371	Hong Kong dollar		94,941
British pound		85,621	British pound		84,962
Chinese yuan		74,259	Chinese yuan		13,858
Brazilian real		61,151	Brazilian real		49,994
Swiss franc		51,246	Swiss franc		34,096
Indian rupee		44,480	Indian rupee		43,567
Other foreign currencies (<1%)		290,191	Other foreign currencies (<1%)		272,544
Total foreign currencies	$	1,950,104	**Total foreign currencies**	$	1,702,596

Note 4 (continued)

c) Interest Rate Risk

The Plan is exposed to interest rate risk associated with the underlying interest-bearing securities held in pooled investment funds. Interest rate risk relates to the possibility that the investments will change in value due to future fluctuations in market interest rates.

In general, investment returns from bonds and mortgages are sensitive to changes in the level of interest rates, with longer term interest-bearing securities being more sensitive to interest rate changes than shorter term bonds. If interest rates increased by 1.0% and all other variables are held constant, the potential loss in fair value to the Plan would be approximately 5.8% (2018: 5.9%) of total investments.

d) Price Risk

Price risk relates to the possibility that equity investments will change in value due to future fluctuations in market prices caused by factors specific to an individual equity investment or other factors affecting all equities traded in the market. The Plan is exposed to price risk associated with the underlying equity investments held in the pools. If equity market indices (S&P/TSX, S&P500, S&P1500 and MSCI ACWI and their sectors) declined by 10.0%, and all other variables are held constant, the potential loss in fair value to the Plan would be approximately 5.9% (2018: 5.9%) of total investments. Changes in fair value of investments are recognized in the statement of changes in net assets available for benefits.

e) Liquidity Risk

Liquidity risk is the risk that the Plan will encounter difficulty in meeting obligations associated with its financial liabilities. Liquidity requirements of the Plan are met through income generated from investments, employee and employer contributions, and by investing in pools that hold publicly traded liquid assets traded in active markets that are easily sold and converted to cash. Units in pools that hold private investments like real estate, timberland, infrastructure and private equities are less easily converted to cash since the underlying securities are illiquid because they take more time to sell. These sources of cash are used to pay pension benefits and operating expenses, purchase new investments, settle derivative transactions with counterparties and settle margin calls on futures contracts. The Plan's future liabilities include the pension obligation and exposure to net payables to counterparties (Note 4(f)).

Note 4 (continued)

f) Use of Derivative Financial Instruments in Pooled Investment Funds

The Plan has indirect exposure to derivative financial instruments through its investment in units of the pools. Derivative financial instruments are used to gain access to equity markets in the pools, manage asset exposure within the pools, enhance pool returns and manage interest rate risk, foreign currency risk and credit risk in the pools.

By counterparty	Number of counterparties 2019	Number of counterparties 2018	Plan's Indirect Share ($ thousands) 2019	Plan's Indirect Share ($ thousands) 2018
Contracts in net favourable position (current credit exposure)	93	54	$ 235,205	$ 149,700
Contracts in net unfavourable position	11	20	(203,189)	(200,168)
Net fair value of derivative contracts	104	74	$ 32,016	$ (50,468)

i) Cash settlements: Receivables or payables with counterparties are usually settled in cash every three months.

ii) Current credit exposure: The current credit exposure is limited to the amount of loss that would occur if all counterparties to contracts in a net favorable position totaling $235,205 (2018: $149,700) were to default at once.

iii) Contract notional amounts: The fair value of receivables (receive leg) and payables (pay leg) and the exchange of cash flows with counterparties in pooled funds are based on a rate or price applied to a notional amount specified in the derivative contract. The notional amount itself is not invested, received or exchanged with the counterparty and is not indicative of the credit risk associated with the contract. Notional amounts are not assets or liabilities and do not change the asset mix reported in Note 3. Accordingly, they are not recognized in the statement of financial position.

Types of derivatives used in pools	Plan's Indirect Share ($ thousands) 2019	Plan's Indirect Share ($ thousands) 2018
Structured equity replication derivatives	$ 22,653	$ (30,915)
Foreign currency derivatives	9,086	(18,790)
Interest rate derivatives	(1,148)	(1,194)
Credit risk derivatives	1,425	431
Net fair value of derivative contracts	$ 32,016	$ (50,468)

i) Equity derivatives are structured to receive income from counterparties based on the performance of a specified market-based equity index, security or basket of equity securities applied to a notional amount in exchange for floating rate interest paid to the counterparty. Floating rate notes are held in equity pools to provide floating rate interest to support the pay leg of the equity derivatives. Rights, warrants, futures and options are also included as structured equity replication derivatives.

Note 4 (continued)

ii) Foreign currency derivatives include contractual agreements to exchange specified currencies at an agreed upon exchange rate and on an agreed settlement date in the future.

iii) Interest rate derivatives exchange interest rate cash flows (fixed to floating or floating to fixed) based on a notional amount. Interest rate derivatives primarily include interest rate swaps and cross currency interest rate swaps, futures contracts and options.

iv) Credit risk derivatives include credit default swaps allowing the pools to buy and sell protection on credit risk inherent in a bond. A premium is paid or received, based on a notional amount, in exchange for a contingent payment should a defined credit event occur with respect to the underlying security.

v) At December 31, 2019, deposits in futures contracts margin accounts totaled $3,774 (2018: $14,293). Cash and non-cash collateral for derivative contracts pledged and received, respectively, totaled $(20,375) (2018: $(60,773)) and $nil (2018: $893).

NOTE 5 PENSION OBLIGATION

a) ACTUARIAL VALUATION AND EXTRAPOLATION

An actuarial valuation of the Plan was carried out as at December 31, 2018 by the Plan's actuarial consultants, Aon Hewitt. The December 31, 2018 valuation results were extrapolated to December 31, 2019.

The pension obligation was determined using the projected benefit method prorated on service. The assumptions used in the valuation extrapolation were developed as the best estimate of expected short-term and long-term market conditions and other future events. After consultation with the Plan's actuary, the Board of Trustees adopted this best estimate.

The major assumptions used were:

	2018 Valuation and 2019 Extrapolation	2016 Valuation and 2018 Extrapolation
	%	%
Asset real rate of return		
For 2 years after valuation	3.21	3.35
Thereafter	3.21	3.35
Inflation rate		
For 2 years after valuation	2.25	2.25
Thereafter	2.25	2.25
Discount rate	5.46	5.60
Salary escalation rate *		
For 2 years after valuation	1.00	1.50
Thereafter	2.75	2.75
Mortality table	85% (100% for females) of 2014 Public Sector Canadian Pensioner table with generational projection (Scale MI-2017)	85% (100% for females) of 2014 Public Sector Canadian Pensioner table with generational projection (Scale CPM-B)

** In addition to merit and promotion*

Note 5 (continued)

The next actuarial valuation of the Plan must be carried out no later than December 31, 2021. Any differences between the actuarial valuation results and extrapolation results as reported in these financial statements that affect the financial position of the Plan will be accounted for as gains or losses in the following year.

b) SENSITIVITY OF CHANGES IN MAJOR ASSUMPTIONS

The Plan's future experience will inevitably differ, perhaps significantly, from these assumptions. Any differences between the actuarial assumptions and future experience will emerge as gains or losses in future valuations and may materially affect the financial position of the Plan.

	Changes in Assumptions (%)	Increase in Plan's Actuarial Deficiency ($ thousands)	Increase in Current Service Cost as a % of Pensionable Earnings *
Inflation rate increase holding discount rate and salary escalation assumptions constant	1.0	426,500	1.64
Salary escalation rate increase holding inflation rate and discount rate assumptions constant	1.0	87,600	0.95
Discount rate decrease holding inflation rate and salary escalation assumptions constant	(1.0)	957,000	5.48

* The current service cost as a % of pensionable earnings as determined by the December 31, 2018 valuation is 22.58% (December 31, 2016 valuation: 21.52%)

NOTE 6 DEFICIT

($ thousands)

	2019			2018
	Pre-1992	Post-1991	Total	Total
Deficit (surplus), beginning of year	$ 842,900	$ 194,453	$ 1,037,353	$ 775,732
Decrease (increase) in net assets available for benefits	8,000	(654,321)	$ (646,321)	20,121
Net (decrease) increase in accrued pension liability	(19,900)	330,200	$ 310,300	241,500
Deficit (surplus), end of year	$ 831,000	$ (129,668)	$ 701,332	$ 1,037,353

In accordance with the requirements of the *Public Sector Pension Plans Act*, separate accounting is required of the pension deficit with respect to service that was recognized as pensionable as at December 31, 1991.

The following table summarizes the net assets available for benefits, pension obligation, and the resulting deficit as at December 31, 2019 allocated between the pre-1992 and post-1991 periods:

($ thousands)

	2019			2018
	Pre-1992	Post-1991	Total	Total
Net assets available for benefits	$ 647,800	$ 4,829,468	$ 5,477,268	$ 4,830,947
Pension obligation	1,478,800	4,699,800	6,178,600	5,868,300
Deficit (surplus)	$ 831,000	$ (129,668)	$ 701,332	$ 1,037,353

The deficit for accounting purposes may differ from that for funding purposes (see Note 14).

NOTE 7 CONTRIBUTIONS

	($ thousands) 2019	2018
Current service		
Employers	$ 99,728	$ 94,610
Employees	98,861	94,616
Contributions to meet post-1991 unfunded liability and optional service		
Employers	20,576	21,336
Employees	22,634	24,258
Contributions to meet pre-1992 unfunded liability		
Employers	14,142	16,354
Employees	14,142	16,354
Province of Alberta	12,191	12,697
	$ 282,274	$ 280,225

NOTE 8 INVESTMENT INCOME (LOSS)

The following is a summary of the Plan's investment income (loss) by asset class:

($ thousands)

	Income	Change in Fair Value	2019 Total	2018 Total
Fixed income	$ 83,794	$ 65,939	$ 149,733	$ 24,614
Public equities				
Canadian	69,011	48,297	117,308	(56,902)
Foreign	146,271	166,892	313,163	(43,051)
	215,282	215,189	430,471	(99,953)
Alternatives				
Real estate	21,614	3,117	24,731	45,527
Private equity	3,497	18,025	21,522	12,404
Infrastructure	17,288	17,677	34,965	12,147
Timberland	4,097	3,675	7,772	6,896
	46,496	42,494	88,990	76,974
Strategic and currency investments	5,887	3,357	9,244	(3,923)
	$ 351,459	$ 326,979	$ 678,438	$ (2,288)

The change in fair value includes realized and unrealized gains and losses on pool units and currency hedges. Realized and unrealized gains and losses on pool units total $10,477 and $315,021 respectively (2018: $(2,245) and $(255,992) respectively). Realized and unrealized gains and losses on currency hedges total $(885) and $2,366 respectively (2018: $(1,129) and $(2,294) respectively).

Income earned in pooled investment funds is distributed to the Plan daily based on the Plan's pro rata share of units issued by the pool. Income earned by the pools is determined on an accrual basis and includes interest, dividends, security lending income, realized gains and losses on sale of securities determined on an average cost basis, and income and expense on derivative contracts.

NOTE 9 INVESTMENT RETURNS, CHANGE IN NET ASSETS AND PENSION OBLIGATION

The following is a summary of investment returns (losses), the annual change in net assets, the annual change in the pension obligation and the percentage of the pension obligation supported by net assets.

	(percentage)				
	2019	2018	2017	2016	2015
Increase (decrease) in net assets attributed to:					
Investment income					
Policy benchmark return (PBR) on investments	14.4	(0.2)	10.1	7.0	6.5
Value added (lost) by investment managers	(0.9)	(0.3)	1.2	0.1	1.1
Time weighted rate of return, at fair value [a]	**13.5**	**(0.5)**	**11.3**	**7.1**	**7.6**
Other sources [b]	(0.1)	0.1	0.2	0.5	(0.3)
Percent change in net assets [c]	**13.4**	**(0.4)**	**11.5**	**7.6**	**7.3**
Percent change in pension obligation [c]	**5.3**	**4.3**	**8.7**	**4.3**	**5.4**
Percent of pension obligation supported by net assets	**88.6**	**82.3**	**86.2**	**84.1**	**81.5**

a) The annualized total return and policy benchmark return on investments over five years is 7.7% (PBR: 7.4%), ten years is 8.8% (PBR: 8.2%) and twenty years is 6.4% (PBR: 6.0%). The plans actuary estimates the long-term net investments return on assets for funding purposes to be 5.46% (2018: 5.60%).

b) Other sources includes employee and employer contributions and transfers from other plans, net of benefit payments, transfers to other plans and administration expenses.

c) The percent change in net assets and pension obligation are based on the amounts reported on the statement of changes in net assets available for benefits and the statement of changes in pension obligation, respectively.

NOTE 10 BENEFIT PAYMENTS

	($ thousands) 2019	2018
Retirement benefits	$ 251,857	$ 240,049
Termination benefits	29,427	29,212
Death benefits	976	3,081
	$ 282,260	$ 272,342

NOTE 11 INVESTMENT EXPENSES

	($ thousands) 2019	2018
Amount charged:		
Management fees [(a)]	$ 29,877	$ 23,477
Alberta Treasury Board and Finance [(b)]	54	54
Total investment expenses	$ 29,931	$ 23,531
Increase in expenses	27.2%	11.8%
Increase in average investments under management	6.5%	5.2%
Decrease in value of investments attributed to active management	(0.9%)	(0.3%)
Investment expenses as a percent of dollar invested	0.5%	0.5%

a) For investment management services, including non-recoverable GST of $899 (2018: $708).
b) For investment accounting and Plan reporting services.

NOTE 12 ADMINISTRATIVE EXPENSES

	($ thousands) 2019	2018
General administration costs	$ 2,062	$ 1,988
Board costs	77	72
Actuarial fees	7	72
Audit fees	54	53
	$ 2,200	$ 2,185

General Plan costs, including the costs for benefit administration and delivery, amounted to $137 per member (2018: $139 per member).

NOTE 13 REMUNERATION OF BOARD OF TRUSTEES MEMBERS

Plan Sponsors may determine remuneration rates. Current remuneration rates are as follows:

	Chair	Trustee
Remuneration rates effective April 1, 2009		
Up to 4 hours	$ 219	$ 164
4 to 8 hours	383	290
Over 8 hours	601	427

	2019	2018
The following amounts were paid:		
Remuneration		
Chair	$ 5,462	$ 5,134
Trustees (8)	30,836	30,758
Travel expenses		
Chair	2,709	1,871
Trustees (8)	12,075	11,860

Trustees are paid for attending and preparing for Board of Trustees and Committee meetings and for time spent on specified Plan business upon the approval of the Board of Trustees. Preparation time for a meeting is remunerated at no more than 4 hours.

NOTE 14 CAPITAL

The Plan defines its capital as the funded position. 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 Plan is fully funded over the long term.

The Plan's surplus or deficit 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 Plan's funded status. Under this method, asset values are calculated based on what the asset value would be at the valuation date had the assets earned precisely the rate of return assumed in the actuarial valuation. This calculation is carried out independently at each of two starting points, namely the market value as at each of the two calendar year-ends preceding the valuation date. These two calculated values, together with the market value as at the valuation date, are averaged to determine the actuarial value of assets with a constraint limiting the actuarial value not to exceed 110% or fall below 90% of net assets available for benefits.

Actuarial asset values for funding valuation purposes amounted to $5,330,068 at December 31, 2019 (2018: $4,947,647), comprising of $627,200 (2018: 667,600) pre-1992 and $4,702,868 (2018: $4,280,047) post-1991.

The following table summarizes on the funding basis, the accrued pension liability, net assets available for benefits, and the resulting deficit as at December 31, 2019 allocated between the pre-1992 and post-1991 periods:

($ thousands)

	2019			2018
	Pre-1992	**Post-1991**	**Total**	**Total**
Net assets available for benefits	$ 647,800	$ 4,829,468	$ 5,477,268	$ 4,830,947
Actuarial adjustment for fluctuation in fair value of net assets	(20,600)	(126,600)	(147,200)	116,700
Actuarial value of net assets available for benefits	627,200	4,702,868	5,330,068	4,947,647
Pension obligation	1,478,800	4,699,800	6,178,600	5,868,300
Actuarial deficit (surplus)	$ 851,600	$ (3,068)	$ 848,532	$ 920,653

Note 14 (continued)

The Plan's unfunded liability for service prior to January 1, 1992 is being financed by additional contributions of 1.25% of salaries by the Province of Alberta with employers and employees equally sharing the balance of the contributions of 2.90% of salaries as required to eliminate the unfunded liability on or before December 31, 2043. The actuarial valuation shows the present value of the Province of Alberta's obligation for future additional contributions was $254,100 at December 31, 2018.

The Plan's unfunded liability for service after December 31, 1991 is being financed by special payments of 4.44% of salaries shared equally between employers and employees to eliminate the unfunded liability on or before December 31, 2027.

The additional contributions and special payments have been included in the rates shown in Note 1(b).

NOTE 15 SUBSEQUENT EVENT

The fair value of the Plan's investments is subject to significant market volatility due to the current economic crisis stemming from the global pandemic COVID-19 virus. The situation is dynamic and the ultimate duration and magnitude of the impact on the economy and the financial effect on the Plan are not fully known at this time. These impacts could include a reduction in the fair value of the investment portfolio and a change in the pension obligation, which could result in future increases in contribution rates to the extent that investments of the Plan do not recover these market-related losses.

NOTE 16 COMPARATIVE INFORMATION

Comparative figures have been reclassified to be consistent with 2019 presentation.

NOTE 17 APPROVAL OF FINANCIAL STATEMENTS

These financial statements were approved by the Board of Trustees of the Plan.

GLOSSARY - TERMS

Absolute Return Strategies/Hedge Funds
Encompass a wide variety of investments and trading strategies in private and publicly-traded securities with the objective of realizing positive returns independent of market direction. Investments in absolute return strategies are made through fund-of-funds and specific fund investments to increase strategy diversification.

Active Management
Managing the investments of a portfolio with the objective of outperforming the return of its benchmark. Active management generally takes two forms - security selection and change in asset allocations within the prescribed ranges. Security selection is the buying and selling of particular securities to earn a return above a market index. Asset allocation refers to changing asset class or sector weights to earn a return above what would be available from maintaining the asset class or sector weight in the benchmark.

Alternative Assets
Holdings that are considered non-traditional assets, including real estate, private equity, infrastructure, and timberland. These assets act as a hedge against inflation and are known for being less liquid than traditional assets. They are typically held by investors with long-term investment horizons.

Asset Mix/Allocation
The allocation of a pension fund's investments among various asset classes such as bonds, equities, real estate, etc.

Benchmark
A standard against which investment performance is measured.

Bonds
Certificates of indebtedness issued by corporations, municipalities or governments on which the issuer promises to pay a specified amount of interest for a specified length of time and to repay the loan on maturity or the expiration date. A bond purchaser is lending money to the issuer. Bonds have terms to maturity greater than one year.

Credit Spread
The difference in yield between two bonds due to differences in credit quality.

Duration
The weighted average term to payment of the cash flows of a bond.

Emerging Market
An economy in the earlier stages of development whose markets have sufficient size and liquidity and are receptive to foreign investment (examples include China, Greece, and Brazil).

Equities/Common Stock
Units of ownership of a corporation where owners typically are entitled to vote on the selection of directors and other important matters as well as to receive dividends on their holdings. In the event that a corporation is liquidated, the claims of secured and unsecured creditors and owners of bonds and preferred stock take precedence over the claims of those who own common stock. The liability of owners of equity is limited to the amount paid for the stock.

External Manager
A third-party firm contracted by the Investment Manager to provide investment management services.

Growth Stock
A share in a company whose earnings are expected to grow at an above-average rate relative to the market.

Large Cap
"Large cap" refers to firms with large market capitalization. Market capitalization is simply the market value of a corporation's outstanding shares. In the US market, this refers to companies with market capitalization above $10 billion. These are mega companies of the financial world and include Apple, Alphabet, and Microsoft. Classifications such as "large cap" or "small cap" are only approximations that change over time.

Passive Management
Managing the investments of a portfolio with the objective of matching/replicating the performance of a given market index or benchmark.

GLOSSARY - TERMS

Policy Benchmark/Return
The "policy benchmark" is a composite return based on the percentage of a pension plan's fund allocated by policy to each asset class and the market index for that class. It is used to measure the plan's relative performance.

Pooled Fund
A fund in which money from two or more investors is accepted for investment and where units allocated to each investor serve to establish the proportionate interest at any time of each investor in the assets of the fund.

Private Income/Infrastructure
Private income opportunities represent privately-negotiated investments in private and publicly-traded entities. These investments are selected, structured and managed to provide (i) a current income component of total return, (ii) diversification and (iii) an inflation hedge. These investment opportunities are typically capital-intensive and may include infrastructure projects (long-life assets used to provide essential services), bridge loans and corporate finance arrangements (with a current income component of total return). Most infrastructure asses are illiquid assets.

Real Return Bond
A fixed-income security (a bond) that generates a specified real rate of return. The real interest rate is the nominal (set) interest rate minus inflation.

Small Cap
"Small cap" refers to firms with relatively smaller market capitalization. Though there is no rigorous definition, in the US, a company with a market capitalization of between $300 million and $2 billion is considered a small cap. The definition can change over time.

Statement of Investment Policies and Goals
A comprehensive statement by the Board outlining, among other things, the asset mix of the Fund, the allowable range for each asset class and the benchmarks for measuring performance.

Swap
A privately-negotiated contract between two parties to exchange a stream of periodic payments on certain dates in the future based on an underlying investment. The size of these payments is normally determined in relation to a nominal, underlying amount, called the notional amount. The underlying security, representing the notional amount, is not exchanged between counterparties. Swaps available in and between all financial markets include, but are not exclusive to, equities, currencies, fixed income and commodities.

Timberland
Timberland investments are made primarily in privately-owned areas of woodland; that is, forested areas consisting of both hardwood and softwood species. When responsibly managed, timberland investments are a renewable and sustainable resource. Timberland investments are illiquid assets.

Total Return
Interest and dividend income plus price increases or decreases.

Tracking Error
The difference between the performance of a position and the performance of a benchmark.

Treasury Bill/T-Bill
A short-term government debt security.

Unfunded Liability
When the actuarial valuation determines that a pension fund's accrued liabilities exceed the assets available for the payment of benefits.

Value Stock
A stock that tends to trade at a lower price relative to its fundamentals (i.e. dividends, earnings, sales, etc.) and thus considered undervalued by an investor.

YMPE (Year's Maximum Pensionable Earnings)
The maximum earnings set each year by the Canada Pension Plan (CPP) up to which employers and employees are required to make CPP contributions.

GLOSSARY - INDICES

Consumer Price Index (CPI)
An indicator of the prices encountered by consumers. It is obtained by calculating, on a monthly basis, the cost of a fixed "basket" of commodities purchased by a typical consumer during a given month. The CPI is published by Statistics Canada and is a widely used indicator of inflation (or deflation) in Canada.

FTSE Canada 91-Day T-Bill Index
An index that represents the performance of Government of Canada 91-day Treasury Bills.

FTSE Canada Long Term Overall Bond Index
An index that tracks the performance of approximately 600 marketable, domestically issued, Canadian bonds with terms to maturity of more than 10 years. This index is comprised of Canada's, provincial, municipal, and AAA- through BBB-rated corporate issuers.

FTSE Canada Real Return Bond Index
An index that tracks the daily performance of real return (inflation-linked) bonds issued in Canada.

FTSE Canada Universe Bond Index
An index that tracks the performance of approximately 1,500 marketable, domestically issued, Canadian bonds with terms to maturity of more than one year. This index is comprised of Canada's, provincial, municipal and AAA- through BBB-rated corporate issuers.

IPD Large Institutional All Property Index
An index that measures the total return from a diversified pool of over 2,400 properties. IPD compiles property level information from pension funds, life insurance companies, and real estate managers on a quarterly basis.

MSCI ACWI (Morgan Stanley Capital International - All Country World Index)
An index maintained by the MSCI Index Committee designed to measure market equity performance of developed and emerging markets. The MSCI ACWI is a free float-adjusted market capitalization index that is calculated on a total return basis, which includes re-investment of net dividends after deduction of withholding taxes. The MSCI ACWI consists of securities across large and mid-cap segments and across style and sector segments in 49 developed and emerging markets.

MSCI EAFE (Europe, Australasia, and Far East)
An index maintained by the MSCI Index Committee that is designed to measure developed public market equity performance, excluding the US and Canada. The MSCI EAFE Index consists of 21 market country indices capturing large and mid-cap equities across developed markets in Europe, Australasia, and the Far East.

MSCI Emerging Markets Free Index
An index maintained by the MSCI Index Committee that is designed to measure emerging public market equity performance net of withholding taxes. The MSCI Emerging Market Index consists of 26 emerging market country indices.

S&P/TSX (Standard & Poor's/Toronto Stock Exchange) Capped Composite Index
An index maintained by the S&P Canadian Index Committee that measures the return on the largest companies and trust units listed on the Toronto Stock Exchange. Any stock in the S&P/TSX Capped Composite Index whose float capitalization exceeds 10% of the Index is capped at 10% during the quarterly rebalancing process.

S&P 500 Index
An index maintained by the S&P Index Committee that includes a representative sample of 500 leading operating companies in the US economy to create a broad market portfolio representing the market capitalization of US public equities.

UNIVERSITIES ACADEMIC PENSION PLAN

2019 ANNUAL REPORT

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