# PUBLIC SERVICE PENSION PLAN

# 2018 Annual Report



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# **Governance Statement**

## Management of the Public Service Pension Plan

The 2018 Public Service Pension Plan (PSPP) Annual Report highlights the benefits administration, financial health and investment information for PSPP's final year under the former governance model.

PSPP was established in 1947 and has been governed under the Public Sector Pension Plans Act (PSPPA) and its regulations since 1992. The Government of Alberta's President of Treasury Board and Minister of Finance was the Trustee of the Plan and was also responsible for administering the Plan and managing its assets. The Public Service Pension Board (PSP Board) was established by the PSPPA to, among other things, oversee and set policy guidelines respecting the investment of Plan assets and administration of the Plan, monitor the financial health of the Plan, make necessary adjustments to employer and employee contribution rates and make recommendations to change Plan rules.

Government approval was required to make changes to the Plan, which limited the scope and decision–making ability of employer and employee representatives who served as Board members on the PSP Board.

#### What is Governance?

Pension plan governance refers to the processes and procedures that are put in place so that the parties involved in the administration and management of a pension plan can ensure the plan is administered in the best interest of its members and beneficiaries.

### Changes to Governance in 2019

In December 2018, the Government of Alberta passed the Joint Governance of Public Sector Pension Plans Act allowing PSPP to be jointly governed by those who contribute to it – employers (represented by the Government of Alberta as the largest participating employer, and the University of Alberta and University of Calgary on an alternating basis) and employees (represented by the Alberta Union of Provincial Employees and University of Alberta Non–Academic Staff Association).

Since March 1, 2019, employer and employee groups have shared control of the Plan's design and responsibility for the financial health of the Plan. The relevant sections under the PSPPA have been repealed and PSPP is now registered under, and must comply with, the Employment Pension Plans Act (EPPA), subject to exemptions granted under the EPPA Exemption Regulation. This means PSPP is now subject to regulatory oversight by the Alberta Superintendent of Pensions to ensure proper Plan operation, governance and rules.

The implementation of this new governance structure changes how PSPP is managed. For example, the PSP Board ceased to exist effective March 1, 2019. In its place, three new entities have been created. These new entities took over responsibilities previously held by the President of Treasury Board and Minister of Finance and former PSP Board:

#### - Sponsor Board:

Comprised of representatives appointed by employer and employee sponsor organizations. The Sponsor Board makes important decisions about pension benefits, eligibility rules and contributions.

#### - PSPP Corporation:

The new trustee of the Plan fund and administrator of the Plan. PSPP Corporation is not an agent of the Crown or a public agency.

#### PSPP Corporation Board of Directors:

Governs PSPP Corporation and oversees the overall activities of PSPP Corporation including Plan management.

Throughout 2018, Alberta Pensions Services Corporation was responsible for the day to day administration of Plan benefits, and Alberta Investment Management Corporation was responsible for investment management of the Plan fund pursuant to agreements with the President of Treasury Board and Minister of Finance. PSPP Corporation entered into service agreements with these key service providers, effective March 1, 2019, to ensure uninterrupted services and operation of the Plan. Membership in PSPP is not affected by governance changes.

# **Administration Report**

Throughout 2018, the President of Treasury Board and Minister of Finance was the administrator of PSPP but delegated certain functions regarding the administration of PSPP to Alberta Pensions Services Corporation (APS). APS was incorporated in 1995 with the Government of Alberta as the sole shareholder. APS provides administrative services for over 375,000 members of nine client pension plans, including PSPP. APS operates on a cost–recovery basis and is committed to delivering the highest standard of accurate, cost–effective service. In 2018, APS reported a 99.7% payout calculation accuracy rate for the year.

Administrative services provided by APS include:

- Contributions management
- Member, pensioner and employer information management and communications
- Benefit calculations and disbursements
- Policy development and implementation
- Compliance, regulatory and plan financial reporting

APS also provides member education services across Alberta, and in 2018 held one-on-one sessions, group sessions, and webinars for PSPP members.

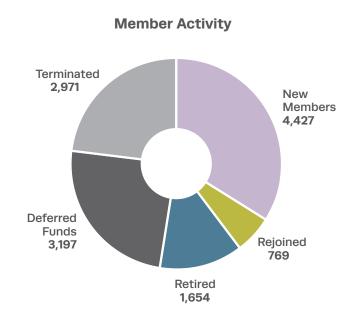
APS maintains mypensionplan, an online portal where members can access personal benefit information and send secure emails. 32% of active, deferred and retired PSPP members have registered for mypensionsplan. In 2018, APS launched PensionEase, a new tool within mypensionplan that allows members to complete the retirement application process online. In 2018, 78 applications were received by PSPP members through PensionEase.

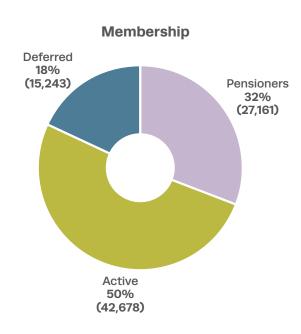
APS also worked with the PSP Board to launch the new PSPP.ca website in April 2018, featuring more comprehensive Plan information, improved tools and tips, and resources to help members plan for retirement.

## Members, Pensioners and Employers

Based on 2018 year–end totals, PSPP had 29 employers and over 85,000 active and deferred members and pensioners.

In 2018, 4,427 new members joined the Plan, 769 re–joined the Plan, and 1,654 members retired. 3,197 members terminated but kept their benefits in the Plan, and 2,971 members terminated and transferred their benefits out of the Plan.





Average age of active members: 43.8

Average age of all pensioners in 2018: 72.7

Average yearly pension paid out (gross): \$16,582.71

Average age at retirement in 2018: 60.4

Percentage increase in membership over 2017: 0.8%

## **PSPP Benefit Administration Expenses**

The total cost of administering PSPP was \$13,661,000 in 2018. Based on average membership, the cost per member was \$161.

# Member Service Expenses (\$ thousands)

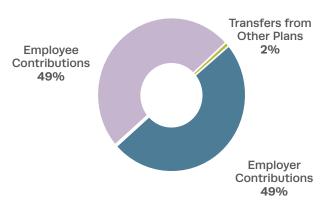
	2018	2017
Plan administration costs	12,810	12,630
Board expenses	147	124
Actuarial fees	117	129
Other professional fees	148	155
GST charged by APS*	439	-
Total	13,661	13,038
Member service expenses per member	\$161	\$154

<sup>\*</sup> Since January 1, 2018, APS began prospectively charging the Plan GST on pension administration services following direction from the Deputy Minister of Treasury Board and Finance.

## Contributions to PSPP

In 2018, total contributions to PSPP were \$691,639 (thousands).

#### **Contributions to PSPP**



## Payments from PSPP

In 2018, total payments from PSPP were \$687,386 (thousands).

Pension benefit payments	\$464,894
Refunds	\$118,364
Transfers to other plans	\$18,378
Member service expenses	\$13,661
Investment expenses	\$72,089
Total payments	\$687,386

# **Plan Performance**

## Fair Value of Net Assets versus Pension Obligation

While still in surplus for accounting purposes, the negative returns from the global public equity markets resulted in a decline in the financial position of the PSPP. At December 31, 2018, the fair value of the Plan's net assets increased by 2.1% (or \$286 million) to \$13.712 billion. The increase in net assets was less than the increase in the estimated pension obligation which grew by 8.6% (or \$1,043 million) to \$13.193 billion. As a result, the Plan's funded status for accounting purposes declined, with the surplus decreasing by \$757 million to \$19 million.

Fair Value of Net Assets: \$13.712 Billion

Pension Obligation: \$13.193 Billion

Surplus: \$519 Million

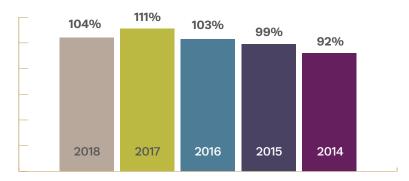
Income and Contributions: \$974 Million

Benefits and Expenses: \$687 Million

At December 31, 2018, the financial position of the Plan shows that 104% of the total pension obligation was supported by net assets.

#### % of Pension Obligation Supported by Net Assets

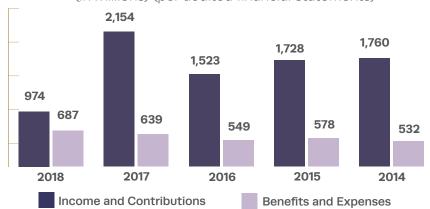
(per audited financial statements)



In 2018, inflows from investment income were down significantly over previous years, due to the negative returns from the global public equity markets. Total inflows of \$974 million were still slightly higher than the outflows for benefit payments and expenses of \$687 million.

#### **PSPP Inflows and Outflows**

(in millions) (per audited financial statements)

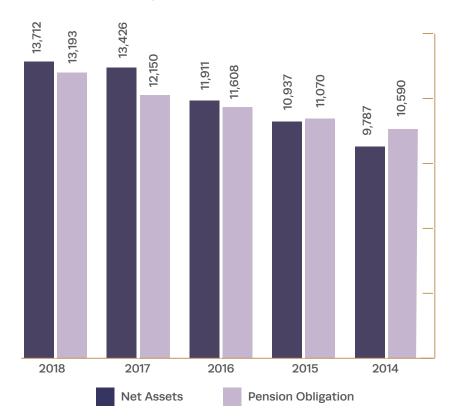


The chart below shows the gap between the total pension obligation and the net assets. By the end of 2018, the gap that was eliminated in 2016 narrowed as growth in net assets was significantly less than the growth in the pension obligation. This was primarily the result of negative returns from the global public equity markets, coupled with a decrease in the discount rate used to determine the pension obligation. The total pension obligation is based on the estimated net present value of future pension benefits paid to plan members. Retirement benefits earned by employees provide a lifetime pension for each year of pensionable service based on a specified percentage applied to the average salary for the five highest consecutive years, subject to the maximum benefit limit allowed under the *Canadian Income Tax Act*. The estimated pension obligation increases annually for each additional year of pensionable service earned by employees. The pension obligation is an estimate because it is based on various assumptions used by the Plan's actuary. For example, an estimated discount rate is used to determine the present value of future retirement payments. A lower estimated discount rate will increase the total pension obligation. Similarly, a higher estimated life expectancy will also increase the pension obligation. Net assets increase when there are positive overall investment returns and when employee and employer contributions exceed pension benefits paid. Net assets decrease when there are investment losses.

At December 31, 2018, the fair value of the Plan's net assets totaling \$13.712 billion was higher than the estimated pension obligation of \$13.193 billion resulting in a surplus of \$519 million. The discount rate for accounting purposes decreased from 6.1% to 5.7%. Other major assumptions for accounting purposes were unchanged from 2017.

## Net Assets Compared to Total Pension Obligation

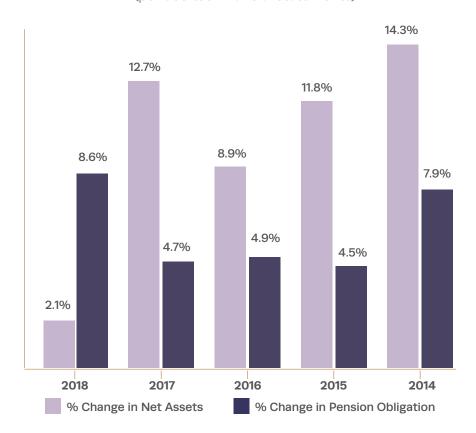
(in millions) (per audited financial statements)



As shown in the chart below, net assets increased by 2.1% in 2018 compared to an increase in the pension obligation of 8.6%.

% Change in Net Assets and Pension Obligation

(per audited financial statements)



# **Investment Performance**

#### 2018 Year in Review

In what can be described as a volatile year, the markets in the 1st quarter of 2018 lost momentum from the strong finish to the 2017 year, and PSPP gained a mere 0.5% on its investments. The U.S. Federal Reserve and the Bank of Canada continued to increase interest rates, with the U.S. target rate increasing by 1%, or 100 basis points by the end of the year. Stronger than expected corporate earnings buoyed the markets in the 2<sup>nd</sup> and 3<sup>rd</sup> quarters, contributing to PSPP's investment gains of 2.3% and 0.8% respectively.

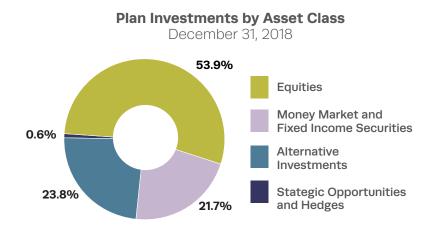
In the 4th quarter, trade war fears and plunging oil prices pushed equity markets into negative territory, reducing the gains earned in the earlier quarters. PSPP posted a loss of 2.0% for the final quarter, finishing the year with an overall return of 1.5% on the strength of returns earned on alternative investments.

In 2018, PSPP earned \$282 million, before investment expenses, compared to \$1,420 million in 2017. Investment expenses totaled

the investments totaled \$13.7 billion compared to \$13.4 billion at the beginning of the year.

\$72 million compared to \$65 million in 2017. At December 31, 2018,

The following chart shows the Plan investments by asset class at December 31, 2018. Alternative investments include real estate, infrastructure and timberland investments.



## Investments

Return on Investment

Investment Income

\$282 Million

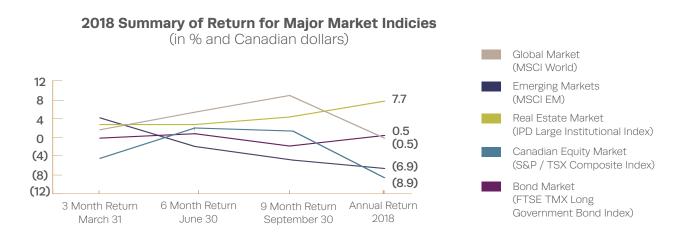
**Investment Expense** 

\$72 Million

At December 31, 2017, Plan assets were invested in equities, 57.8%, money market and fixed income securities. 21.8%, alternative investments, 19.8% and strategic opportunities and currency hedges, 0.6%.

Overall, the PSPP's investments gained 1.5% in 2018, net of investment expenses, compared to 11.3% in 2017. Active management from AIMCo resulted in value added of 0.5%, compared to 1.6% in 2017.

The chart below compares the market returns from various indices around the world. The real estate market, as measured by the IPD Large Institutional All Property Index, had the highest returns in 2018 with a gain of 7.7%, followed by the long bond market at 0.5%. The global, emerging and Canadian public equity markets all posted losses (in Canadian dollars) for 2018, losing 0.5%, 6.9% and 8.9% respectively.



## Long-Term Investment Objectives for Funding Purposes

To meet the long-term funding needs of the PSPP, the 2017 actuarial funding valuation reduced the discount rate to 5.1%, which is comprised of an assumed real rate of return of 3.1% and an inflation rate of 2.0%. The assumed real rate of return includes a 1.0% margin to mitigate the impacts from plan experience that is different from the assumption used in the actuarial funding valuation.

## Annual Returns by Year

Net of expenses, the Plan's investments generated a return of 1.5% in 2018 and an average of 9.4% per annum over the past ten years.



## Statement of Investment Policies & Guidelines (SIP&G)

## **Investment Management Overview**

Throughout 2018, the President of Treasury Board and Minister of Finance was the trustee of the PSPP and was responsible in legislation for holding the PSPP's assets and for the investment management of the assets. Responsibility for setting investment policies and guidelines including the portfolio asset mix was delegated to the Public Service Pension Board (PSP Board). Responsibility for the day–to–day investment and management of the Plan's portfolio was delegated to Alberta Investment Management Corporation (AIMCo), an Alberta provincial corporation. Effective March 1, 2019, new legislation established PSPP Corporation as the trustee of the PSPP, and the PSPP Corporation became responsible for setting investment policies and guidelines. AIMCo continues to provide day–to–day investment services for the Plan's investment portfolio pursuant to an investment contract with PSPP Corporation.

AIMCo invests PSPP's assets in accordance with legislation and the investment policies set for PSPP. The Plan invests in units of pooled investment funds created and managed by AIMCo. 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 sales of units.

The SIP&G establishes investment principles and guidelines, considering PSPP's benefit design, demographics, risk tolerance and liabilities. The SIP&G is reviewed at least once a year to ensure that the PSPP Fund is managed within an appropriate and prudent level of risk.

## **Proxy Voting**

The PSP Board considers proxy voting to be a key element of responsible investing and believes that thoughtful voting is a contributor to optimizing the long-term value of investments. The PSP Board delegates the proxy voting function to AIMCo. Research and proxy voting have been outsourced to an independent adviser who specializes in providing proxy-related services to institutional investors. While AIMCo may review and utilize the recommendations of the research provider in making proxy voting decisions, they have processes in place to review voting decisions and are in no way obligated to follow such recommendations.

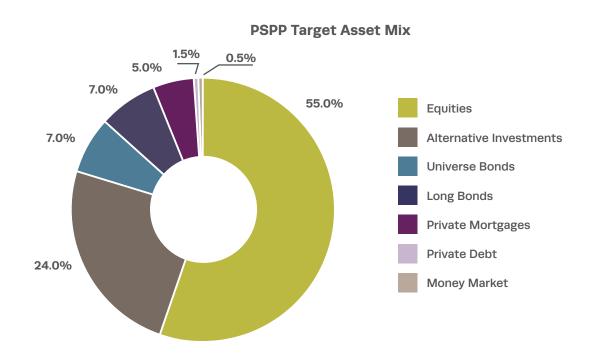
## Risk Management System

PSPP investments are diversified in a wide spectrum of asset classes to help improve the likelihood of achieving desired results for a given level of risk. As such, investment risk management is a central thesis for PSPP's investment manager. AlMCo seeks to measure and monitor both historic and possible future risks, allocating risk as a scarce resource to the most promising investment opportunities. AlMCo maintains a quantitative investment risk system designed to operate across all asset classes and take into account a variety of risk types such as credit risk, price risk, interest rate risk, currency risk and liquidity risk.

## **Policy Asset Mix**

The asset class structure shown below supports the PSPP investment strategy, which focuses on funding PSPP over the long-term.

AIMCo is given broad ranges to invest within each asset class. In addition, AIMCo may invest up to 3% of the Plan's investments in strategic opportunities that are outside the asset classes shown in this chart.



The table below shows the long-term policy asset mix for each asset class compared to the actual holdings at December 31, 2018.

## Long-Term Policy Asset Mix

(Percentage of Fund)

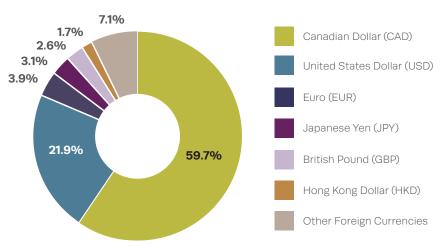
Asset Class	Target	Min	Max	Actual
FIXED INCOME SECURITIES	21.0%	11.0%	33.0%	21.7%
Deposits and short-term	0.5%	0.0%	3.0%	0.7%
Long bonds	7.0%	4.0%	10.0%	6.4%
Universe bonds	7.0%	4.0%	10.0%	9.2%
Private mortgages	5.0%	3.0%	7.0%	4.4%
Private debt and loan	1.5%	0.0%	3.0%	1.0%
EQUITIES	55.0%	37.0%	65.0%	53.9%
Canadian	13.0%	10.0%	18.0%	12.3%
Global				
Traditional	22.0%	19.0%	27.0% ر	33.9%
Low volatility	11.0%	8.0%	14.0%	<del></del> 33.9%
Emerging markets	5.0%	0.0%	7.0%	5.0%
Private equity	4.0%	0.0%	6.0%	2.7%
ALTERNATIVE INVESTMENTS	24.0%	15.0%	30.0%	23.8%
Canadian real estate	13.0%	10.0%	15.0%	13.4%
Foreign real estate	2.0%	0.0%	3.0%	2.0%
Infrastructure (1)	9.0%	5.0%	12.0%	8.4%
STRATEGIC OPPORTUNITIES AND CURRENCY HEDGES	-	-	-	0.6%
Total	100.0%			100.0%

<sup>(1)</sup> Includes Timberland, from which the Board intends on divesting. Until such time, organic growth is permitted.

### Investments by Currency

At December 31, 2018, 59.7% of the Plan's investments were denominated in Canadian currency (2017: 59.2%) and 40.3% in foreign currencies (2017: 40.8%). Investments in U.S. currency comprised 21.9% (2017: 21.5%) of total investments followed by 18.4% (2017: 19.3%) in other currencies outside North America.

#### **PSPP Investments by Currency**



### **Investment Expenses**

In 2018, investment expenses charged by AIMCo, before GST, increased by 12.6% compared to an increase of 45.1% last year. Average investments under management increased by 7.1% compared to 11.1% last year. Overall investment expenses in 2018 were 0.5% of plan assets.

(\$ millions)	2018	2017
Amounts charged by AIMCo for: Investment costs (a)	\$59.8	\$52.9
Performance based fees (a)	10.0	9.1
Total investment expense before GST	69.8	62.0
GST (b)	2.3	2.6
Total investment expense after GST	\$72.1	\$64.6
% increase in investment expense, before GST	12.6%	45.1%
% increase in average investments under management	7.1%	11.1%
Value added by AIMCo	0.5%	1.6%
Investment expense as % of each dollar invested	0.5%	0.5%

<sup>(</sup>a) Refer to AIMCo's financial statements for a detailed breakdown of the types of expenses incurred by AIMCo. Amounts recovered by AIMCo for investment costs include those costs that are primarily non-performance related including external performance fees, external administration costs, employee salaries and incentive benefits and overhead costs. Amounts recovered by AIMCo for performance based fees related to external managers hired by AIMCo.

Also includes amounts charged by Treasury Board and Finance for investment accounting and Plan reporting.

<sup>(</sup>b) Two-thirds of GST paid is expensed in the year and the remaining one-third is recorded as a receivable until received.

## **PSPP Investment Performance Summary**

The PSPP policy benchmark return is based on the policy asset mix weightings set by the PSP Board and returns of related market benchmarks. The policy benchmarks are documented in the SIP&G for the PSPP. Investment performance is measured against PSPP's policy benchmark to determine the impact of the manager's investment decisions.

According to the SIP&G, the PSP Board expects that, in aggregate, the investment manager earn a return, net of fees, which exceeds the rate of return of the benchmark portfolio by 85 basis points, or 0.85%, over a rolling four-year time horizon.

Over four years, the actual value-added return by AIMCo was 1.0% per annum.

#### **December 31, 2018**

	Fair Value	Asset		Annual R	eturns %		Compound
Table of Investment Returns (A)	(in millions)	<b>Mix</b> (%)	2018	2017	2016	2015	Annualized Return 4 yr
Total Fund Return	\$13,678.6	100.0	1.5	11.3	6.9	9.8	7.3
Policy Benchmark Return (Market Return)			1.0	9.7	6.6	8.0	6.3
Value Added Return			0.5	1.6	0.3	1.8	1.0
Consumer Price Index (B)			1.7	2.1	1.2	1.4	1.6
Money Market	94.3	0.7	1.6	1.0	0.9	0.9	1.1
FTSE TMX 91–Day T–Bill Index			1.4	0.6	0.5	0.6	0.8
Universe bonds	1,261.3	9.2	1.9	3.3	3.3	4.1	3.2
Private mortgages	606.2	4.4	4.7	2.5	2.1	5.0	3.6
Private debt	134.1	1.0	4.0	2.3	4.4	6.1	4.2
FTSE TMX Universe Bond Index			1.4	2.5	1.7	3.5	2.3
Long-term Government Bonds	878.7	6.4	0.9	7.6	2.4	4.1	3.7
FTSE TMX Long-term Government Bond Index			0.5	6.5	1.3	4.5	3.2
Real Return Bonds	-	-	n/a	n/a	n/a	3.0	n/a
FTSE TMX Real Return Bond (RRB) Index			n/a	n/a	n/a	2.8	n/a
EQUITIES			(2.9)	14.8	7.6	12.3	7.7
Combined Benchmark			(1.6)	13.2	7.8	9.7	7.1
Canadian Equity	1,687.4	12.3	(9.8)	10.2	19.9	(7.4)	2.5
S&P/TSX Composite Index			(8.9)	9.1	21.1	(8.3)	2.5
Global Equity	4,633.4	33.9	(1.0)	15.8	2.7	20.9	9.2
MSCI World Index			1.0	13.1	2.0	18.9	8.5
Emerging Markets	680.7	5.0	(8.2)	30.4	8.7	6.2	8.4
MSCI Emerging Markets Index			(6.9)	28.3	7.3	2.0	6.9
Private Equity	366.6	2.7	18.9	(1.4)	1.2	26.4	10.8
Combined Benchmark <sup>(c)</sup>			8.6	8.6	8.3	17.1	10.6

(continued on next page)

#### **December 31, 2018**

		Fair Value	Asset		Annual R	eturns %		Compound
Т	able of Investment Returns <sup>(</sup>		Mix (%)	2018	2017	2016	2015	Annualized Return 4 yr
	ALTERNATIVES			12.7	9.5	6.4	11.0	9.1
	Combined Benchmark			7.6	6.7	5.8	9.4	7.0
	Real Estate	2,114.8	15.4	11.9	8.8	5.0	7.4	8.0
	Combined Benchmark (D)			8.5	7.0	5.8	8.0	7.3
	Canadian Real Estate (D)	1,837.9	13.4	11.5	n/a	n/a	n/a	n/a
	IPD Large Institutional Index			7.6	n/a	n/a	n/a	n/a
	Foreign Real Estate (D)	276.9	2.0	14.7	n/a	n/a	n/a	n/a
	IPD Global Region Property Index <sup>(D)</sup>			13.8	n/a	n/a	n/a	n/a
	Infrastructure	943.0	6.9	13.1	9.2	9.5	20.6	11.6
	Timberland	200.4	1.5	17.7	17.5	10.0	7.6	12.2
	Combined Benchmark (E)			6.1	6.1	5.8	9.1	6.8
	STRATEGIC OPPORTUNITIES AND CURRENCY HEDGING			(2.2)	5.0	(5.1)	(32.2)	15.1
	Strategic Opportunities	77.7	0.6	(2.2)	5.0	(3.2)	42.8	9.2

<sup>(</sup>A) Investment returns provided by AIMCo. Investment returns for assets classified as Level 3 in the financial statements are based on estimates of fair value. Level 3 includes real estate, private equities, infrastructure, timberland, hedge funds and private debt. For these investments, measurement uncertainty exists because trading activity is infrequent and fair values are derived using valuation techniques which incorporate assumptions that are based on non-observable market data. Reasonably possible alternative assumptions could yield an increase or decrease in the fair value amounts and investment returns reported for these types of investments. Any change in estimated returns and valuations, resulting from new information received after the cut-off date for preparation of the Plan's financial statements, will be reflected in the next reporting period.

<sup>(</sup>B) The Consumer Price Index (CPI) is calculated and reported on a one-month lagged basis due to a timing difference in reporting with Statistics Canada.

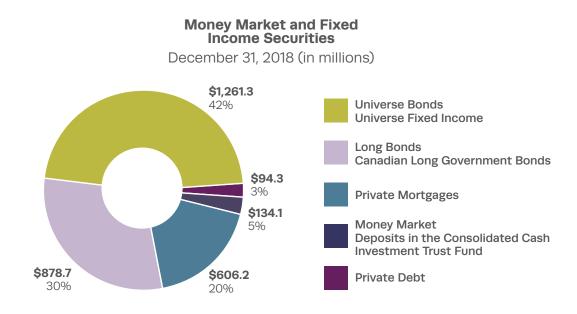
<sup>(</sup>C) Effective January 1, 2016, CPI + 7.0%. Previously, MSCI All Country World Index (ACWI).

<sup>(</sup>D) The asset mix, in accordance with the 2018 SIP&G, separates real estate between Canadian and foreign allocations. Prior to January 9, 2018, allocations to Canadian and foreign real estate were combined and benchmarked against the IPD Large Institutional All Property Index. Current year actual and benchmark returns for Canadian and foreign allocations are year to date from January 9, 2018.

<sup>(</sup>E) Effective November 1, 2015, CPI + 4.5%. Previously, 50% FTSE TMX RRB Index and 50% MSCI ACWI.

## Money Market and Fixed Income Securities

The Plan's money market and fixed income portfolio consists of money–market securities, long and universe bonds, private mortgages and private debt totaling 21.7%, or \$2.975 billion, of total investments at December 31, 2018, compared to 21.8%, or \$2.921 billion the previous year.



## **Money Market**

At December 31, 2018, money-market securities comprised 0.7% of PSPP total investments or \$94 million compared to 0.6% or \$78 million the previous year.

Money-market securities primarily include deposits in the Consolidated Cash Investment Trust Fund (CCITF). The CCITF is a portfolio of investments, which includes short-term and mid-term fixed income securities issued by banks, various levels of government and major corporations with a maximum term-to-maturity of three years.

		Benchmark FTSE TMX 91–Day	
Money Market	Actual Return %	T-Bill Index %	Value Added %
One year	1.6	1.4	0.2
Four years (annualized)	1.1	0.8	0.3

## **Long Bonds**

Long bonds totaled 6.4% of the total portfolio or \$879 million at December 31, 2018 compared to 6.5% or \$869 million the previous year.

#### Pooled Fund Investments (by Issuer) Compared to Benchmark Index (in %)

December 31, 2018

Issuer	Canadian Long–term Government Bond Pool	Benchmark FTSE TMX LT All Government Bond Index
Federal	20	28
Provincial	65	69
Municipal	6	3
Corporate	8	-
* may not add to 100% due to rounding	100*	100

	Benchmark FTSE TMX LT			
Long Bonds	Actual Return %	Government Bond Index %	Value Added %	
One year	0.9	0.5	0.4	
Four years (annualized)	3.7	3.2	0.5	

#### **Universe Bonds**

Universe bonds totaled 9.2% of the total portfolio or \$1,261 million at December 31, 2018, compared to 10.2% or \$1,363 million the previous year.

# Pooled Fund Investments (by Issuer) Compared to Benchmark Index (in %) December 31, 2018

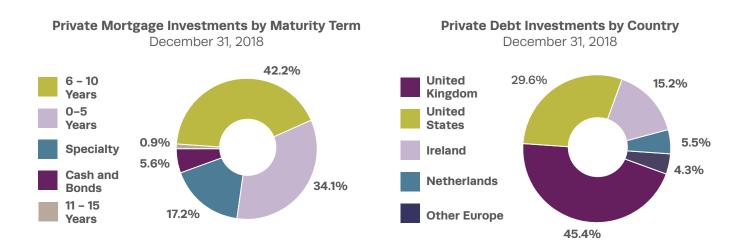
Issuer	Universe Fixed Income Pool	Benchmark FTSE TMX Universe Bond Index
Federal	28	36
Provincial	32	34
Municipal	-	2
Corporate	38	28
Private debt and mortgages	1	-
Under 1 year	1	-
* may not add to 100% due to rounding	100*	100

**Benchmark FTSE TMX Universe Actual Return Bond Index Value Added** % % % **Universe Bonds** One year 1.9 1.4 0.5 Four years (annualized) 3.2 2.3 0.9

### **Private Mortgages and Private Debt**

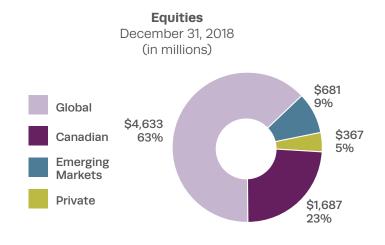
The Plan also invests in private mortgages and private debt securities. The private mortgage portfolio is managed over a longer-term investment horizon providing stable cash flows. Private mortgages accounts for 4.4% of the Plan's investments, or \$606 million, at December 31, 2018, compared to 4.0%, or \$543 million, in the previous year.

The private debt portfolio generates high current income and preservation of capital through diversification. Private debt accounts for 1.0% of the Plan's investments, or \$134 million, at December 31, 2018, compared to 0.5%, or \$67 million, in the previous year.



## Equities

At December 31, 2018, equities comprised 53.9% of the total investments or \$7.368 billion, down from 57.8%, or \$7.753 billion, the previous year. The Plan's equity portfolio includes investments in AIMCo's Canadian, global, emerging markets and private equity pools.



## Canadian Public Equities

At December 31, 2018, Canadian equities comprised 12.3% of the PSPP's total investments or \$1,687 million compared to 13.6% or \$1,822 million the previous year. The Plan's Canadian equity investment is held in AIMCo's Canadian Equities Master Pool, which in turn invests in the Global Alpha Strategy (GLAS) and structured equity products that 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 opportunities for value–add return (alpha). GLAS's portfolio is actively managed by AIMCo and includes directly held investments in public companies in the U.S., and Europe, Australasia and 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.

## Canadian Equities Master Pool Industry Exposure Relative to Benchmark December 31, 2018

Sector	Benchmark TSX Composite Index %	Over (Under) Benchmark %
Communication services	6.0	0.4
Consumer discretionary	4.3	0.1
Consumer staples	4.0	(0.8)
Energy	17.8	(0.5)
Financials	32.9	0.5
Health care	1.6	(0.2)
Industrials	10.8	(0.4)
Information technology	4.0	0.9
Materials	11.4	0.6
Real estate	3.2	(0.4)
Utilities	4.1	(0.0)
	100*	

<sup>\*</sup> may not add to 100% due to rounding

	Benchmark S&P/TSX		
	<b>Actual Return</b>	<b>Composite Total Return Index</b>	Value Added
Canadian Public Equities	%	%	%
One year	(9.8)	(8.9)	(0.9)
Four years (annualized)	2.5	2.5	0.0

## **Global Equities**

At December 31, 2018, global equities comprised 33.9% of the PSPP's total investments or \$4.633 billion, down from 36.5%, or \$4.900 billion, the previous year. PSPP invests in units of AIMCo's Global Equities Master Pool, which makes up 66% of the Plan's global equity investment. The Pool's investment in GLAS provides exposure to a diverse market, which intends on providing 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. PSPP also invests in units of AIMCo's Global Minimum Variance Pool, which makes up 32% of the Plan's global equities. The pool aims to have lower realized volatility than capitalization–weighted indices while providing similar or better returns. The remaining 2% of global equities is held in the Life Settlement Holdings (LSH) Pool. The LSH Pool invests in discounted life insurance policies.

		Benchmark	
Global Equities	Actual Return %	MSCI World Index %	Value Added %
One year	(1.0)	1.0	(2.0)
Four years (annualized)	9.2	8.5	0.7

#### Global Equities Master Pool Industry Exposure Relative to Benchmark

December 31, 2018

Sector	Benchmark MSCI World Total Return Index %	Over (Under) Benchmark %
Communication services	8.3	0.4
Consumer discretionary	10.4	0.2
Consumer staples	8.7	(0.8)
Energy	5.9	(0.5)
Financials	16.2	0.5
Health care	13.4	(0.1)
Industrials	10.9	(0.4)
Information technology	14.9	0.9
Materials	4.6	0.6
Real estate	3.2	(0.4)
Utilities	3.5	(0.0)
	100*	

<sup>\*</sup> may not add to 100% due to rounding

#### **Global Equities Master Pool Relative Regional Exposure to Benchmark**

December 31, 2018

Region	Benchmark MSCI World Total Return Index %	Over (Under) Benchmark %
United States	61.7	0.7
Europe, Australasia & the Far East	34.9	0.1
Emerging markets	0.0	(0.1)
Canada	3.3	(0.4)
	100*	

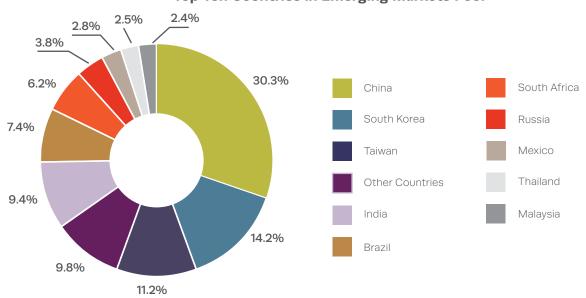
<sup>\*</sup> may not add to 100% due to rounding

## **Emerging Markets**

At December 31, 2018, investments in emerging markets comprised 5.0% of the PSPP's total investments or \$681 million, down from 5.3%, or \$704 million, the previous year. PSPP invests in units of AIMCo's Emerging Markets Pool, which holds an investment in GLAS with the non-emerging market exposure being swapped out to the MSCI Emerging Markets index. The chart below shows the top ten countries in the emerging markets pool.

Emerging Markets	Actual Return Actual Return %	Benchmark MSCI Emerging Index %	Value Added %
One year	(8.2)	(6.9)	(1.3)
Four years (annualized)	8.4	6.9	1.5

#### **Top Ten Countries in Emerging Markets Pool**



## **Private Equities**

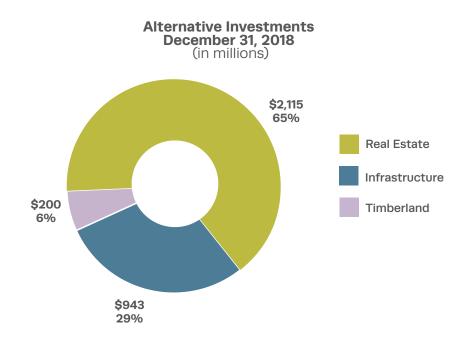
At December 31, 2018, private equities comprised 2.7% of total PSPP investments or \$367 million, up from 2.4% or \$327 million at the end of the previous year. Private equity investments primarily include buyout investments such as expansion capital, acquisition financings, management buyouts, family succession, turnaround financings, project financings and leverage reductions.

	Actual Return	Combined Benchmark <sup>(1)</sup>	Value Added
Private Equities	%	%	%
One year	18.9	8.6	10.3
Four years (annualized)	10.8	10.6	0.2

(1) Effective January 1, 2016, CPI + 7.0%. Previously, MSCI ACWI.

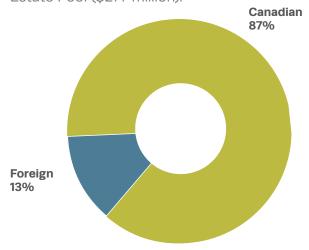
## Alternative Investments

At December 31, 2018, alternative investments comprised 23.8% of total PSPP investments, or \$3,258 million, compared to 19.8%, or \$2,661 million, at the end of the previous year. Alternative investments include real estate, infrastructure and timberland investments.



#### Real Estate

At December 31, 2018, real estate comprised 15.4% of the PSPP's total investments or \$2,115 million, compared to 12.7% or \$1,710 million at the end of the previous year. Real estate investments are held primarily in the AIMCo's Canadian Private Real Estate Pool (\$1,838 million) and in the Foreign Private Real Estate Pool (\$277 million).

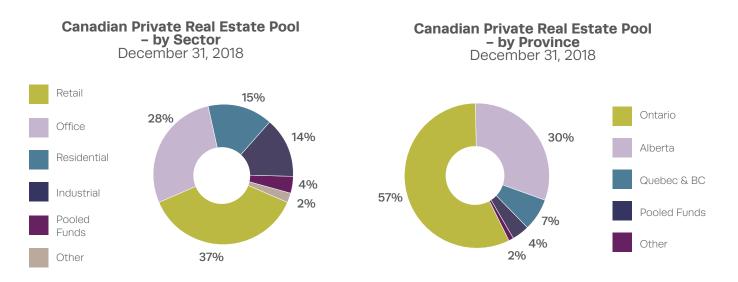


In January 2018, the real estate allocation was split between the Canadian and foreign portfolios. The Canadian portfolio remained benchmarked against the IPD Large Institutional All Property Index, and the foreign portfolio began to be measured against the IPD Global Region Property Index.

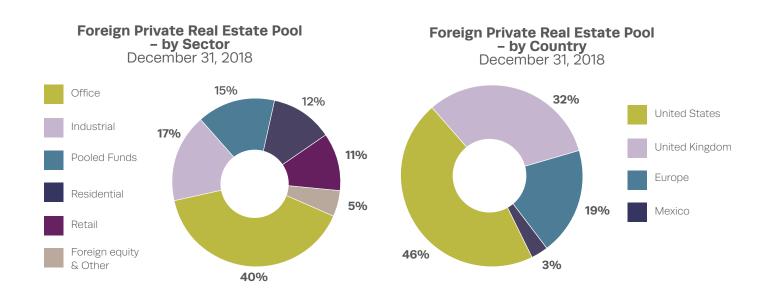
Real Estate (combined)	Actual Return %	Benchmark <sup>(1)</sup> %	Value Added %
One year	11.9	8.5	3.4
Four years (annualized)	8.0	7.3	0.7

(1) Effective January 9, 2018, 2/3 IPD Large Institutional All Property Index, 1/3 IPD Global Region Property Index. Previously, IPD Large Institutional All Property Index.

The Canadian real estate portfolio includes office, retail, industrial and residential properties located in major urban centers in Ontario, Alberta, Quebec and British Columbia. The focus is on quality properties with strong locations and tenants.



The foreign real estate investment is in AIMCo's Foreign Private Real Estate Pool. Investments held in this pool are primarily a mix of office, retail, industrial and residential properties in developed global centres in Europe and North America.



### Infrastructure

At December 31, 2018, investments in AIMCo's infrastructure pools comprised 6.9% of the total PSPP's investments or \$943 million, up from 5.7% or \$765 million at the end of the previous year. The Infrastructure Pools include investments in projects that provide attractive returns plus inflation sensitivity with a long investment horizon. Infrastructure projects include transportation/logistics (e.g. toll roads, airports, ports, and rail), power/energy (e.g. contracted power generation, power transmission pipelines) and utilities (e.g. water, wastewater, natural gas networks).

		Combined	
	<b>Actual Return</b>	Benchmark (1)	Value Added
Infrastructure	%	%	%
One year	13.1	6.1	7.0
Four years (annualized)	11.6	6.8	4.8

(1) Effective November 1, 2015, CPI + 4.5%. Previously, 50% FTSE TMX Real Return Bond (RRB) Index and 50% MSCI ACWI.

### **Timberland**

At December 31, 2018, the Plan's investment in units of AIMCo's Timberland Pool comprised 1.5% of the total PSPP investments or \$200 million, compared to 1.4% or \$186 million the previous year. Timberland investments include funds holding timber and forestry property as well as agricultural and farm land in Canada, United States, Australia, New Zealand and Latin America.

		Combined	
	<b>Actual Return</b>	Benchmark (1)	Value Added
Timberland	%	%	%
One year	17.7	6.1	11.6
Four years (annualized)	12.2	6.8	5.4

<sup>(1)</sup> Effective November 1, 2015, CPI + 4.5%. Previously, 50% FTSE TMX RRB Index and 50% MSCI ACWI.

## Strategic Opportunities and Currency Hedges

At December 31, 2018, the Plan's investment in AIMCo's Strategic Opportunities Pool and currency hedges comprised 0.6% of total investments or \$78 million compared to 0.6% or \$85 million the previous year. The Strategic Opportunities Pool consists of investments in infrastructure and hydropower in emerging market countries in Brazil and Columbia. In 2018, the Strategic Opportunities Pool lost 2.2% (2017: gained 5.0%).

# **Financial Statements**

Year Ended December 31, 2018

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Statement of Changes in Net Assets Available for Benefits	page 33
Statement of Changes in Pension Obligation	page 34
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Independent Auditor's Report

To the PSPP Corporation Board of Directors

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

#### **Opinion**

I have audited the financial statements of the Public Service Pension Plan, which comprise the statement of financial position as at December 31, 2018, and the statements of changes in net assets available for benefits and changes in pension obligation for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In my opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Public Service Pension Plan as at December 31, 2018, and the changes in net assets available for benefits and changes in its pension obligation for the year then ended in accordance with Canadian accounting standards for pension plans.

#### **Basis for opinion**

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

#### Other information

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

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

In connection with my audit of the financial statements, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

When I read the Annual Report, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance.

#### Responsibilities of management and those charged with governance for the financial statements

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

In preparing the financial statements, management is responsible for assessing the Public Service Pension Plan's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless an intention exists to liquidate or to cease operations, or there is no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Public Service Pension Plan's financial reporting process.

#### Auditor's Responsibilities for the Audit of the Financial Statements

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

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

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Public Service Pension Plan's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Public Service Pension Plan's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Public Service Pension Plan to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

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

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

May 2, 2019 Edmonton, Alberta

## Statement of Financial Position

As at December 31, 2018

	(\$ thousands)		
	2018	2017	
Net assets available for benefits			
Assets			
Investments (Note 3)	\$13,678,535	\$13,419,292	
Contributions receivable			
Employers	18,650	14,525	
Employees	18,174	14,594	
Accounts receivable	10,196	11,189	
Total Assets	13,725,555	13,459,600	
Liabilities			
Accounts payable	12,996	28,291	
Liabilities for investment purchases	-	5,000	
Total Liabilities	12,996	33,291	
Net assets available for benefits	\$13,712,559	\$13,426,309	
Pension obligation and surplus			
Pension obligation (Note 5)	\$13,193,341	\$12,150,466	
Surplus (Note 6)	519,218	1,275,843	
Pension obligation and surplus	\$13,712,559	\$ 13,426,309	

The accompanying notes are part of these financial statements.

## Statement of Changes in Net Assets Available for Benefits

Year ended December 31, 2018

	 (\$ thousands)		
	2018	2017	
Increase in assets			
Contributions (Note 7)	\$ 676,132	\$ 730,454	
Investment income (Note 8)	281,997	1,419,843	
Transfers from other plans	15,507	3,888	
	973,636	2,154,185	
Decrease in assets			
Benefit payments (Note 10)	583,258	554,481	
Transfers to other plans	18,378	6,400	
Investment expenses (Note 11)	72,089	64,616	
Administrative expenses (Note 12)	13,661	13,038	
	687,386	638,535	
Increase in net assets	286,250	1,515,650	
Net assets available for benefits at beginning of year	13,426,309	11,910,659	
Net assets available for benefits at end of year	\$ 13,712,559	\$13,426,309	

The accompanying notes are part of these financial statements.

## Statement of Changes in Pension Obligation

Year ended December 31, 2018

	(\$ thousands)	
	2018	2017
Increase in pension obligation		
Interest accrued on opening pension obligation	\$ 738,169	\$ 705,303
Benefits earned	502,981	470,189
Net decrease due to actuarial assumption changes (Note 5a)	633,308	50,943
	1,874,458	1,226,435
Decrease in pension obligation		
Benefits, transfers and interest	601,636	560,881
Net experience gains (Note 5b)	229,947	122,772
	831,583	683,653
Net increase in pension obligation	1,042,875	542,782
Pension obligation at beginning of year	12,150,466	11,607,684
Pension obligation at end of year (Note 5)	\$13,193,341	\$ 12,150,466

The accompanying notes are part of these financial statements.

# Notes to the Financial Statements

Year ended December 31, 2018
(All dollar amounts in thousands, except per member data)

### NOTE 1 SUMMARY DESCRIPTION OF THE PLAN

The following description of the Public Service Pension Plan (the Plan) is a summary only. For a complete description of the Plan, reference should be made to the *Joint Governance* of Public Sector Pension Plans Act, Statutes of Alberta, Chapter J-0.5 and the Public Sector Pension Plans Act, Revised Statutes of Alberta 2000, Chapter P-41, and the Public Service Pension Plan Alberta Regulation 368/93, as amended, as were in effect prior to being repealed on March 1, 2019 (see Note 15). Unless otherwise stated, all terms that are not defined below have the meaning prescribed to them in the Plan. Should anything in Note 1 or the financial statements conflict with the legislation, the legislation shall apply.

### a) GENERAL

The Plan is a contributory defined benefit pension plan for eligible employees of the Province of Alberta, approved provincial agencies, public bodies and other approved entities.

The Plan is a registered pension plan as defined in the *Income Tax Act*. The Plan's registration number is 0208769. Throughout 2018 and until March 1, 2019, the President of Treasury Board, Minister of Finance was the legal trustee for the Plan. As of March 1<sup>st</sup>, 2019 the PSPP Corporation is the trustee of the Plan (see Note 15) and is management for the purpose of these financial statements.

## b) PLAN FUNDING

Current service costs and any actuarial deficiency (see Note 14) are funded equally by employers and employees at contribution rates, which together with investment earnings, are expected to provide for all benefits payable under the Plan. The contribution rates in effect at December 31, 2018 are 10.47% (2017: 11.70%) of pensionable earnings up to the Canada Pension Plan's Year's Maximum Pensionable Earnings (YMPE) and 14.95% (2017: 16.72%) of pensionable earnings over the YMPE, with matching contributions by employers.

The contribution rates were reviewed in 2018 and are to be reviewed at least once every three years based on recommendations of the Plan's actuary. As a result of the 2018 review, contributions rates will remain unchanged for 2019.

#### c) RETIREMENT BENEFITS

The Plan provides a pension of 1.4% for each year of pensionable service based on average salary of the highest five consecutive years up to the YMPE over the same five consecutive year period and 2.0% on the excess, subject to the maximum pension benefit limit allowed under the *Income Tax Act*. The maximum combined pensionable service allowable under the Plan is 35 years. Pensions are payable to vested members at retirement who have attained age 65, or have attained age 55 and the sum of their age and years of service equals 85. Reduced pensions are payable to members at age 55 or older retiring early with a minimum of two years of combined pensionable service.

#### d) DISABILITY PENSIONS

Unreduced pensions may be payable to members who become totally disabled and have at least two years of combined pensionable service. Reduced pensions may be payable to members who become partially disabled and have at least two years of combined pensionable service.

Individuals who became members after June 30, 2007 and had no combined pensionable service prior to July 1, 2007 are not entitled to disability pensions.

## e) DEATH BENEFITS

Death benefits are payable on the death of a member prior to retirement. If the member has at least two years of combined pensionable service and a surviving pension partner, the surviving pension partner may choose to receive either a survivor pension or a lump sum payment. For a beneficiary other than a pension partner or where combined pensionable service is less than two years, a lump sum payment must be chosen.

#### f) TERMINATION BENEFITS AND REFUNDS TO MEMBERS

Members who terminate with at least two years of combined pensionable service and who are not immediately entitled to a pension may receive the commuted value for all years of membership, with the commuted value being subject to locking-in provisions. Any service purchased by the member on an elective basis that was wholly funded by the member is not included in the commuted value and is instead refunded as contributions with interest. If the remaining member contributions fund more than 50% of the commuted value, that excess is paid as a cash refund under the 50% excess rule. Alternatively, they may elect to receive a deferred pension which is also subject to the 50% excess rule. Members who terminate with less than two years of combined pensionable service receive a refund of their contributions and interest. The refunds are accounted for as benefit payments on the statement of changes in net assets available for benefits.

#### q) PURCHASED SERVICE AND TRANSFERS

All elective service purchases are to be cost-neutral to the Plan. The actuarial present value of pension entitlements is paid when service is transferred out of the Plan under a transfer agreement. The cost to recognize service transferred into the Plan under a transfer agreement is the actuarial present value of the benefits that will be created as a result of the transfer.

## h) COST-OF-LIVING ADJUSTMENTS

Pensions payable are increased each year on January 1<sup>st</sup> 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 31<sup>st</sup> in the previous year. The increase is prorated for pensions that became payable within the 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. International Financial Reporting Standards (IFRS) is used for accounting policies that do not relate to the Plan's 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) CHANGE IN ACCOUNTING POLICY

The accounting standard IFRS 9 - Financial Instruments was adopted for the Plan effective January 1, 2018 on a prospective basis. There was no impact on the financial position or performance of the Plan.

#### c) 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"). The pools are established by Ministerial Order 16/2014, being the Establishment and Maintenance of Pooled Funds, pursuant to the *Financial Administration Act* of Alberta, Chapter F-12, Section 45, and the *Alberta Investment Management Corporation Act* of Alberta, Chapter A-26.5, Section 15 and 20. Participants in pools include government and non-government funds and plans.

Contracts to buy and sell financial instruments in the pools are between the Province of Alberta and the third party 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. Alberta Investment Management Corporation (AIMCo), a Crown corporation within the Ministry of Treasury Board and Finance, controls 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 AIMCo (see Note 3b). 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 AIMCo 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 Treasury Board and Finance.

Differences considered immaterial by Treasury Board and Finance are included in investment income in the following period.

Investments in pool 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.

#### d) INVESTMENT INCOME

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

### e) 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.

## 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. The valuation is made 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 Treasury Board and Finance's best estimate, as at the measurement date, of various economic and non-economic assumptions.

### 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, private investments, hedge funds, real estate and timberland pools. Uncertainty arises because:

- i) the Plan's actual experience may differ, perhaps significantly, from assumptions used in the extrapolation of the Plan's pension obligation, and
- ii) the estimated fair values of the Plan's private investments, hedge funds, real estate and timberland pools 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, private investments, hedge funds, real estate and timberland 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. AIMCo invests the Plan's assets in accordance with the Statement of Investment Policies and Goals (SIP&G) established by the former Public Service Pension Board and adopted by the PSPP Corporation Board of Directors March 1, 2019. 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 pool units. AIMCo is delegated authority 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)							
	Fa	Fair Value Hierarchy <sup>(a)</sup>				2018		2017
Asset class	Le	evel 2		Level 3	Fair Value		Fa	ir Value
Fixed income								
Money market	\$	94,299	\$	-	\$	94,299	\$	78,382
Bonds, mortgages and private debt	2,	139,939		740,288		2,880,227	2	2,842,588
	2,	234,238		740,288		2,974,526	2	2,920,970
Equities								
Canadian	1,	687,423		-		1,687,423		1,822,342
Global developed	4,	549,938		83,445		4,633,383	4	1,899,500
Emerging market		680,732		-		680,732		703,703
Private		2		366,632		366,634		327,336
	6,	918,095		450,077		7,368,172	7	7,752,881
Alternatives								
Real estate		-		2,114,796		2,114,796		1,710,356
Infrastructure		-		943,015		943,015		764,537
Timberland		-		200,372		200,372		186,069
		-		3,258,183		3,258,183	2	2,660,962
Opportunistic and currency								
investments *		-		77,654		77,654		84,479
Total investments	\$ 9,	152,333	\$	4,526,202	\$1	3,678,535	\$13	3,419,292

- \* 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).
  - 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 marketobservable inputs other than quoted market prices. This level includes pool units that hold public equities, debt securities and derivative contracts totalling \$9,152,333 (2017: \$9,654,973).
    - **Level 3** fair value is estimated using inputs based on non-observable market data. This level includes pool units that hold private mortgages, hedge funds, private equities and alternative investments totalling \$4,526,202 (2017: \$3,764,319).

NOTE 3 INVESTMENTS CONTINUED

## **Reconciliation of Level 3 Fair Value Measurements**

Balance	beginning	n of vear
Daiance,	DEMILLION	4 OI YEAI

Investment income \*
Purchases of Level 3 pooled fund units
Sale of Level 3 pooled fund units
Transfers out of Level 3

## Balance, end of year

(\$ thousands)							
	2018		2017				
\$	3,764,319	\$	3,553,639				
	451,165		253,590				
	667,727		445,610				
	(357,007)		(488,520)				
	(2)		-				
\$	4,526,202	\$	3,764,319				

<sup>\*</sup> Investment income includes unrealized gains (losses) of \$293,856 (2017: (\$40,538)).

## b) Valuation of Financial Instruments recorded by AIMCo 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 discounted using appropriate interest
  rate premiums over similar Government of Canada benchmark bonds trading in the
  market. Private debt and loans is valued similar to private mortgages.
- 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. The fair value of hedge fund investments is estimated by external managers. The fair value of private equities is estimated by managers or general partners of private equity funds, pools and limited partnerships. Valuation methods for private equities 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.
- 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 discounted cash flows. The fair value of timberland investments is appraised
  annually by independent third party evaluators. Infrastructure investments are
  valued similar to private equity investments.
- Strategic and currency investments: The estimated fair value of infrastructure
  investments held in emerging market countries are valued similar to private
  equities. For tactical asset allocations, investments in derivative contracts provides
  overweight or underweight exposure to global equity and bond markets, including
  emerging markets. 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 value of derivative contracts in a favourable and unfavourable position is recorded at fair value and is included in the fair value of the pools (see Note 4f). The estimated fair value of equity and bond index swaps is 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 and 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 created and managed by AIMCo. 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 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. The SIP&G was established by the former Public Service Pension Board and adopted by the PSPP Corporation Board of Directors March 1, 2019. The purpose of the SIP&G is to ensure the Plan is invested and managed in a prudent manner in accordance with current, accepted governance practices incorporating an appropriate level of risk. The Plan's return-risk trade-off is managed 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 4b).

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 following target policy asset mix has been established:

	Target Policy		Asset Mix		
Asset Class	Asset Mix	2018		2017	
		(\$ thousands)	%	(\$ thousands)	%
Fixed income	11 - 33%	\$ 2,974,526	21.7	\$ 2,920,970	21.8
Equities	37 - 65%	7,368,172	53.9	7,752,881	57.8
Alternatives	15 - 30%	3,258,183	23.8	2,660,962	19.8
Opportunistic and					
currency investments	(a)	77,654	0.6	84,479	0.6
		\$13,678,535	100.0	\$13,419,292	100.0

<sup>(</sup>a) In accordance with the SIP&G, AIMCo may invest up to 3% of the fair value of the Plan's investments in opportunistic investments that are outside of the asset classes listed above. AIMCo may, at its discretion, invest the funds in currency overlays.

### a) Credit Risk

#### i) Debt securities

The Plan is indirectly exposed to credit risk associated with the underlying debt securities held in the pools managed by AIMCo. 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 following table summarizes the Plan's investment in debt securities by credit rating at December 31, 2018:

Credit rating	2018	2017
Investment Grade (AAA to BBB-)	74.6%	78.9%
Speculative Grade (BB+ or lower)	0.3%	0.3%
Unrated	25.1%	20.8%
	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 4f). AIMCo is responsible for selecting and monitoring derivative counterparties on behalf of the Plan.

AlMCo 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.

## iii) Security lending risk

To generate additional income, the pools participate 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, 2018, the Plan's share of securities loaned under this program is \$697,007 (2017: \$1,452,969) and collateral held totals \$743,950 (2017: \$1,563,812). 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 values of investments denominated in foreign currencies are 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 40% (2017: 41%) of the Plan's investments, or \$5,509,251 (2017: \$5,472,434), are denominated in currencies other than the Canadian dollar, with the largest foreign currency exposure being to the US dollar, 22% (2017: 22%) and the Euro, 4% (2017: 4%).

If the value of the Canadian dollar increased by 10% against all other currencies, and all other variables are held constant, the potential loss in fair value to the Plan would be approximately 4.0% of total investments (2017: 4.1%).

The following table summarizes the Plan's exposure to foreign currency investments held in the pools at December 31, 2018:

	(\$ thousands)					
	20	18	20	17		
Currency <sup>(a)</sup>	Fair Value	Sensitivity	Fair Value	Sensitivity		
U.S. dollar	\$2,997,050	\$ (299,705)	\$2,885,640	\$ (288,564)		
Euro	538,207	(53,821)	569,736	(56,973)		
Japanese yen	418,831	(41,883)	444,776	(44,478)		
British pound	356,909	(35,691)	300,018	(30,002)		
Hong Kong dollar	224,207	(22,421)	200,780	(20,078)		
Other foreign currency	974,047	(97,404)	1,071,484	(107,148)		
Total foreign currency investments	\$5,509,251	\$ (550,925)	\$5,472,434	\$ (547,243)		

<sup>(</sup>a) Information on specific currencies is disclosed when the current year fair value is greater than 1% of the Plan's net assets

#### c) Interest Rate Risk

The Plan is exposed to interest rate risk associated with the underlying interest-bearing securities held in the pools managed by AIMCo. Interest rate risk relates to the possibility that the fair value of 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%, and all other variables are held constant, the potential loss in fair value to the Plan would be approximately 1.9% of total investments (2017: 2.0%).

#### d) Price Risk

Price risk relates to the possibility that pool units will change in fair value due to future fluctuations in market prices of equities held in the pools 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 pools managed by AIMCo. If equity market indices (S&P/TSX, S&P500, S&P1500 and MSCI ACWI and their sectors) declined by 10%, and all other variables are held constant, the potential loss in fair value to the Plan would be approximately 6.4% of total investments (2017: 6.5%). 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 an active market 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 margin calls on futures contracts. The Plan's future liabilities include the accrued pension benefits obligation and exposure to net payables to counterparties (Note 4f).

## 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. AIMCo uses derivative financial instruments to cost effectively 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.

		Plan's Indirect Share					
			(\$ thou	ds)			
	Number of						
By counterparty	counterparties		2018	2017			
Contracts in net favourable position							
(current credit exposure)	57	\$	355,544	\$	161,761		
Contracts in net unfavourable position	20		(499,229)		(84,810)		
Net fair value of derivative contracts	77	\$	(143,685)	\$	76,951		

- (i) 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 favourable position totaling \$355,544 (2017: \$161,761) were to default at once.
- (ii) Cash settlements: Receivables or payables with counterparties are usually settled in cash every three months.
- (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, there is no accounting policy for their recognition in the statement of financial position.

	Plan's Indirect Share				
	(\$ thousands)				
Types of derivatives used in pools	2018 2017				
Structured equity replication derivatives	\$	(74,978)	\$	28,307	
Foreign currency derivatives		(71,003)		25,625	
Interest rate derivatives		1,230		19,188	
Credit risk derivatives		1,066		3,831	
Net fair value of derivative contracts	\$	(143,685)	\$	76,951	

- (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.
- (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, 2018, deposits in futures contracts margin accounts totaled \$47,214 (2017: \$15,228). Cash and non-cash collateral for derivative contracts pledged and received, respectively, totaled \$153,440 (2017: \$31,412) and \$2,100 (2017: \$1,319).

#### NOTE 5 PENSION OBLIGATION

#### a) ACTUARIAL VALUATION AND EXTRAPOLATION ASSUMPTIONS

An actuarial valuation of the Plan was carried out as at December 31, 2017 by George and Bell Consulting and results were then extrapolated to December 31, 2018.

The actuarial assumptions used in determining the value of the pension obligation of \$13,193,341 (2017: \$12,150,466) reflect Treasury Board and Finance's best estimate, as at the measurement date, of future economic events and involve both economic and non-economic assumptions. The non-economic assumptions include considerations such as mortality as well as withdrawal and retirement rates. The primary economic assumptions include the discount rate, inflation rate, and the salary escalation rate. The discount rate is determined by taking the plan specific asset allocation and applying the average of the expected long term asset returns determined by independently developed investment models; less expected plan investment expenses; and an additive for diversification and rebalancing. It does not assume a return for active management beyond the passive benchmark.

The major assumptions used for accounting purposes were:

	2018	2017
	9	6
Discount rate	5.70	6.10
Inflation rate	2.00	2.00
Salary escalation rate*	3.00	3.00
Mortality rate	2014 Canad Mortality Table	
	-mortality raise	( English Decitor)

<sup>\*</sup> In addition to age specific merit and promotion increase assumptions.

The next actuarial valuation of the Plan will be completed no later than as at December 31, 2020. Any differences between the actuarial valuation results and extrapolation results as reported in these financial statements will affect the financial position of the Plan and will be accounted for as gains or losses in the year following the next actuarial valuation.

#### b) NET EXPERIENCE GAINS

Net experience gains of \$229,947 (2017: \$122,772) reflect the results of the valuation as at December 31, 2017 extrapolated to December 31, 2018.

## c) SENSITIVITY OF CHANGES IN MAJOR ASSUMPTIONS

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

The following is a summary of the sensitivities of the Plan's deficiency and current service cost to changes in assumptions used in the actuarial extrapolation at December 31, 2018:

	(\$ thousands)				
	Changes in Assumptions %	Increase in Plan Deficiency \$	Increase in Current Service Cost as a % of Pensionable Earnings *		
Inflation rate increase holding discount rate and salary escalation assumptions constant	1.0	968,869	1.6		
Salary escalation rate increase holding inflation rate and discount rate assumptions constant	1.0	328,336	1.1		
Discount rate decrease holding inflation rate and salary escalation assumptions constant	(1.0)	1,814,044	3.2		

<sup>\*</sup> The current service cost as a percentage of pensionable earnings is 18.2% at December 31, 2018

## NOTE 6 SURPLUS

## Surplus at beginning of year

Increase in net assets available for benefits Net increase in pension obligation **Surplus at end of year** 

(\$ thousands)						
2018	2017					
\$ 1,275,843	1,275,843 \$ 30					
286,250		1,515,650				
(1,042,875)		(542,782)				
\$ 519,218	\$	1,275,843				

## NOTE 7 CONTRIBUTIONS

	(\$ thousands)			
	2018 201			2017
Current service				_
Employers	\$	335,420	\$	361,885
Employees		333,857		360,647
Past service				
Employers		1,970		1,863
Employees		4,885		6,059
	\$	676,132	\$	730,454

## NOTE 8 INVESTMENT INCOME

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

	(\$ thousands)				
		(	Change in	2018	2017
	Income	) l	Fair Value	Total	Total
Fixed income	\$ 101,3	25 \$	\$ (28,052)	\$ 73,273	\$ 118,791
Equities					
Canadian	66,8	82	(236,853)	(169,971)	181,294
Foreign	366,7	97	(437,226)	(70,429)	869,021
Private	23,3	30	46,853	70,183	1,654
	457,0	09	(627,226)	(170,217)	1,051,969
Alternatives					
Real estate	71,6	15	161,422	233,037	148,410
Infrastructure	31,3	25	82,996	114,321	66,367
Timberland	18,3	52	14,119	32,471	30,132
	121,2	92	258,537	379,829	244,909
Opportunistic and currency investments	(7	64)	(124)	(888)	4,174
	\$ 678,8	62 \$	\$ (396,865)	\$ 281,997	\$1,419,843

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 \$16,026 and (\$412,891) respectively (2017: \$143,592 and \$170,468 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), and the annual change in net assets compared to the annual change in the pension obligation and the per cent of pension obligation supported by net assets:

	2018	2017	2016	2015	2014	
_	in per cent					
Increase (decrease) in net assets attributed to:						
Investment income						
Policy benchmark return on investments	1.0	9.7	6.6	8.0	12.5	
Value added (lost) by AIMCo	0.5	1.6	0.3	1.8	(0.3)	
Time weighted rate of return, at fair value <sup>(a)</sup>	1.5	11.3	6.9	9.8	12.2	
Other sources <sup>(b)</sup>	0.6	1.4	2.0	2.0	2.1	
Per cent change in net assets (c)	2.1	12.7	8.9	11.8	14.3	
Per cent change in pension obligation <sup>(c)</sup>	8.6	4.7	4.9	4.5	7.9	
Per cent of pension obligation supported by						
net assets	104	111	103	99	92	

- (a) All investment returns are provided by AIMCo and are net of investment expenses. The annualized total return and policy benchmark return (PBR) on investments over five years is 8.3% (PBR: 7.5%), ten years is 9.4% (PBR: 8.5%) and 20 years is 6.6% (PBR: 6.1%). The Plan's actuary estimates the long-term net investment return on assets for funding purposes to be 5.1% (2017: 5.5%).
- (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 percentage change in net assets and the pension obligation is based on the amounts reported on the statement of changes in net assets available for benefits and the statement of changes in pension obligation.

## NOTE 10 BENEFIT PAYMENTS

Retirement benefits Disability pensions Termination benefits Death benefits

(\$ thousands)						
	2018	2017				
\$	430,707	\$	404,951			
	1,747		1,568			
	118,364		113,388			
	32,440		34,574			
\$	583,258	\$	554,481			

## NOTE 11 INVESTMENT EXPENSES

	 (\$ thousands)			
Amounts charged by AIMCo for:	2018		2017	
Investment costs (a)	\$ 59,732	\$	52,923	
Performance based fees <sup>(a)</sup>	9,979		9,052	
GST	2,326		2,589	
	72,037		64,564	
Amounts charged by Treasury Board and Finance for:				
Investment accounting and Plan reporting	52		52	
Total investment expenses	\$ 72,089	\$	64,616	
Increase in expenses (a)	11.6%		45.4%	
Increase in average investments under management	7.1%		11.1%	
Increase in value of investments attributed to AIMCo	0.5%		1.6%	
Investment expense as a percent of dollar invested	0.5%		0.5%	
Investment expenses per member	\$ 847	\$	766	

<sup>(</sup>a) Investment expenses are charged by AIMCo on a cost recovery basis. Please refer to AIMCo's financial statements for a more detailed breakdown of the types of expenses incurred by AIMCo. Amounts recovered by AIMCo for investment costs include those costs that are primarily non-performance related including external management fees, external administration costs, employee salaries and incentive benefits and overhead costs. Amounts recovered by AIMCo for performance based fees relate to external managers hired by AIMCo.

The per cent increase in investment costs and performance based fees is 12.5% (2017: 45.1%).

### NOTE 12 ADMINISTRATIVE EXPENSES

	 (\$ thousands)			
	2018	2017		
General administration costs	\$ 12,810	\$	12,630	
Board costs	147		124	
Actuarial fees	117		129	
Other professional fees	148		155	
GST Charged by APS	439			
	13,661		13,038	
Member service expenses per member	\$ 161	\$	154	

General administration and the Board costs were paid to Alberta Pensions Services Corporation (APS) on a cost-recovery basis.

The Plan's share of APS's operating and Plan specific costs was based on cost allocation policies approved by the President of Treasury Board, Minister of Finance.

## NOTE 13 TOTAL PLAN EXPENSES

Total Plan expenses of investment expenses per Note 11 and administrative expenses per Note 12 are \$85,750 (2017: \$77,654) or 0.63% (2017: 0.58%) of net assets under administration.

## NOTE 14 CAPITAL

The Plan defines its capital as the funded status. In accordance with the *Public Sector Pension Plans Act*, the actuarial surplus or deficit is determined by an actuarial funding valuation performed, at a minimum, every three years. The objective is to ensure that the Plan is fully funded over the long term through the management of investments, contribution rates and benefits. Investments, the use of derivatives and leverage are based on an asset mix and risk policies and procedures that are designed to enable the Plan to meet or exceed its long-term funding requirement within an acceptable level of risk, consistent with the Plan's SIP&G.

The Plan's asset values are 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. Actuarial asset values for funding valuation purposes amounted to \$13,741,000 at December 31, 2018 (2017: \$12,691,000).

In accordance with the *Public Sector Pension Plans Act*, the actuarial deficiency determined by the December 31, 2017 actuarial funding valuation is being funded by a special payment in the amount of 3.42% of pensionable earnings shared between employees and employers until June 30, 2026.

The special payments have been included in the rates shown in Note 1b.

## NOTE 15 SUBSEQUENT EVENT

On the transition date of March 1st, 2019 the Plan transitioned to a joint governance structure in accordance with the *Joint Governance of Public Sector Pension Plans*Act passed on December 5, 2018. On the transition date, ownership of the Plan fund transferred to the newly established PSPP Corporation. The assets of the Plan shall continue to be held in trust for members of the Plan and others entitled to benefits under the Plan. All members and employers participating in the Plan immediately prior to the transition date continue to be participating members and employers of the Plan.

On the transition date, the PSPP Corporation becomes the administrator and trustee of the Plan. As of the transition date, the Minister and the Crown have no responsibilities, functions, obligations, duties or liabilities in relation to administration of the Plan. There is no change to Plan benefits or how the Plan is funded or impact to net assets available for benefits of the Plan as a result of joint governance.

## NOTE 16 COMPARATIVE FIGURES

Comparative figures related to the fair value hierarchy in Note 3 have been reclassified to conform to the presentation adopted in 2018. The current classification of investments within the hierarchy reflects the quality and reliability of the valuation of the pool unit. Previous presentation reflected the quality and reliability of the valuation of significant securities held within the pools.

### NOTE 17 RESPONSIBILITY FOR FINANCIAL STATEMENTS

These financial statements were approved by the Board of Directors of the PSPP Corporation based on information and representations provided by Treasury Board and Finance, APS, AIMCo and the Plan's actuary.