Public Service Pension Plan

Financial Statements

Year Ended December 31, 2022

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, 2022, 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, 2022, and the changes in net assets available for benefits, and changes in its pension obligations for the year then ended in accordance with Canadian accounting standards for pension plans.

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 identified above 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.

If, based on the work I will perform on this other information, I conclude that there is a material misstatement of this other information, 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 26, 2023
Edmonton, Alberta

Statement of Financial Position

As at December 31, 2022

	(in thousands) 2022	2021
Net assets available for benefits		
Assets		
Cash	$ 15,490	$ -
Investments (Note 3)	17,074,432	18,041,325
Contributions receivable		
Employers	11,059	6,139
Employees	10,882	5,922
Accounts receivable	11,871	9,974
Total Assets	17,123,734	18,063,360
Liabilities		
Accounts payable	7,192	4,951
Total Liabilities	7,192	4,951
Net assets available for benefits	$ 17,116,542	$ 18,058,409
Pension obligation and surplus		
Pension obligation (Note 5)	$ 12,857,821	$ 13,469,930
Surplus (Note 6)	4,258,721	4,588,479
Pension obligation and surplus	$ 17,116,542	$ 18,058,409

The accompanying notes are part of these financial statements.

Approved by the Board:

[Original signed by]
David Lardner
Chair of the Corporate Board

Approved by the Board:

[Original signed by]
Liliana Cordeiro
Chair of Finance Audit Committee

Statement of Changes in Net Assets Available for Benefits

Year ended December 31, 2022

(in thousands)

	2022	2021
Increase in assets		
Contributions (Note 7)		
Employers	$ 287,703	$ 310,371
Employees	283,081	299,408
Investment income (Note 8)		
Income	1,394	1,792,013
Change in fair value	-	808,150
Interest income	614	-
Transfers from other plans	5,213	3,149
	578,005	3,213,091
Decrease in assets		
Benefit payments (Note 10)	680,564	635,240
Transfers to other plans	13,164	10,911
Investment expenses (Note 11)	108,805	129,200
Investment loss (Note 8)		
Change in fair value	703,188	-
Administrative expenses (Note 12)	14,151	13,515
	1,519,872	788,866
(Decrease) Increase in net assets	(941,867)	2,424,225
Net assets available for benefits at beginning of year	18,058,409	15,634,184
Net assets available for benefits at end of year	$ 17,116,542	$ 18,058,409

The accompanying notes are part of these financial statements.

Statement of Changes in Pension Obligation

Year ended December 31, 2022

(in thousands)

		2022		2021
Increase in pension obligation				
Interest accrued on opening pension obligation	$	786,486	$	744,560
Benefits earned		410,810		416,368
Experience losses (Note 5b)		207,104		94,883
		1,404,400		1,255,811
Decrease in pension obligation				
Benefits payments and transfers to other plans		690,132		646,151
Experience gains (Note 5b)		281,229		-
Net gain due to actuarial assumption changes (Note 5a)		1,045,148		550,332
		2,016,509		1,196,483
Net (decrease) increase in pension obligation		(612,109)		59,328
Pension obligation at beginning of year		13,469,930		13,410,602
Pension obligation at end of year (Note 5)	$	12,857,821	$	13,469,930

The accompanying notes are part of these financial statements.

Notes to the Financial Statements

Year ended December 31, 2022

(All dollar amounts in thousands, unless otherwise noted)

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 Public Service Pension Plan text document. 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 plan rules and applicable legislation, those plan rules and applicable legislation shall apply.

a. GENERAL

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

The Plan is a registered pension plan (registration number 0208769) as defined in the *Income Tax Act*. The Plan is also registered under the *Employment Pension Plans Act* (Alberta) (EPPA). Other provincial legislation having application to the Plan includes the *Exemption (Public Sector Pension) Regulation AR 3/2020* and the *Employment Pensions Plans Regulation AR 154/2014* (EPPR).

The Plan is governed by the PSPP Sponsor Board and PSPP Corporation. The PSPP Sponsor Board has certain statutory functions with respect to the Plan under the Joint Governance Act, including making and amending plan text, setting contribution rates, and establishing a funding policy. PSPP Corporation is the administrator of the Plan for all purposes of the EPPA, legal trustee of the Plan fund, and management for the purpose of these financial statements.

b. PLAN FUNDING

The Plan is subject to the jointly sponsored plan funding rules of the EPPA and is exempted from the EPPA's solvency funding requirements. Current service costs and any actuarial deficiency (see Note 13) are funded equally by employers and employees at contribution rates, which together with investment earnings, are expected to provide the payment of all benefits payable under the Plan. The member contribution rates in effect at December 31, 2022 were 9.60% (2021: 10.47%) of pensionable earnings up to the Year's Maximum Pensionable Earnings (YMPE) and 13.70% (2021: 14.95%) of pensionable earnings over the YMPE, with matching contributions by employers.

Pensionable earnings are subject to an upper limit (the salary cap) to ensure the pension accrual is not greater than the maximum pension benefit limit allowed under the *Income Tax Act*. In 2022, the YMPE was $64,900 (2021: $61,600) and the salary cap was $190,470 (2021: $180,758).

The contribution rates were reviewed in 2022 and are to be reviewed at least once every three years based on recommendations of the Plan's actuary. Contribution rates will be reduced effective January 1, 2023 to 8.30% up to the YMPE of $66,600 and 11.90% of pensionable earnings above the YMPE.

c. RETIREMENT BENEFITS

A member is vested for a retirement benefit when they have at least two years of combined pensionable service, or immediately if they are an active participant in the Plan on or after attaining age 65.

The Plan provides for a pension based on a formula that considers a vested member's pensionable salary and years of pensionable service. The pensionable salary used is referred to as the member's highest average salary and is calculated by taking the average of the five consecutive years where the member's pensionable salary was the highest. The years of pensionable service used include the total years of pensionable service a member has accumulated in PSPP. A member cannot accumulate more than a maximum of 35 years of combined pensionable service. The member's highest average salary up to the average YMPE over the same period (matching average YMPE) is multiplied by 1.4% for each year of pensionable service. The member's highest average salary above the matching average YMPE is multiplied by 2.0% for each year of pensionable service. The two amounts are added together to calculate the member's annual unreduced pension. Unreduced pensions are payable to members who have attained age 65 or have attained age 55 and the sum of their age and years of combined

c. RETIREMENT BENEFITS (continued)

pensionable service equals 85. Vested members may retire and collect a pension as early as age 55 with their pensions being reduced if the sum of their age and years of combined pensionable service is less than 85.

d. DISABILITY PENSIONS

Unreduced pensions may be payable to vested members who become totally disabled and retire early. Reduced pensions may be payable to vested members who become partially disabled and retire early.

Individuals who became members after June 30, 2007 and have 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.

If the member is vested, dies prior to commencing to receive a pension, and has 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 the member is not vested, a lump sum payment must be chosen.

If the member is vested and dies after commencing to receive a pension, the death benefit will depend on the pension option selected at retirement and can include a lifetime pension payable to a surviving pension partner, or a monthly pension or lump-sum benefit payable to the surviving beneficiary(ies) based on any remaining guaranteed period.

f. TERMINATION BENEFITS AND REFUNDS TO MEMBERS

Vested members who terminate prior to their 55th birthday may choose to withdraw their funds from the Plan and receive a lump sum payment equal to the commuted value of their pension, with the commuted value being subject to the EPPA's "locking-in provisions". Any service transferred into the Plan on an actuarial reserve basis or 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 member's remaining contributions with interest exceed more than 100% of the commuted value, the excess contributions with interest are refunded as taxable cash. Alternatively, the vested member may elect to receive a deferred pension which is also subject to the applicable excess rule. Members who are not vested when they terminate receive a refund of the employee paid portion of their contributions with interest. These payments are included as benefit payments on the statement of changes in net assets available for benefits.

g. PURCHASED SERVICE AND TRANSFERS

The Plan allows for the purchase of certain eligible periods of service and for the transfer of entitlements into the Plan under various transfer agreements with other pension plans. 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 (COLA)

Pensions in pay and deferred pensions are increased each year on January 1 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 in the previous year.

NOTE 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND REPORTING PRACTICES

a. BASIS OF PRESENTATION

These financial statements are prepared on the going concern basis in accordance with Canadian accounting standards for pension plans. 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. CASH

Cash includes deposits in the plan's administration bank account. The funds in this account are used for operational and pension benefits disbursements. Historically, cash was part of the Consolidated Cash Investment Trust Fund (CCITF) and included as part of 'Investments' on the financial statements. Effective October 2022, the CCITF structure was dismantled and split into the Money Market Pool (MMP) and a stand-alone plan administration bank account.

The MMP is disclosed under 'Investments' and the stand-alone plan administration bank account is disclosed as 'Cash' on the financial statements. Interest earned on cash is recorded on an accrual basis as Interest income.

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 Alberta Investment Management Corporation (AIMCo), a Crown corporation within the Ministry of Treasury Board and Finance, 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. AIMCo 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.

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

Investment income is recorded on an accrual basis.

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

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

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 PSPP Corporation'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 renewable 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 renewable pools may differ significantly from the values that would have been used had a ready market existed for these investments.

iii. the current economic environment has significant market volatility stemming from high global inflation rates and rising interest rates. Increases in long-term interest rates that accompany higher inflation will results in an improvement in the funded position of the Plan, at least in the short-term.

While best estimates have been used in the valuation of the Plan's pension obligation, private investments, hedge funds, real estate and renewable 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 statement 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 PSPP Corporation approved benchmarks based on fair value. AIMCo invests the Plan's assets in accordance with the Statement of Investment Policies and Procedures (SIPP) established by PSPP Corporation and updated on October 1, 2021 and September 22, 2022. 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).

(in thousands)

	Fair Value Hierarchy (a)					
			2022			2021
Asset Class	**Level 2**	**Level 3**	**Fair Value**	**Level 2**	**Level 3**	**Fair Value**
Fixed income						
Money market	$ 13,327	$ -	$ 13,327	$ 36,482	$ -	$ 36,482
Bonds, mortgages and private debt	1,370,911	1,605,320	2,976,231	2,287,274	1,259,295	3,546,569
	1,384,238	1,605,320	2,989,558	2,323,756	1,259,295	3,583,051
Equities						
Canadian	868,017	-	868,017	976,173	-	976,173
Global developed	6,211,447	46,526	6,257,973	7,688,659	54,094	7,742,753
Emerging market	1,353,716	-	1,353,716	1,465,923	-	1,465,923
	8,433,180	46,526	8,479,706	10,130,755	54,094	10,184,849
Alternatives						
Real estate	-	2,527,909	2,527,909	-	2,140,412	2,140,412
Infrastructure	7	1,871,401	1,871,408	8	1,235,338	1,235,346
Renewables	-	303,305	303,305	-	179,689	179,689
Private equity	1	876,364	876,365	-	691,846	691,846
	8	5,578,979	5,578,987	8	4,247,285	4,247,293
Strategic and currency investments*	-	26,181	26,181	-	26,132	26,132
Total Investments	$ 9,817,426	$ 7,257,006	$ 17,074,432	$ 12,454,519	$ 5,586,806	$ 18,041,325

** This asset class is not listed separately in the SIPP 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 market-observable inputs other than quoted market prices. This level includes pool units that hold public equities, debt securities and derivative contracts totaling $9,817,426 (2021: $12,454,519).
- ***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, real estate, infrastructure, and renewable investments totaling $7,257,006 (2021: $5,586,806).

Reconciliation of Level 3 Fair Value Measurement

(in thousands)

	2022	2021
Balance at beginning of year	$ 5,586,806	$ 4,669,673
Investment (loss) income *	400,965	783,005
Purchases of Level 3 pooled fund units	1,709,354	1,019,271
Sale of Level 3 pooled fund units	(440,119)	(880,982)
Transfers out of Level 3	-	(4,161)
Balance at end of year	$ 7,257,006	$ 5,586,806

** Investment income includes unrealized gains of $157,384 (2021: $504,499)*

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 are 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.
- ***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 renewable investments is appraised annually by independent third-party evaluators. Infrastructure investments are valued similar to private equity investments. Established private companies are valued using the fair market value approach reflecting conventional valuation methods including discounted cash flows and earnings multiple analysis.
- ***Strategic and currency investments:*** 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 are valued based on difference between contractual foreign exchange rates and foreign exchange forward rate. Future 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 SIPP. The purpose of the SIPP 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. A new asset mix was approved by the Board of Directors of PSPP Corporation on October 1, 2021. A key change being an increased allocation to private investments. Given the illiquid nature of private investments, the move to the new asset mix is not able to be completed through short-term portfolio rebalancing activity. A formal transition plan is in place to fill the private market allocations. The following target policy asset mix is in effect as of December 31, 2022.

		Actual Asset Mix			
Asset Class	**Target Asset Policy Mix (a)**		**2022**		**2021**
		(in thousands)	*%*	*(in thousands)*	*%*
Fixed income	18%	$ 2,989,558	17.5	$ 3,583,051	19.9
Equities	47%	8,479,706	49.7	10,184,849	56.5
Alternatives	35%	5,578,987	32.7	4,247,293	23.5
Strategic and currency investments	(b)	26,181	0.1	26,132	0.1
		$ 17,074,432	100.0	$ 18,041,325	100.0

(a) While the portfolio is in transition to the new asset mix, actual investments may be outside the ranges for each Asset Class outlined in the SIPP.
(b) In accordance with the SIPP, AIMCo may invest up to 3% of the fair value of the Plan's investments in strategic 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, 2022:

Credit Rating	**2022**	**2021**
Investment Grade (AAA to BBB-)	57.5%	67.0%
Speculative Grade (BB+ or lower)	2.4%	2.4%
Unrated	40.1%	30.6%
	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.

AIMCo 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 (in thousands)

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, 2022, the Plan's share of securities loaned under this program is $323,256 (2021: $410,613) and collateral held totals $344,468 (2021: $440,672). 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 bankers' acceptances and bankers' deposit notes. All collateralization, by the borrower, must be in excess of 100% of investments loaned.

b. FOREIGN CURRENCY RISK (in thousands)

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 48% (2021: 51%) of the Plan's investments, or $8,133,666 (2021: $9,205,214), are denominated in currencies other than the Canadian dollar, with the largest foreign currency exposure being to the US dollar, 27% (2021: 30%) and the Euro, 5% (2021: 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 4.8% of total investments (2021:5.1%).

The following table summarized the Plan's exposure to foreign currency investments held in the pools at December 31, 2022:

	(in thousands)			
	2022		**2021**	
Currency *	**Fair Value**	**Sensitivity**	**Fair Value**	**Sensitivity**
U.S. dollar	$ 4,621,457	$ (462,146)	$ 5,452,163	$ (545,216)
Euro	815,072	(81,507)	810,525	(81,052)
Japanese yen	496,904	(49,690)	608,231	(60,823)
Hong Kong dollar	344,153	(34,415)	375,369	(37,537)
British pound	461,090	(46,109)	370,483	(37,048)
Swiss franc	207,095	(20,710)	256,834	(25,683)
Indian Rupee	181,953	(18,195)	155,004	(15,500)
New Taiwan dollar	159,643	(15,964)	201,562	(20,156)
Other foreign currency	846,298	(84,630)	975,043	(97,505)
Total foreign currency investments	$ 8,133,665	$ (813,366)	$ 9,205,214	$ (920,520)

** 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, the fair value of bonds and mortgages are sensitive to changes in the level of interest rates, which will impact returns if the securities are sold prior to maturity, with longer-term interest-bearing securities being more sensitive to interest rate changes than shorter-term bonds. AIMCo may use repurchase agreements, which given their short-term nature, reduce portfolio interest rate risk. A rise in interest rate will typically mean a drop in fair value (vice versa). 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 0.8% of total investments (2021: 1.1%).

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. Both products and their benchmarks are impacted by price risk, which is managed within equity products through diversification of asset class allocation and security selection. 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 5.6% of total investments (2021: 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, renewable, infrastructure and private equities are less easily converted to cash since the underlying securities are illiquid because they take more time to sell. AIMCo will use repurchase agreements to bridge cashflow mismatches or, in a stressed market environment, to provide liquidity rather than initiating the forced sale of assets to meet margin calls or redemption requests. There were $712,890 in repurchase agreements as of December 31, 2022 (2021: $893,934). 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). Liquidity risk is monitored by AIMCo using a Stressed Liquidity Coverage Ratio which considers the ratio of liquidity supply to liquidity demand in an extreme liquidity scenario (defined as the 3-month period during the Global Financial Crisis immediately following the collapse of Lehman Brothers).

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 *(in thousands)*	
By counterparty	**Number of counterparties**	**2022**	**2021**
Contracts in net favourable position (current credit exposure)	155	$ 64,780	$ 223,182
Contracts in net unfavourable position	18	(154,128)	(128,795)
Net fair value of derivative contracts	173	$ (89,348)	$ 94,387

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 $64,780 (2021: $223,182) were to default at once. Cash settlements: Receivables or payables with counterparties are usually settled in cash every three months.

ii. 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.

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f. USE OF DERIVATIVE FINANCIAL INSTRUMENTS IN POOLED INVESTMENT FUNDS (continued)

	Plan's Indirect Share *(in thousands)*	
Types of derivatives used in pools	**2022**	**2021**
Equity-based derivatives	$ 7,075	$ 92,533
Foreign currency derivatives	(124,884)	(4,267)
Interest rate derivatives	26,650	(77)
Credit risk derivatives	1,811	6,198
Net fair value of derivative contracts	$ (89,348)	$ 94,387

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, 2022, deposits in futures contracts margin accounts totaled $52,117 (2021: $62,707). Cash and non-cash collateral for derivative contracts pledged and received, respectively, totaled $(161,205) (2021: $(124,068)) and $nil (2021: $nil).

NOTE 5. PENSION OBLIGATION *(in thousands)*

a. ACTUARIAL VALUATION AND EXTRAPOLATION ASSUMPTIONS

An actuarial valuation of the Plan was carried out at December 31, 2021 by George and Bell Consulting and results were then extrapolated to December 31, 2022.

The actuarial assumptions used in determining the value of the pension obligation of $12,857,821 (2021: $13,469,930) reflect PSPP Corporation'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 expected long-term asset returns determined by an independently developed investment model. It does not assume a return for active management beyond the passive benchmark.

a. ACTUARIAL VALUATION AND EXTRAPOLATION ASSUMPTIONS (continued)

The major assumptions used for accounting purposes were:

	2022	2021
	%	%
Discount rate	6.5	5.9
Inflation rate	2.0	2.0
Salary escalation rate*	3.0	3.0
Mortality rate	2014 Canadian Pension Mortality Private Table	

** In addition to age specific merit and promotion increase assumptions. Rate is 1.6% until April 1, 2022 and 3.0% thereafter.*

Net gain due to actuarial assumption changes of $1,045,148 (2021: net gain of $550,332) primarily resulted from changes in the discount rate.

The next actuarial valuation of the Plan will be completed no later than December 31, 2024.

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. EXPERIENCE LOSSES AND GAINS

There were experience losses of $207,104 from cost-of-living adjustments being greater than expected and experience gains of $281,229 due to difference in actual experience in 2021 versus the assumptions used in the December 31, 2020 actuarial valuation.

In 2021, experience losses totaled $94,883, which included a $29,086 loss from cost-of-living adjustments being greater than expected, and experience losses of $65,797 due to difference in actual experience in 2020 versus the assumptions used in the December 31, 2019 actuarial valuation.

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.

c. SENSITIVITY OF CHANGES IN MAJOR ASSUMPTIONS (continued)

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, 2022:

	(in thousands)		
	Changes in Assumptions %	**Increase in Plan Deficiency $**	**Increase in Current Service Cost as a % of Pensionable Earnings (1)**
Inflation rate increase holding discount rate and salary escalation assumptions constant	1.0	825,298	1.0
Salary escalation/YMPE/Maximum pension limit rate increase holding inflation rate and discount rate assumptions constant	1.0	369,270	1.3
Discount rate decrease holding inflation rate and salary escalation assumptions constant	(1.0)	1,668,415	2.6

(1) The current service cost as a percentage of pensionable earnings is 13.9% at December 31, 2022.

NOTE 6. SURPLUS

	(in thousands)	
	2022	**2021**
Surplus at beginning of year	$ 4,588,479	$ 2,223,582
(Decrease) increase in net assets available for benefits	(941,867)	2,424,225
Net decrease (increase) in pension obligation	612,109	(59,328)
Surplus at end of year	$ 4,258,721	$ 4,588,479

NOTE 7. CONTRIBUTIONS

	(in thousands)	
	2022	**2021**
Employers		
Current service	$ 286,235	$ 308,563
Past service	1,468	1,808
	287,703	310,371
Employees		
Current service	279,872	295,508
Past service	3,209	3,900
	283,081	299,408
	$ 570,784	$ 609,779

NOTE 8. INVESTMENT INCOME

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

(in thousands)

	Income	Change in Fair Value	2022 Total	Income	Change in Fair value	2021 Total
Fixed Income						
Money market	$ 6,687	$ (343,020)	$ (336,333)	$ 381	$ (7,067)	$ (6,686)
Bonds, mortgages and private debt	29,700	26,239	55,939	114,824	(181,648)	(66,824)
	36,387	$ (316,781)	$ (280,394)	115,205	$ (188,715)	$ (73,510)
Equities						
Canadian	69,516	(103,949)	(34,433)	385,560	87,632	473,192
Foreign	(335,690)	(485,139)	(820,829)	1,096,898	327,330	1,424,228
	(266,174)	(589,088)	(855,262)	1,482,458	414,962	1,897,420
Alternatives						
Real Estate	77,850	55,751	133,601	25,686	269,697	295,383
Infrastructure	123,293	127,068	250,361	102,376	122,491	224,867
Renewables	15,212	48,911	64,123	11,220	21,084	32,304
Private equity	18,763	(26,731)	(7,968)	44,970	179,235	224,205
	235,118	204,999	440,117	184,252	592,507	776,759
Strategic and currency investments	(3,937)	(2,318)	(6,255)	10,098	(10,604)	(506)
	$ 1,394	$ (703,188)	$ (701,794)	$ 1,792,013	$ 808,150	$ 2,600,163

The change in fair value includes realized and unrealized (losses) and gains on pool units. Realized and unrealized (losses) and gains on pool units total $(355,950) and $(347,238) respectively (2021: $286,055 and $522,095 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. Interest income earned on Consolidated Cash Investment Trust Fund (CCITF) balance is included in Investment income until September 30, 2022 after which the CCITF was wound down.

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:

	In %				
	2022	**2021**	**2020**	**2019**	**2018**
Increase (decrease) in net assets attributed to:					
Investment income					
Policy benchmark return on investments	(5.9)	10.8	8.0	13.8	1.0
Value added (lost) by AIMCo	1.4	5.0	(6.4)	(1.5)	0.5
Time weighted rate of return, at fair value (a)	**(4.5)**	**15.8**	**1.6**	**12.3**	**1.5**
Other sources (b)	(0.7)	(0.3)	(0.2)	0.1	0.6
Per cent change in net assets (c)	**(5.2)**	**15.5**	**1.4**	**12.4**	**2.1**
Per cent change in pension obligation (c)	**(4.5)**	**0.4**	**5.9**	**(4.1)**	**8.6**
Per cent of pension obligation supported by net assets	**133**	**134**	**117**	**122**	**104**

(a) All investment returns are provided by AIMCo and are net of investment expenses.

(b) Other sources include 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

	(in thousands)	
	2022	**2021**
Retirement benefits	$ 556,217	$ 525,616
Disability pensions	1,778	1,830
Termination benefits	97,489	84,721
Death benefits	25,080	23,073
	$ 680,564	$ 635,240

NOTE 11. INVESTMENT EXPENSES

	(in thousands)	
	2022	**2021**
Amounts charged by AIMCo for:		
Investment costs [(a)]	$ 72,222	$ 57,784
Performance-based fees [(a)]	33,249	67,199
GST	3,334	4,217
Total investment expenses	$ 108,805	$ 129,200
(Decrease) Increase in expenses [(a)]	(15.8%)	81.2%
Increase in average investments under management	4.3%	8.6%
Increase in value of investments attributed to AIMCo	1.1%	5.0%
Investment expenses	62 bps	77 bps

(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.

NOTE 12. ADMINISTRATIVE EXPENSES

	(in thousands)	
	2022	**2021**
Pension administration costs and process improvement costs		
Alberta Pensions Services Corporation (APS)	$ 10,944	$ 10,507
PSPP Corporation	2,751	2,571
Goods and services tax	456	437
	$ 14,151	$ 13,515
Administrative expenses per member in dollars (based on total membership)	$ 162	$ 159

Pension administration and process improvement costs were paid to APS and PSPP Corporation on a cost-recovery basis.

Goods and service tax reflects the amount not eligible for rebate under the *Excise Tax Act*.

NOTE 13. CAPITAL

The Plan defines its capital as the funded status. 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 SIPP.

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 $17,711,000 at December 31, 2022 (2021: $16,983,000).

NOTE 14. RESPONSIBILITY OF FINANCIAL STATEMENTS

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