Public Service Pension Plan

# FUNDING POLICY STATEMENT

**Effective Date: November 10, 2017**

Public Service Pension Plan

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## Background and Purpose

The Public Service Pension Plan was established effective January 1, 1947 to provide a vehicle through which retirement and related benefits could be made available to all eligible members.

The Plan provides a pension promise that is funded through employee and employer contributions made prior to retirement as well as accumulated investment returns on such contributions. The level of assets required to fund the promised pensions prior to their commencement cannot be determined with 100% certainty and consequently guidance on the Plan's funding is desirable. This policy statement provides such guidance with its primary purpose being to document:

- the relevant environment within which the Plan operates;
- the primary risks that threaten the Plan's financial well-being and the implications of such risks;
- the desired Funding Principles for the Plan;
- the Funding Strategies that have been established for the Plan to assist with decision making involving the funding of the Plan's benefits; and
- the governance process that is to be followed in relation to this policy statement.

A glossary accompanies this policy statement and words and phrases contained in the glossary have been capitalized throughout the document.

## Environment and Risks

The environment within which the Plan operates and the risks that threaten the realization of the desired funding outcomes provide important context to the Funding Policy Statement. Over time, the Funding Policy Statement will need to be reviewed and updated to reflect changes in these environmental and risk factors.

### Environment

The following table summarizes the environment within which the Plan operates.

| | |
|---|---|
| Regulatory Influence | • Plan is regulated at the provincial level under the Public Sector Pension Plans Act (PSPPA), the Public Sector Pension Plans (Legislative Provisions) Regulation (Alberta regulation 365/1993) and the PSPP Regulation (Alberta regulation 368/1993).<br>• The Alberta Employment Pension Plans Act (EPPA) is incorporated in the PSPPA by reference.<br>• The Lieutenant Governor in Council is empowered to make changes to the Plan's rules but only on the PSP Board's recommendation.<br>• Solvency funding is not mandated for the Plan but adequate contributions are required to fund current service costs and to amortize deficits over no longer than 15 years.<br>• Plan is registered under the Income Tax Act as a registered pension plan and subject to the contribution and benefit limits prescribed therein. |
| Trusteeship of Assets | • Contributions and corresponding investment returns are held in trust by the Trustee, the President of Treasury Board and Minister of Finance, who also serves as the Plan's legal administrator. |
| Investment Policy | • The PSP Board is responsible for setting investment policy and is the legal owner of the Plan's assets. |

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| Contribution Rate Setting | • The PSP Board is responsible for setting contribution rates within the confines of the minimum regulatory funding requirements, including that any past service deficits be amortized over not more than 15 years.<br>• The PSP Board may adjust either or both of the employer and employee contribution rates.<br>• The cost of the Plan is borne by employers and employees and observes a 50/50 cost sharing between employers and employees.<br>• Effective January 1, 2013 employees and employers each contributed 11.70% of pensionable earnings up to the YMPE and 16.72% above the YMPE.<br>• Effective January 1, 2018 employees and employers will each contribute 10.47% of pensionable earnings up to the YMPE and 14.95% above the YMPE. |
| Membership | • The Plan is open to new members.<br>• As at December 31, 2016 (last filed valuation):<br>➢ active membership is 41,490 with an average age of 44.1 and average pensionable service of 9.7 years<br>➢ suspended / inactive / deferred membership is 18,516 with an average age of 47.7<br>➢ pensioner membership is 25,422 with an average age of 72.5 |
| Benefit Level | • For each year of pensionable service after December 31, 1966, the benefit payable at normal retirement date (age 65) is equal to:<br>➢ 1.4% of the best consecutive five year average pensionable earnings up to the average five year YMPE; plus<br>➢ 2.0% of the best consecutive five year average pensionable earnings in excess of the average five year YMPE.<br>• Pensionable service is limited to 35 years.<br>• Unreduced early retirement at earlier of age 65 and when age plus pensionable service equals 85. |
| Cost-of-living Increases | • Pensions payable to retired members, former members with deferred pensions and survivors will be increased annually to reflect 60% of the increase in the Consumer Price Index for Alberta.<br>• The PSP Board may approve additional ad hoc cost-of-living increases. |
| Expenses | • Expenses that relate to the Plan's governance, administration of benefits and funding and investment activities are paid from the Plan's assets. |

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| Asset Mix Policy | • Assets are invested by AIMCo in accordance with the asset mix policy approved by the PSP Board. The following asset mix was approved effective April 1, 2016. |

| SECURITY CLASS | TARGET WEIGHT | MINIMUM WEIGHT | MAXIMUM WEIGHT |
|---|---|---|---|
| | | | |
| Fixed Income | | | |
| Money Market | 0.5 | 0 | 3.0 |
| Universe Bonds | 7.0 | 4.0 | 10.0 |
| Long Bonds | 7.0 | 4.0 | 10.0 |
| Private Mortgages | 5.0 | 3.0 | 7.0 |
| Opportunistic Fixed Income[1] | 1.5 | 0 | 3.0 |
| **Total Fixed Income** | **21.0** | **11.0** | **33.0** |
| | | | |
| Equities | | | |
| Canadian Equity | 13.0 | 10.0 | 18.0 |
| Global Equity, Traditional | 22.0 | 19.0 | 27.0 |
| Global Equity, Low Volatility | 11.0 | 8.0 | 14.0 |
| Emerging Markets Equity | 5.0 | 0 | 7.0 |
| Private Equity | 4.0 | 0 | 6.0 |
| **Total Equities** | **55.0** | **37.0** | **65.0** |
| | | | |
| Alternatives | | | |
| Canadian Real Estate | 13.0 | 10.0 | 15.0 |
| Foreign Real Estate[2] | 2.0 | 0 | 3.0 |
| Infrastructure[3] | 9.0 | 5.0 | 12.0 |
| **Total Alternatives** | **24.0** | **15.0** | **30.0** |
| | | | |

*Notes:*
*[1] Includes Private Debt & Loans*
*[2] Foreign Real Estate: 2.0% of value of Plan assets with organic growth is permitted to 3.0%*
*[3] Includes Timberland*

**Risks**

Through this policy statement, the Plan has adopted a number of desired Funding Principles. These principles are primarily aimed at ensuring sufficient assets are accumulated to meet benefit obligations. However, there are a number of risks that threaten the realization of this goal, the most relevant of which are summarized in the following table.

| Risk | Commentary |
|---|---|
| Assumption Risk (Going-Concern) | • Defined as the risk that actual events turn out to be worse than originally anticipated by the going-concern actuarial assumptions which results in funding shortfalls.<br>• With all actuarial assumptions there is an element of uncertainty as to the extent actual experience will deviate from that assumed. The greater the uncertainty associated with an assumption, the greater the potential that the Plan's funding objectives will not be met.<br>• Arguably, the assumption with the greatest degree of uncertainty is the discount rate which reflects the future rate of return expected to be earned by invested assets.<br>• Other assumptions that involve significant degrees of uncertainty include:<br>➢ future salary increases;<br>➢ future cost-of-living adjustments;<br>➢ early retirement; and<br>➢ mortality. |
| Cash Flow Mismatch Risk | • Defined as the risk that investments may have to be liquidated at depressed values to pay benefits thereby losing opportunity for such undervalued investments to recover to their normalized values.<br>• This risk is highly dependent on the volatility in Plan's investments and the rate of benefit payouts.<br>• This downside risk is neutralized to some extent by contribution inflows.<br>• Currently, the ratio of benefit payments to contributions is approximately 0.70:1 and is materially influenced by the relatively high levels of deficit contributions currently being made. In absence of deficit contributions, this ratio would be approximately 1:1. |

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|---|---|
| Demographic Shift | • Defined as the risk that the demographic makeup (notably the average age) of the active membership base will change over time and translate into an increase in current service costs. |
| Plan Maturation | • Defined as the risk that the Plan's total liabilities will increase more rapidly than the pensionable earnings base from which contributions stem.<br>• As total liabilities increase relative to pensionable earnings, adverse experience could put greater upward pressure on contribution rates. |

The primary implications that these risks could bring to bear are summarized in the following table.

| **Implication** | **Commentary** |
|---|---|
| Contribution rate volatility | • Fluctuating Plan experience translates directly into fluctuating contribution rates.<br>• Fluctuating contribution rates create budgeting pressures for both employers and employees. |
| Contribution rate increases to fund past service deficits | • Contribution rate increases that are necessary to fund past service deficits result in a transfer of the cost of benefits from one generation to the next.<br>• Similarly, should positive experience translate into a reduction in contribution rates below the current service cost, a previous generation could be viewed as subsidizing the cost of a future generation. |
| Contribution rates becoming unaffordable | • Negative Plan experience could translate into contribution rates that are deemed to be unaffordable by the employers and the members. |
| Reduced benefits | • To the extent that negative Plan experience cannot be addressed through increased contribution rates, benefits may need to be scaled back in some fashion. |

**Funding Principles**

The PSP Board has adopted the following Funding Principles to which the funding of the Plan should strive:

1. The Plan's funding needs to be established so as to ensure that accrued benefits are secure and can be delivered to members and beneficiaries.

2. For each generation of active members, contribution rates to the Plan should remain affordable and stable with Margins for Adverse Deviation allowed to vary to support this goal.

3. For a given generation of active members, to the extent possible, contributions made in respect of active members should, when combined with investment returns, be sufficient to fully support the anticipated cost of the benefits for that generation.

4. To the extent possible, the Plan's funding should be managed so as to ensure a reasonably consistent level of cost is experienced across different generations of contributors.

The Funding Strategies as detailed in the following section provide specific guidance in relation to how these Funding Principles are managed.

## Funding Strategies

In order to support the realization of the Plan's Funding Principles, the Plan has adopted specific Funding Strategies. These strategies are designed to guide and manage the accumulation of assets to fund future obligations. The Plan's Funding Strategies are outlined in this section.

### Going-Concern Actuarial Valuation and Contribution Rate Setting Process

The Plan's financial position will be monitored by the PSP Board through the performance of regular Actuarial Valuations that are performed on a going-concern basis whereby the Plan is assumed to continue to exist for the long term. As part of each Actuarial Valuation, the PSP Board in consultation with the Plan's Actuary will:

- compare the Plan's actual financial experience since the time of the previous Actuarial Valuation to what was expected in order to understand the root cause of results that deviate from expectations;
- review changes to the risk factors that influence the Plan's funding in order to understand how such changes should be incorporated into the Actuarial Valuation;
- review and update as appropriate the inputs relating to the Actuarial Cost Method, Asset Valuation Method and the actuarial assumptions;
- review and update as appropriate the Margins for Adverse Deviation contained in the actuarial assumptions; and
- assess the need to make changes to contribution rates.

### Selection of Inputs

Intrinsic to each Actuarial Valuation is the selection of the Actuarial Cost Method, the Asset Valuation Method and the actuarial assumptions. The PSP Board's selection of these three inputs will be in consultation with the Plan's Actuary and guided by the following:

- The Actuarial Cost Method known as the Projected Accrued Benefit Actuarial Cost Method will be used to determine the Plan's going-concern liabilities and current service costs. This method determines the present value of benefits based on service accrued to a given valuation date and pensionable earnings projected to retirement.

- The Asset Valuation Method may include appropriate smoothing of current asset values by averaging actual investment returns that are above and below the assumed discount rate assumption over a period of not more than five years and subject to the resulting smoothed value falling within 90% to 110% of the market value of assets.

- The actuarial assumptions will be established by first selecting assumptions that are individually determined to be Best Estimate and then making an allowance for any Margins for Adverse Deviation. Normally, Margins for Adverse Deviation will be incorporated into the discount rate only. The Best Estimate discount rate assumption should align with the rate of return expectation inherent with the current investment policy on the premise that this policy continues indefinitely into the future.

- The target amount of Margin for Adverse Deviation incorporated into the actuarial assumptions will be a 1.0% point reduction in the Best Estimate discount rate. Such a reduction should result in a target Provision for Adverse Deviation in the Plan's going-concern liabilities and current service costs of 10% to 20%.

**Guidelines for Action**

Based on the Plan's financial position and current service costs determined in accordance with the above guidance and including the stated target margin (i.e., the Target Going-Concern Basis), the PSP Board will review the adequacy of the current contribution rates. The following table highlights the action the PSP Board is expected to contemplate for various funded position and current contribution rate scenarios.

| Financial Position on Target Going-Concern Basis | Current Contribution Rate Level | Action Expected to be Contemplated |
|---|---|---|
| Deficit | • Sufficient to fund current service costs determined under the Target Going-Concern Basis; and<br>• Insufficient to fund deficit over no more than 15 years | • Reduce actual Margin for Adverse Deviation but not to a level which produces less than a 5% Provision for Adverse Deviation with respect to either the liabilities or current service cost; or<br>• Increase contribution rates |
| Deficit | • Sufficient to fund current service costs determined under the Target Going-Concern Basis; and<br>• Sufficient to fund deficit over no more than 15 years | • No action; or<br>• Reduce contribution rates but not below rates necessary, on the Target Going-Concern Basis, to fund deficit over 15 years and current service costs |
| Surplus | • Sufficient to fund current service costs determined under the Target Going-Concern Basis | • Establish a Contingency Reserve out of surplus assets up to a level of 25% of Best Estimate liabilities; and<br>• Reduce contribution rates but not below the current service cost rate determined under the Target Going-Concern Basis |

**Additional Actuarial Analysis**

The going-concern Actuarial Valuation and contribution rate setting process will be supported by additional actuarial analysis, including:

- stress testing of key actuarial assumption inputs at each Actuarial Valuation in order to understand the potential impact of adverse experience on the Plan's financial position;

- studies that periodically assess the Plan's historical experience relative to that assumed; and

- periodic modeling of the range of outcomes for the Plan's future financial position, contribution rates and demographic makeup based on a projection of such variables into the future (i.e., asset-liability modeling).

## Governance

The PSP Board has established this Funding Policy Statement and is responsible for:

- monitoring the extent to which the Plan's Funding Principles are met;
- ensuring that decisions made by the PSP Board in relation to the Plan's contribution rates align with the guidance provided by this Funding Policy Statement;
- making the appropriate interpretations of this policy statement; and
- regularly reviewing and making appropriate changes to this policy statement.

## Glossary

**Actuarial Cost Method** means the methodology used to determine the present value of a pension plan's benefit obligations and how such a present value is allocated across the working lifetime of a member.

**Actuarial Valuation** means the process by which a pension plan's financial position is assessed.

**Asset Valuation Method** means the methodology used to assign a value to a pension plan's assets.

**Best Estimate** in relation to an actuarial assumption means that the assumption represents the mean or average expectation of the future and is neither conservatively nor aggressively biased.

**Contingency Reserve** means a reserve established from surplus assets to protect against future adverse experience.

**Funding Principles** means the principles that a pension plan's particular funding strategy is expected to achieve in terms of both an end result and the means to a particular end result.

**Funding Strategies** means the specific processes and targets established by a pension plan that guide and manage the plan's funding so as to help ensure the realization of the Funding Principles.

**Margin for Adverse Deviation** means the amount of conservative bias contained in an actuarial assumption.

**Provision for Adverse Deviation** means the resulting amount of conservative bias included in either the going-concern liabilities or current service costs as a result of the Margin for Adverse Deviation contained in an actuarial assumption.

**Target Going-Concern Basis** means the going-concern Actuarial Cost Method, Asset Valuation Method and the actuarial assumptions, including the target amount of Margin for Adverse Deviation, as established by the Funding Strategies.