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INVESTORS SERVICE

CREDIT OPINION
14 February 2023

Update

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RATINGS

Public Sector Pension Investment Board

Domicile	Canada
Long Term CRR	Not Assigned
Long Term Issuer Rating	Aaa
Type	LT Issuer Rating - Dom Curr
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Public Sector Pension Investment Board

Update to credit analysis

Summary

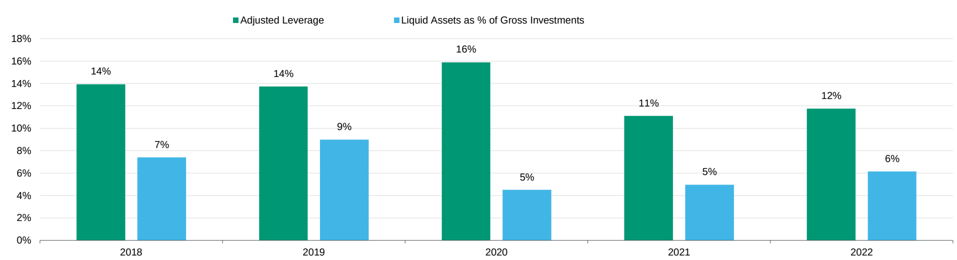
Public Sector Pension Investment Board's (PSPIB) Aaa long-term issuer rating is based on its aa2 Baseline Credit Assessment (BCA), a high assumption of extraordinary support from the Government of Canada (Aaa stable), and our expectation that PSPIB's creditors will have an effective priority of claim over pension obligations in the event of a default, which provides a substantial cushion of assets and increases expected recoveries. PSPIB's BCA of aa2 reflects the pension manager's strong liquidity and predictability of future cash flows as well as its conservative financial policies and low leverage, offset by growth in less liquid investments and a high proportion of high risk assets as defined by Moody's.

The pension manager generated another strong return during its fiscal year ending 31 March 2022, with a one-year overall portfolio return of 10.9% compared with 18.4% in fiscal 2021. Both private equity (+27.6%) and real estate (+24.8%) were the biggest contributors to the strong performance. Natural resources (+15.9%), infrastructure (+13.9%), credit investments (+7.5%) and public equities (+6.0%) were also positive contributors while fixed income generated a small drag of -1.7%.

In the next 3-5 years, we believe the investment characteristics of certain asset classes will change reflecting a weakening macroeconomic outlook as well as lingering effects from the pandemic including shifting private sector preferences, such as greater employment away from office real estate. That said, PSPIB has weathered past crises well and has a reputation for strong investment acumen. The fund's long investment horizon is a considerable advantage in this regard as it affords them time to make portfolio shifts, particularly with its less liquid investments.

Exhibit 1

PSPIB's liquidity levels provide good coverage of its leverage; reducing refinancing risk



Fiscal year ended 31 March. Liquid assets represents cash and money market securities and securities purchased under reverse repurchase agreements.
Source: Moody's Investors Service, company financials

PSP Capital Inc., a wholly-owned subsidiary of PSPIB, has a backed senior unsecured rating of Aaa and a backed commercial paper rating of Prime-1, reflecting the unconditional and irrevocable guarantee of its debt obligations by PSPIB. PSPIB Capital Inc. adds a moderate degree of leverage by issuing commercial paper and term debt guaranteed by PSPIB, with the goal of diversifying funding sources and enhancing overall returns of the fund.

Credit strengths

» Governing legislation that mandates PSPIB as exclusive investment manager for certain Canadian government-sponsored pension plans without responsibility for the underlying pension obligations;

» Highly predictable cash flows, with positive net contributions projected for at least the next 5 years;

» Strong coverage of obligations by high quality liquid assets;

» A moderate degree of leverage through PSPIB Capital Inc., as its issued instruments are unconditionally and irrevocably guaranteed by PSPIB.

Credit challenges

» Execution risk associated with the transition to a higher allocation of private investments, although private investments are well-suited to PSPIB's long-term investment horizon;

» Private investments weaken portfolio liquidity, and PSPIB has comparably higher levels of less liquid Level 3 assets than Moody's-rated peers;

» Maintaining effective risk management as PSPIB continues to grow.

Outlook

The stable outlook reflects our expectations that PSPIB's credit fundamentals, specifically its strong and stable liquidity and level of high risk assets, will remain unchanged over the next 12 to 18 months. It also reflects the stable outlook of its government support provider, the Government of Canada.

PSPIB Capital Inc.'s stable ratings outlook reflects the outlook of its parent.

Factors that could lead to an upgrade

» An upgrade of the Aaa senior unsecured rating is not possible.

» An upgrade of the aa2 BCA could be driven by a sustained decrease in PSPIB's high risk assets.

Factors that could lead to a downgrade

» The BCA could be downgraded if we were to assess a material reduction in PSPIB's liquid assets. However, a downgrade of the BCA would not necessarily result in a downgrade of the long-term issuer rating because of our expectation of extraordinary support.

» A change in PSPIB's governing legislation or a legal precedent that casts doubt on the status of PSPIB's obligations as having preference over pension obligations; however, given the publicized and political nature of such an act, we view the probability of this happening to be very low.

» A material increase in leverage above 25% for a sustained period of time.

» A deterioration in the creditworthiness of the Government of Canada.

» As well, the supported ratings of PSPIB Capital Inc. could be downgraded if we were to assess a change in the guarantee from PSPIB.

Key indicators

Exhibit 2
PSP Investment Board [1][2]

Statistics for Public Sector Pension Investment Board	2022	2021	2020	2019	2018
Total Assets (C$ millions)	264,044	232,793	207,603	199,215	179,139
Net Assets (C$ millions)	230,273	204,299	169,682	167,853	152,994
Fixed Income % Net Investments	20%	21%	19%	21%	18%
Public Equities % Net Investments	26%	29%	29%	30%	34%
Private & Real Assets % Net Investments	54%	50%	52%	49%	48%
Liabilities C$ millions	33,771	28,494	37,921	31,362	26,145
Liabilites % Gross Assets	13%	12%	18%	16%	15%
Unsecured Debt (C$ millions)	22,791	16,802	15,877	14,169	12,249
Unsecured Debt % Gross Assets	9%	7%	8%	7%	7%
Secured Funding (C$ millions)	9,484	9,730	20,563	15,899	12,459
Secured Funding % Gross Assets	4%	4%	10%	8%	7%
Other Liabilities % Gross Assets	1%	1%	1%	1%	1%
Derivative Notionals (C$ millions)	372,714	355,320	357,047	371,355	391,213
Annual Reported Return (%)	10.9%	18.4%	-0.6%	7.1%	9.8%
Benchmark Return (%)	9.4%	16.5%	-1.6%	7.2%	8.7%

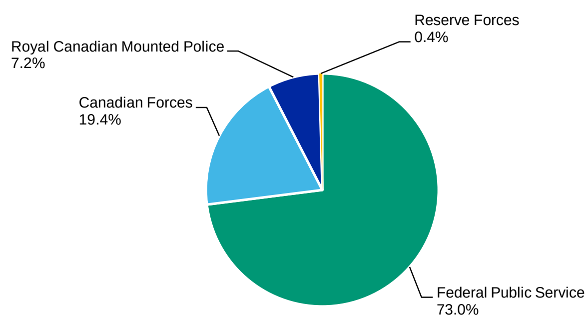
[1] Information based on IFRS financial statements for 2018-2022, [2] Fiscal year end 31 March
Source: Moody's Investors Service, company financials

Profile

PSPIB was established by the Public Sector Pension Investment Board Act (PSPIB Act) in 1999 to invest the pension contributions (net of benefit payments) of Canada's national public service, its military (Canadian Forces and Reserve Forces), and the national police service, the Royal Canadian Mounted Police (RCMP). The funds for which amounts are currently transferred to PSPIB by the Government of Canada relate to pension obligations under the Plans for service on or after 1 April 2000, and in the case of the Reserve Forces Plan, for service on or after March 1, 2007. As such, PSPIB is responsible for managing assets only related to those pension obligations.

At 73% (Exhibit 3), the majority of PSPIB's net assets is managed for benefits related to the federal public service.

Exhibit 3
Majority of PSPIB's net assets related to Canada's federal public service
PSPIB's net assets per pension plan account as of 31 March 2022



Source: Moody's Investors Service, company financials

Detailed credit considerations

Funded Status - PSPIB does not have responsibility for the obligation of the underlying pension liability

As a pension reserve fund, PSPIB is not responsible for the administration of benefits, nor in setting actuarial assumptions of the underlying obligations, both of which are the responsibility of the sponsoring government. In contrast to a pension fund, the sponsor is the beneficiary of the net assets. As such, we consider PSPIB to be fully funded and therefore assign a Funding Ratio score of aaa.

Liquidity - Benefits of liquid fixed income portfolio offset by funding sources that encumber assets

PSPIB has strong coverage of obligations by high quality liquid assets. At 31 March 2022, the ratio of discounted liquid asset inflows to recognized obligation outflows was 389%, supported by high levels of sovereign debt securities and publicly traded equity. This level is down from 419% last year due to higher levels of short-term funding. PSPIB's liquidity position is strong and its asset encumbrance from short-sold securities is modest relative to many of its Canadian pension fund peers.

PSPIB's strong liquidity position is also enhanced by the Plan's actuarial profile, with net contributions (transfers from the government) to PSPIB expected to remain positive for at least the next 5 years. PSPIB's net assets as at 31 March 2022 increased by 1.7% year over year, before investment returns, as a result of these transfers. Including investment returns, total growth in net assets for fiscal 2022 was 12.7% year over year as PSPIB recorded a net return of 10.9%. PSPIB is also not subject to plan redemptions or loss of mandate, except in the unlikely event of a change in legislation. These characteristics allow PSPIB to adopt a long-term investment horizon.

We make no adjustments to PSPIB's initial liquidity score, resulting in an assigned score of aaa.

Asset Risk - high levels of less liquid assets, although broadly diversified by geography and sector

PSPIB’s high risk asset ratio of 80% as of 31 March 2022 is broadly in line with its peers. These assets are largely invested outside Canada and are broadly diversified across several asset classes and sectors. Moody's definition of high risk assets broadly comprises all investments other than investment-grade bonds and mortgage loans, including below-investment-grade and unrated bonds/loans, common and preferred stock equities, alternative investments such as private equity and hedge fund holdings, real estate assets, and other investments that are not classified on a pension manager’s balance sheet.

At 31 March 2022, PSPIB's allocation to private equity and real assets stood at 44% of net investments, which is in line with its long-term target weight of 50%. PSPIB's long-term investment horizon and liquidity profile from expected positive net transfers, positions it well to execute this type of investment strategy. PSPIB's investment risks are well managed, although this capability will need to continue to keep pace with asset growth and rising complexity as well as shifting economics in a post-pandemic economy.

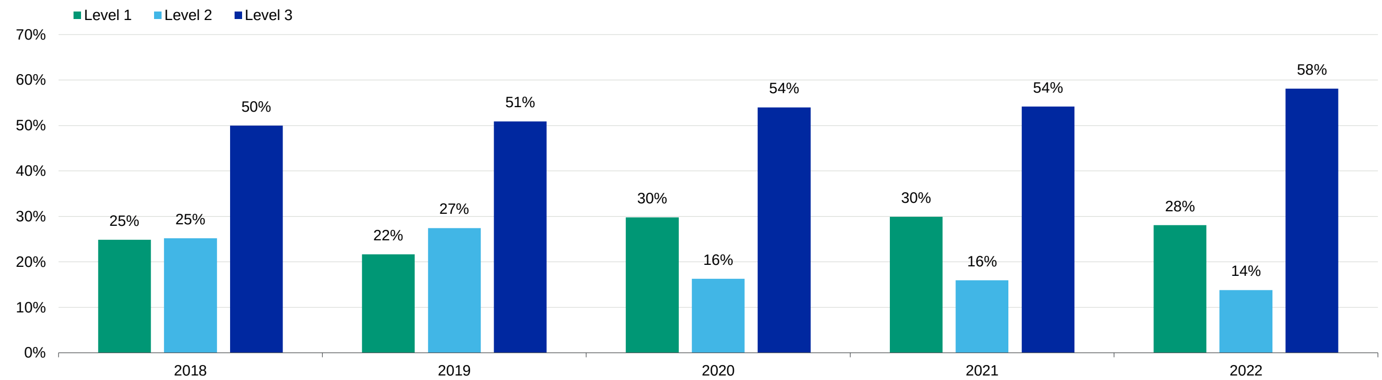
PSPIB’s investment approach is designed to achieve a return greater than the Reference Portfolio over a 10-year period with a lower or equal level of pension funding risk. In addition, PSPIB seeks to generate an additional return through active management within defined risk limits, for example, by varying the allocation to a particular sector compared to the Policy Portfolio. In 2016, PSPIB changed its policy portfolio by reducing target allocations in public equity in favour of more private and real assets; adding a new asset class, Private Debt.

As at 31 March 2022, PSPIB's investment portfolio was comprised of 20% fixed income[1], 26% public equity, and 54% private equity and real investments. As noted, in recent years, PSPIB's investment portfolio has shifted toward less liquid Level 3 assets such as real estate, infrastructure and private equity (Exhibit 4). While these asset classes align to the pension manager's mandate to invest over a longer time horizon and offer attractive returns from a liquidity premium, they also add incremental liquidity and operational risks to the fund.

Exhibit 4

PSPIB's less-liquid Level 3 assets have grown in recent years

Real estate, infrastructure and private equity allocation align with PSPIB's long-term horizon



Fiscal year end 31 March. Level 1 and Level 2 assets have been adjusted for cash and money market securities. Fixed income includes Cash and Cash Equivalents.
Source: Moody's Investors Service, company financials

That said, PSPIB's investment portfolio is diversified globally and across many sectors. In our view, the benefits of this diversification strategy offsets higher liquidity and operational risks associated with reliance on Level 3 assets. It also reduces common credit risks related to the Canadian economy, providing diversification away from the geographic location of its underlying pension obligation and related contribution cash inflows.

PSPIB's initial asset risk score is ba2, to which we make two notches of upward adjustment to account for its geographic and sector diversification. This results in an assigned asset risk score of baa3.

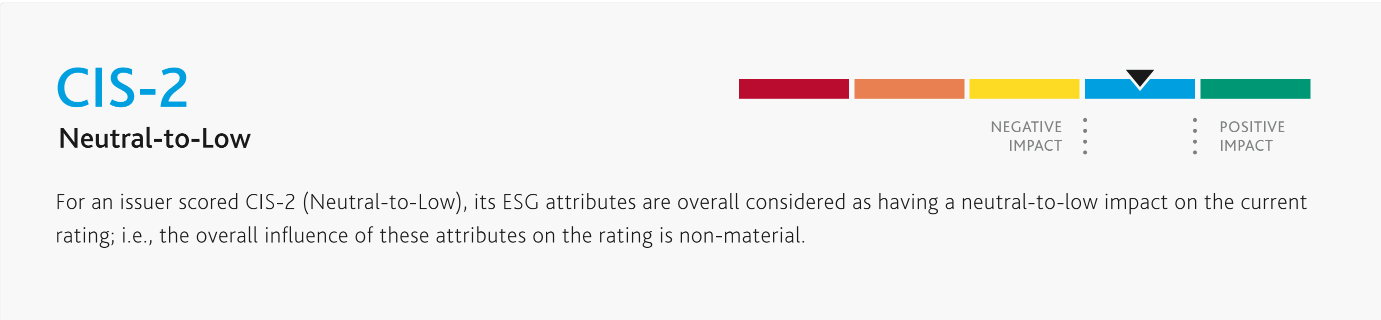
Financial Policy - conservative financial policies and investment profile provides natural hedge to creditor obligations

PSPIB's financial policies are broadly conservative as expressed in our aa-score for Financial Policy. The pension manager has good liquidity and risk management practices that mitigate a modest level of leverage that creates refinancing and counterparty risks. PSPIB hedges certain currency risks within its portfolios and has natural currency matches between its investments and funding. A large portion of PSPIB's investment portfolio is invested in USD or CAD assets, which aligns with its creditor obligations, much of which are denominated in USD.

ESG considerations

Public Sector Pension Investment Board's ESG Credit Impact Score is Neutral-to-Low CIS-2

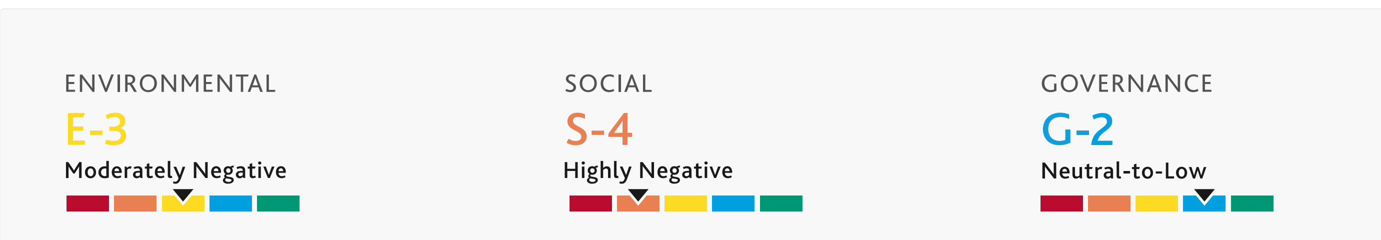
Exhibit 5
ESG Credit Impact Score



Source: Moody's Investors Service

PSPIB's ESG Credit Impact Score is neutral-to-low (**CIS-2**), reflecting the limited impact of ESG considerations on the current rating. PSPIB is exposed to carbon transition and physical climate risks from the pension manager's commercial real estate portfolio as well as energy exposures. PSPIB's exposure to social risk factors are influenced by changes in unemployment and immigration, which have the potential to change contribution and benefit payment flows over time. As well, an aging population will pressure the fund's liquidity over time as benefit payments become larger than contributions and the fund needs to rely on cash flow from investments to make up shortfall. These ESG risks are offset by PSPIB's excellent liquidity, conservative financial policies and its commitment to help and influence sectors with elevated carbon transition risks.

Exhibit 6
ESG Issuer Profile Scores



Source: Moody's Investors Service

Environmental

PSPIB faces moderately negative exposure to environmental risks related to carbon-intensive investments in its portfolio, such as oil & gas, transportation and financial services (insurance) holdings. As well, the fund's real estate and infrastructure portfolios are exposed to physical climate risk where assets could be damaged by extreme weather or rising sea levels. In addition, natural capital assets, such as agriculture, are used a hedge against inflation.

Social

PSPIB faces highly negative exposure to social risks, primarily from changes in unemployment or immigration rates, which can impact contribution cash flows. However, in contrast to a pension fund, PSPIB does not have direct exposure to an aging population because it is not responsible for making benefit payments nor in managing the pension benefit obligation, both of which are the responsibility of the national government. This also reduces the impact of a privacy or data breach because PSPIB does not warehouse beneficiary data.

Governance

PSPIB has neutral-to-low governance risks; practices are in line with most standards within the Canadian financial services sector. This includes a defined risk appetite statement, risk and performance benchmarks and a professional board of directors and standing Board control committees.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click here to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Support and structural considerations

High expectation of extraordinary support with a mandate as the exclusive investment manager of national public sector employee pensions

Extraordinary support represents the probability that a government owner of a GRI would provide financial support, or other contractual protections, to a GRI to avoid a default on its debt obligations. The expectation of a continuation of ordinary support does not constitute extraordinary support and is instead considered in our assessment of the GRI's BCA.

As noted, PSPIB has special legal status as the exclusive asset manager for investments related to active and retired members of Canada's civil service. We believe the pension manager is a key element of the national government's compensation program and an important contributor to the Canadian economy. In our view, a default of PSPIB would be politically embarrassing to the Government of Canada and would have implications for the country's own ability to access debt markets. As such, we believe the Government of Canada would provide extraordinary support, financial or otherwise, to PSPIB if necessary.

PSPIB's creditors effectively rank ahead of amounts due to the plans

PSPIB is an exclusive asset manager of the four pension plans, but does not have legal responsibility for their liabilities, which are those of the Government of Canada. We note that the legislative acts constituting PSPIB do not explicitly define the priority of PSPIB's unsecured creditors relative to the amounts due to the Plans. However, it is our view that PSPIB creditors have an effective priority claim on PSPIB's assets because the statutory framework provides that the Government of Canada may only call upon the net assets of PSPIB to pay Plan benefits. In this context, net assets means assets with a fair market value in excess of liabilities, including the unsecured obligations that PSPIB guarantees. As a result, PSPIB's obligations under the PSP Capital Inc. guarantee rank senior to the amounts that become due to the pension Plans and pari passu with PSPIB's other senior unsecured obligations. Similarly the Plans are only entitled to the net returns after PSPIB's operational costs. On a gross asset base of CAD264 billion at 31 March 2022, PSPIB had CAD230 billion in net assets, which we view as a loss absorbing cushion to the benefit of PSPIB's creditors.

As at 31 March 2022, PSPIB's leverage was about 12% after adjusting for nettable repurchase agreements and derivatives that are not offset for accounting purposes.

Rating methodology and scorecard factors

Exhibit 7

Public Sector Pension Investment Board

Public Pension Manager						
Public Sector Pension Investment Board						
2022						
	Historical			Assigned		
	Factor Weights	Historic Ratio	Initial Score	Assigned Score	Key driver #1	Key driver #2
Funding Ratio *						
Net Assets / PBO	40%	100.0%	aaa	aaa		
Liquidity						
Liquidity Inflows / Outflows	20%	389.0%	aaa	aaa		
Asset Quality						
High Risk Assets / Gross Assets	20%	79.9%	ba3	baa3	Asset Class Diversification	
Financial Policy						
Financial Policy	20%	aa	aa	aa		
Financial Profile Outcome	100%		aa3	aa2		
Qualitative Notching						
Political Independence				0		
Corporate Behavior				0		
Scorecard-Indicated Outcome Before Constraint				aa2		
Consideration of:					**Comment**	
Sovereign Constraint (Y/N)				Yes		
Sovereign Rating				Aaa		
Sponsor Constraint (Y/N)				Yes		
Sponsor Rating				Aaa		
Scorecard-Indicated Outcome				aa2		

Source: Moody's Financial Metrics

Ratings

Exhibit 8

Category	Moody's Rating
PUBLIC SECTOR PENSION INVESTMENT BOARD	
Outlook	Stable
Issuer Rating -Dom Curr	Aaa
PSP CAPITAL INC.	
Outlook	Stable
Bkd Senior Unsecured	Aaa
Bkd Commercial Paper	P-1

Source: Moody's Investors Service

Endnotes

1 Includes cash and cash equivalents

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