MOODY'S
INVESTORS SERVICE

CREDIT OPINION
4 March 2020

Update

Rate this Research

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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PSP Investment Board

Update following the publication of new methodology

Summary

On 21 February 2020, Moody's published a new standalone Public Pension Managers rating methodology. The new rating methodology introduced a baseline credit assessment (BCA) , a joint-default analysis to determine extraordinary sponsor support and an enhanced method of determining obligation support from high levels of asset coverage in jurisdictions where we believe creditor preference exists.

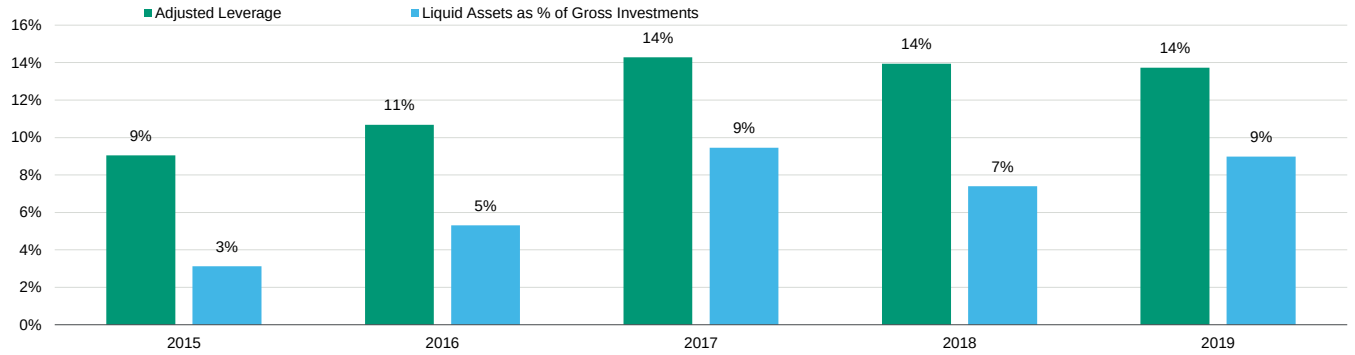
Following the publication of the new rating methodology, we affirmed PSP Investment Board's (PSPIB) Aaa long-term issuer rating and assigned an aa2 BCA. We also affirmed the Aaa long-term senior unsecured rating and P-1 short-term rating assigned to PSP Capital Inc.

PSPIB's aa2 BCA reflects the pension manager's strong liquidity and predictability of future cash flows, as well as its conservative financial policies and low leverage. PSPIB's BCA is further supported by our positive view of its funding because as a pension manager as compared to a public pension plan its obligation is to its sponsor not the ultimate beneficiary. These credit strengths are offset by growth in less-liquid investments and a high proportion of high risk assets, which we broadly define as all investments other than investment grade fixed income.

PSPIB's Aaa long-term issuer rating is based on its aa2 BCA, and a high assumption of extraordinary support from its sponsor, the Government of Canada. It also reflects our view that PSPIB's creditor obligations rank senior to its underlying pension obligations under our assumption that creditors have a priority of claim on net assets, creating high coverage of assets for creditors.

This report was republished on 20 March 2020 to reflect the fact that the asset risk score is broadly in line with PSPIB's peer group.

Adjusted leverage is low and liquid assets offer strong coverage of obligations



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

PSPIB Capital Inc., a wholly-owned subsidiary of PSPIB, has 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

» PSPIB Capital Inc.'s issued instruments are unconditionally and irrevocably guaranteed by PSPIB

Credit challenges

» Execution risk associated with the transition to a higher allocation of private investments

» Comparably high levels of less liquid Level 3 assets than peers

» Private investments suit PSPIB's long-term investment horizon but weaken portfolio liquidity

» 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 stable outlook on PSPIB Capital Inc.'s ratings reflect 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	2019	2018	2017	2016	2015
Total Assets (C$ millions)	199,215	179,139	158,973	131,660	124,637
Net Assets (C$ millions)	167,853	152,994	135,562	116,761	111,967
Fixed Income % Net Investments	21%	18%	18%	21%	20%
Public Equities % Net Investments	30%	34%	41%	41%	50%
Private & Real Assets % Net Investments	49%	48%	42%	38%	30%
Liabilities C$ millions	31,362	26,145	23,411	14,899	12,670
Liabilites % Gross Assets	16%	15%	15%	11%	10%
Unsecured Debt (C$ millions)	14,188	12,249	10,846	8,878	7,445
Unsecured Debt % Gross Assets	7%	7%	7%	7%	6%
Secured Funding (C$ millions)	15,899	12,459	11,258	5,258	3,426
Secured Funding % Gross Assets	8%	7%	7%	4%	3%
Other Liabilities % Gross Assets	1%	1%	1%	1%	1%
Derivative Notionals (C$ millions)	371,355	391,213	311,339	207,550	285,425
Annual Reported Return (%)	7.1%	9.8%	12.8%	0.7%	14.2%
Benchmark Return (%)	7.2%	8.7%	11.9%	0.3%	13.1%

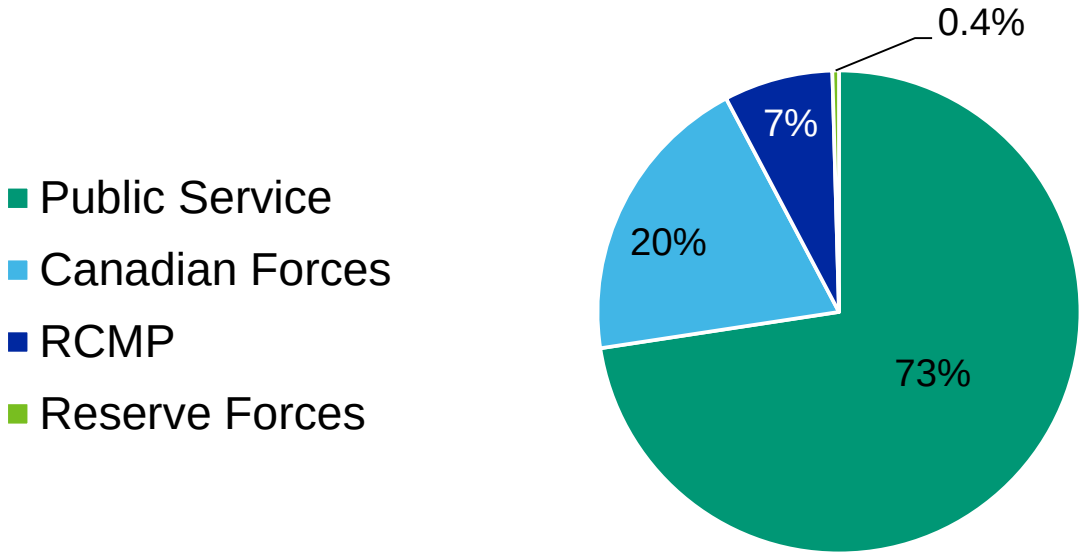
[1] Information based on IFRS financial statements for 2015-2019, [2] Fiscal year end 31 March
Source: Public Financials, Moody's Investors Service

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

Exhibit 3
Majority of PSPIB's net assets relate to Canada's federal public service
31 March 2019



Source: Public Financials, Moody's Investors Service

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 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 assigns a aaa-score to its Funding Ratio score.

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

As of 31 March 2019, PSPIB had strong coverage of liquid assets to cash obligations. The ratio of discounted liquid asset inflows to recognized obligation outflows was 364%, largely because of high levels of publicly-traded equity and sovereign debt securities. We also note that in contrast to a number of its Canadian peers, PSPIB has only a modest amount of asset encumbrance from short-sold securities.

PSPIB's fundamental liquidity position is particularly strong in part because of the actuarial profile of the Plans: net contributions (transfers from the government) to PSPIB are expected to remain positive for at least the next 5 years. PSPIB's net assets increased by 2.4% in fiscal 2019, before investment returns, as a result of these transfers. With investment returns, total growth in net assets was 9.7% in the same period. Actuarial projections indicate that the PSPIB's net investments will increase to over CAD250 billion by 2028 from CAD168 billion at 31 March 2019. 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.

PSPIB has an initial liquidity score of aaa and we make no adjustments.

Asset Risk - high levels of less-liquid assets, but with broad geographic and sector diversification

With a ratio of high risk assets to gross assets of 70%, PSPIB's asset risk ratio is broadly in line with peers. PSPIB's high risk assets are largely in non-investment grade debt and less liquid Level 3 assets; specifically real estate and infrastructure. These assets are largely invested outside Canada and broadly diversified across several assets classes.

At March 2019, PSPIB's allocation to private equity and real assets stood at 49% of net investments compared to a long-term target weight of 50%. PSPIB's long-term investment horizon and liquidity from expected positive net transfers leaves it well positioned to execute this strategy, but a rising proportion of less-liquid investments has weakened the overall liquidity of the portfolio. This kind of

portfolio transition entails monitoring and other execution risks as well as potential asset concentrations. PSPIB has sought to address this through disciplined investment selection and an expansion of its in-house investment team and risk management infrastructure. We believe risks are well managed, although this capability will need to continue to keep pace with asset growth and rising complexity in order to maintain credit quality.

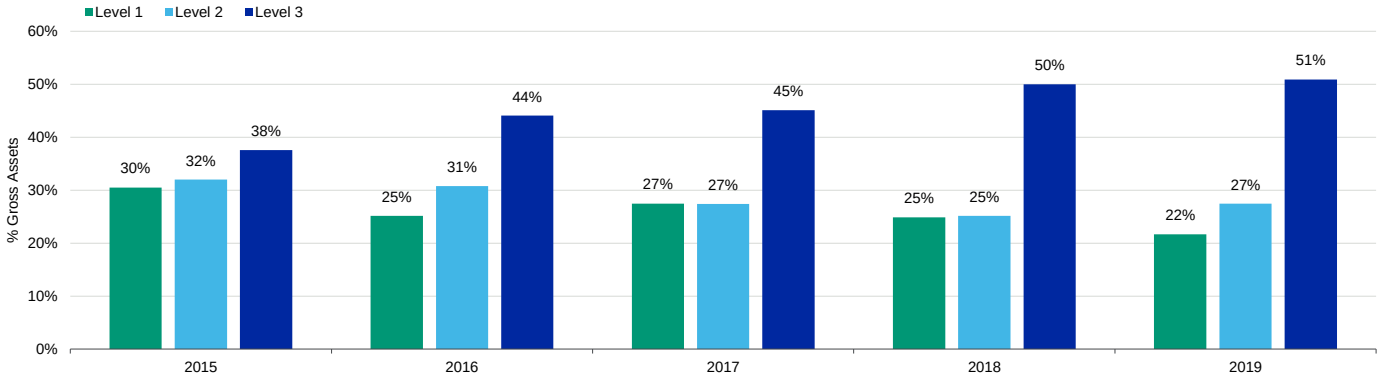
PSPIB's investment approach is designed to achieve a return at least equal to the long-term actuarial return used by Chief Actuary in the valuation of the Plans (i.e. a real return of 3.6% over the next 10 years) with an acceptable level of funding risk. In addition, PSPIB seeks to generate an additional 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, PSP 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 2019, PSPIB's investment portfolio was comprised of 21% fixed income, 30% public equity, 49% private and real investments. As noted, in recent years, PSPIB's investment portfolio has shifted away from more liquid Level 1 assets to 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 with a long-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 align with PSPIB's long time horizon



Fiscal year end 31 March, Level 1 and Level 2 assets have been adjusted for cash and money market securities.
Source: Public Financials, Moody's Investors Service

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 with the Canadian economy, providing diversification away from the geographic location of its underlying pension obligation and related contribution cash inflows.

PSPIB has an initial asset risk initial score of ba3 and we make a three-notch upward adjustment to account for its geographic and sector diversification.

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

We believe PSPIB's financial policies to be broadly conservative as expressed in our aa-score for Financial Policy. In our view, 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 currency risks within certain portfolios and has natural currency matches between its investments and funding. Almost 60% of PSPIB's investment portfolio is in USD or CAD which aligns with its creditor obligations, much of which is denominated in USD.

ESG considerations

PSPIB's exposure to environmental risks is low, consistent with our general assessment for the pension funds sector. See our Environmental heatmap for further information.

PSPIB's exposure to social risks is moderate, consistent with our general assessment for the pension funds sector. Pension funds' social risk exposure is largely driven by: 1) inherent susceptibility to demographic changes such as population ageing, which reduces the number of contributors and increases the number of beneficiaries; 2) employees' specialized investment knowledge which increases risks with talent recruitment and retention; and 3) increasing interconnectedness with the broader financial system which increases interdependency with financial system supply chains. See our Social risks heatmap for further information.

PSPIB has limited exposure to governance risk thanks to an independent board and management that insolates investment and liability decisions from the political process. There remains a possibility that portfolio investments may become a source of reputational risk for the fund and/or the sponsoring government.

Support and structural considerations

Very high dependence with an explicit and well-recognized mandate to invest contributions for key national public sector employees

Our application of default dependence reflects the joint susceptibility of a GRI and its supporting government to adverse circumstances that simultaneously move them closer to default. It reflects the likelihood that the credit profiles of two obligors may be imperfectly correlated.

PSPIB has an explicit and well defined public policy mandate to invest the pension assets of the Canada's civil service and military personnel, and the Royal Canadian Mounted Police. As such, PSPIB is an important component of the national government's employment structure. That said, we note PSPIB is both operationally and financially independent from the national government with respect to investment, financing decisions, organizational structure, professional management, compensation practices and board nomination processes. That said, we note final Board appointments are made with the approval of the national government.

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 as of 31 March 2018 (most recent data available). We believe the pension manager is a key element of the national government's compensation program and an important contributor 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 CAD199 billion at 31 March 2019, PSPIB had CAD168 billion in net assets, which we view as a loss absorbing cushion to the benefit of PSPIB's creditors.

As at 31 March 2019, PSPIB's leverage was about 14% after adjusting for nettable repurchase agreements and derivatives that are not offset for accounting purposes.

Rating methodology and scorecard factors

Enter Obligor Name Here ►	Public Sector Plan Investment Board
Enter Fiscal Year-End Date Here ►	3/31/2019

	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%*	364.0%	aaa	**aaa**		
Asset Quality						
High Risk Assets / Gross Assets	*20%*	70.0%	baa3	**baa3**		
Financial Policy						
Financial Policy	*20%*	aa	aa	**aa**		
Financial Profile Outcome	***100%***		**aa2**	**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 Investors Service

Ratings

Exhibit 5

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

Source: Moody's Investors Service

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CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

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