FitchRatings

Public Sector Pension Investment Board

Key Rating Drivers

Strong Collateral Coverage: Public Sector Pension Investment Board's (PSP) ratings reflect its exceptionally strong asset overcollateralization (OC) and liquidity levels, the creditor priority of debtholders to amounts coming due under the relevant pension plans, and the captive nature of asset inflows. The ratings also incorporate its experienced management team, solid long-term investment track record, strong corporate governance, and a supportive regulatory framework.

In addition, given PSP's role as an investment manager, the company is not directly responsible for pension obligations, which Fitch Ratings views incrementally favorable relative to peers that are pension funds.

Rating Offsets: Offsetting factors include the challenging macro backdrop, including higher interest rates and slowing economic growth. In addition, the relatively higher proportion of less liquid and private assets in the portfolio could result in higher performance volatility over time.

Solid Investment Result: PSP generated a net return of 7.2% in the fiscal year 2024 (ended in March), outperforming its one-year benchmark portfolio return by 0.8%. Investment performance was solid across most asset classes, in particular public equities, credit investments, infrastructure, and private equity, which offset weaker performance in real estate. On a five- and 10-year basis, total fund returns were solid at 7.9% and 8.3%, respectively, exceeding the benchmark and reference portfolio return by 110 bps or more.

Sound Net Investment Asset Growth: As of March 31, 2024, PSP reported net investment assets of CAD264.9 billion, which was an increase of 8.7% yoy and corresponds to a compound annual growth rate of 10.9% over the past 10 years. PSP is the third largest Canadian pension fund asset manager. Growth in net investment assets for the year was driven mainly by net portfolio income (CAD17.8 billion) and, to a lesser degree, by net contributions (CAD3.5 billion).

Low Leverage: Fitch assesses leverage for PSP and other pension plan investment managers based on the ratio of gross debt (excluding repurchase agreements and securities sold) to net investment assets (i.e. equity), reflecting a strong emphasis on asset OC. On this basis, leverage was little changed yoy, at 0.11x as of financial year-end (FYE) 2024. This is below PSP's internal limit for recourse debt, in line with Fitch's quantitative benchmark range of 0.15x, and below levels of investment companies rated 'aa' and higher.

Very Robust Liquidity: PSP's exceptionally strong liquidity is supported by its predicable contributions, balance sheet cash and money market instruments (CAD12 billion as of FYE24) as well as by CAD89.8 billion in marketable equities and fixed income securities, in addition to CAD3 billion in aggregate unutilized revolver capacity. This compared with CAD27.0 billion of outstanding commercial paper and unsecured term notes, at fair value.

Non-Bank Financial Institutions Non-Bank Financial Institutions

Ratings

Foreign Currency	
Long-Term IDR	AAA
Short-Term IDR	F1+

Sovereign Risk (Canada)

Long-Term Foreign-CurrencyAA+Long-Term Local-Currency IDRAA+Country CeilingAAA

Outlooks

Long-Term Foreign-Currency IDR	Stable
Sovereign Long-Term Foreign- Currency IDR	Stable
Sovereign Long-Term Local- Currency IDR	Stable

Applicable Criteria

Non-Bank Financial Institutions Rating Criteria (January 2024)

Related Research

Fitch Affirms Public Sector Pension Investment Board at 'AAA'/'F1+'; Outlook Stable (June 2024)

Fitch Affirms Canada at 'AA+'; Outlook Stable (December 2023)

Global Investment Managers Outlook 2024 (November 2023)

Analysts

Ben Schmidt +1 647 977 1332 ben.schmidt@fitchratings.com

Dafina Dunmore +1 312 368 3136 dafina.dunmore@fitchratings.com

Rating Sensitivities

Factors that Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade

A negative rating action could be triggered by a significant reduction in liquid assets, failure to maintain leverage within a relatively narrow band around 0.10x and/or PSP's own stated leverage limits, and/or a material change in risk appetite resulting in higher performance volatility and/or a material increase in the proportion of less liquid investments, particularly in an attempt to improve the funded status. A weak investment performance or increased single-name or industry concentrations, and an actual or reasonably expected change in the rule of law that calls into question creditor priority could also be rating negative.

The ratings are also sensitive to changes in the Canada's credit risk profile, to the extent that any of such changes resulted in a reduction in Canada's Country Ceiling to a level below PSP's Issuer Default Rating (IDR). Fitch last affirmed Canada's Country Ceiling at 'AAA' on December 19, 2023. Fitch believes there is some cushion in this rating sensitivity as Canada's Rating Outlook is Stable, combined with the limited likelihood that a one-to-two notch downgrade of Canada's sovereign rating would result in a reduction in its Country Ceiling.

Factors that Could, Individually or Collectively, Lead to Positive Rating Action/Upgrade

Positive rating action is not possible, as the ratings are already at the highest levels on the Long- and Short-Term rating scales.

Recent Developments

Improved Global Growth Prospects, Albeit Still Slowing

In Fitch's "Global Economic Outlook" (GEO), published June 17, 2024, the agency raised its 2024 global GDP growth forecast to 2.6%, from 2.4% in March 2024, as confidence in the prospects of a European recovery improves, China's export sector revives, and domestic demand in emerging markets excluding China (EM ex-China) shows stronger momentum. The U.S. economy is slowing but only gradually, and Fitch's 2024 growth forecast for the U.S. is unchanged at 2.1%. The agency increased its eurozone growth forecast by 0.2pp to 0.8% and raised China's growth to 4.8% in June, from 4.5% in March 2024. EM ex-China growth has been revised up quite sharply, by 0.5pp to 3.7%. For 2025, Fitch forecasts world growth will edge down to 2.4%, as the U.S. slows to a below-trend rate of 1.5% and the eurozone picks up to 1.5%. The agency expects growth in China also to slow next year, to 4.5%. Fitch's outlook for the pension fund peer group's asset performance remains negative, reflecting an ongoing difficult investment environment driven by challenging macroeconomic conditions and elevated geopolitical risk.

Ratings Navigator

Pub	lic Sect	or Pensio	on Invest	ment E	Board			ESG Relevance:		R	NBF atings Navigato
	Sector Risk					Financ	ial Profile		Less Part		
	Operating Environment	Business Profile	Management & Strategy	Risk Profile	Asset Performance	Earnings & Profitability	Capitalization & Leverage	Funding, Liquidity & Coverage	Implied Standalone Credit Profile	Standalone Credit Profile	lssuer Default Rating
		25%	10%	10%	10%	10%	15%	20%			_
aa									aaa	aaa	AAA Sta
a+									aa+	aa+	AA+
3									aa	aa	AA
3-									aa-	aa-	AA-
+									a+	a+	A+
									а	a	A
									а-	a-	A-
bb+									bbb+	bbb+	BBB+
bb									bbb	bbb	BBB
bb-									bbb-	bbb-	BBB-
b+									bb+	bb+	BB+
b									bb	bb	BB
b-									bb-	bb-	BB-
+									b+	b+	B+
									b	b	В
-									b-	b-	B-
cc+									ccc+	ccc+	CCC+
c									CCC	ccc	CCC
:c-									ccc-	ccc-	CCC-
:									сс	cc	CC
									c	c	С
or rd									d or rd	d or rd	D OR RD

The Key Rating Driver (KRD) weightings used to determine the implied Standalone Credit Profile (SCP) are shown as percentages at the top. In cases where the implied SCP is adjusted upwards or downwards to arrive at the SCP, the KRD associated with the adjustment reason is highlighted in red. The shaded areas indicate the benchmark-implied scores for each KRD. The sector risk assessment acts as a sector-specific constraint on the typical implied operating environment range and is shown as an overlay on the operating environment.

Adjustments

PSP's Standalone Credit Profile (SCP) has been assessed to be above the implied SCP due to the following adjustment reason(s): business profile (positive).

The asset performance score has been assigned above the implied score due to the following adjustment reason(s): risk profile and business model (positive).

Navigator Peer Comparison

Peer Group Summary	Oper Enviro	ating nment	Comp Prot	•	gement ategy	Ris Appe	Ass Perforn	Earnin Profital	Capitalis Leve	ation & rage	Fund Liquid Cover	ity &	lssuer Default Rating	Outlook/ Watch	Rating Action
Caisse de depot et placement du Quebec	aa		aaa	aa		aa	aa↓	a+	aaa		aaa		AAA	Stable	26-Jun-24
OMERS Administration Corporation	aa		aaa	aa		aa	aa ↓	a+	aa+		aaa		AAA	Stable	26-Jun-24
Public Sector Pension Investment Board	aa		aaa	aa		aa	aa ↓	a+	aa+		aaa		AAA	Stable	26-Jun-24

Key Qualitative Factors

Canada's Country Ceiling Caps Ratings

Fitch does not view PSP's ratings as being directly constrained by Canada's ratings, considering the relatively high proportion of PSP's assets invested outside of Canada. Nevertheless, PSP's ratings are constrained by Canada's Country Ceiling, which reflects Fitch's assessment of transfer and convertibility risks. As per Fitch's Country Ceilings Criteria, dated July 24, 2023, the Country Ceiling of a given country can be as many as three notches above the sovereign's Long-Term Foreign-Currency IDR if Fitch believes there are very strong incentives against the imposition of capital controls by the sovereign in question.

On December 19, 2023, Fitch affirmed Canada's Long-Term Foreign- and Local-Currency IDRs at 'AA+'/Stable and the Country Ceiling at 'AAA'. Fitch believes there is some degree of cushion in this rating sensitivity, due to the limited likelihood that a one-to-two notch downgrade of Canada's sovereign rating would result in a reduction in its Country Ceiling below 'AAA'.



Captive Mandates Support Business Model Strength

PSP's net investment assets under management amounted to CAD264.9 billion at FYE24, which corresponds to a 8.7% increase over FYE23 and makes PSP the third largest defined benefit pension plan in Canada. Per its mandate, PSP invests assets to fund benefits earned from April 1, 2000 by members of the Canadian Federal Public Service, the Canadian Armed Forces (Regular Forces), the Royal Canadian Mounted Police and, since March 1, 2007, the Canadian Forces (Reserve Force). This provides PSP captive access to more than 900,000 contributors and beneficiaries with a high degree of contribution predictability.

Legally, PSP is incorporated as a non-agent crown corporation; thus, it is fully owned by the government of Canada. Given PSP's status as a pension investment manager, it is not directly responsible for the payment of pension obligations, which are ultimately the liability of the Canadian government. Fitch believes this profile is incrementally more favorable relative to that of peer pension funds.

Very Strong Corporate Governance

Fitch considers PSP's corporate governance framework as very strong. Board members are appointed by the Governor in Council (based on recommendations from the Treasury Board of Canada). They must be truly

independent from both PSP and the Government of Canada and should not be a beneficiary of any pension fund associated with PSP in its role as the designated pension investment manager. At FYE24, the board of directors comprised 10 independent directors, while one seat remained vacant and is currently being advertised.

Experienced Management Team

Over the past 12 months to June 2024, PSP's senior executive management team has been unchanged, barring the addition of Patrick Charbonneau as CEO of Canada Growth Fund Investment Management. Fitch considers PSP's management team as highly skilled and well experienced, while its business strategy remains clearly articulated and well aligned with PSP's long-term investment goals.

Market Risk Measure



Annual Fund Flows and Return



Solid Risk Controls and Manageable Market Risk Given its core business activity as a pension investment manager, PSP is exposed to some degree of market risk, arising primarily from volatility in investment valuations, as well as from currency and interest rate risk. PSP assesses total portfolio market risk on the basis of an annualized absolute value-at-risk (VaR) measure, which is calculated using 10-year monthly historical returns scaled to a 12-month holding period with a 95% confidence level. For the fiscal year 2024, VaR for the total portfolio equated to a moderately lower 19.2% (2023: 19.6%), still below management's

PSP selectively uses derivatives such as over-the-counter swaps to manage its asset exposures. Fitch does not believe that these synthetic exposures materially alter PSP's risk profile, as these instruments reference commonly used interest rate benchmarks and equity indices. Fitch does not expect PSP to expand its trading activity into more complex structures, but any increase to PSP's currently low risk appetite would be viewed negatively by the agency.

Financial Profile

guideline.

Sound Asset Diversification

Predictability of asset flows is high and consistent through the cycle because of PSP's captive member pool. Net contributions, as a percentage of the opening balance of net investment assets for the year, averaged 1.5% between 2021 and 2024. This measure is somewhat below that of other highly rated investment managers covered by Fitch, but it is considered strong relative to other Canadian pension funds. Net contributions are expected to remain positive over the foreseeable future. Based on Fitch's quantitative asset performance benchmarks for investment managers, the net contributions metric corresponded to an implied category score of 'bbb'. The benchmark-implied score was adjusted up to 'aa' considering the captive nature of the flows and their predictability over an extended period.

Well Diversified Portfolio

PSP's investment portfolio remains well diversified both in terms of asset class (largest: public equities and fixed income each at 21% of net investment assets at FYE24) and industry. In addition, investments continue to be geared towards developed markets (notably the U.S. and Canada), while its selective investment approach to developing markets limits country risk exposure. The reference portfolio is the basis of PSP's investment framework and is used by the Government of Canada to communicate its funding risk tolerance to PSP. The reference portfolio is a passively managed portfolio, which has been fairly stable over time, comprising 59% of equity and 41% of government fixed-income instruments as of March 31, 2024.

Solid Investment Performance

For 2024, PSP generated a net return of 7.2%, which was above the 4.4% return reported one year ago and also outperformed the one-year fund benchmark of 6.4%. Investment performance for the year has been robust across

most asset classes, in particular public equities (one-year return of 17.5%), infrastructure (14.3%), and credit investment (14.2%). Collectively, these offset a negative return of 15.9% in real estate, which was negatively impacted by valuation mark-downs in a higher interest rate environment, similar to peers. On a five- and 10- year basis, total fund returns were equally solid at 7.9% and 8.3%, respectively, exceeding the benchmark and reference portfolio return by 110 bps or more.

Rating-Appropriate Leverage Appetite

PSP's leverage (calculated by Fitch as gross debt excluding repurchase agreements and securities sold short) to net investment assets was 0.11x as of FYE24, compared to 0.10x the prior year-end. Proforma for the PSP's EUR750 million and CAD600 million unsecured issuances concluded in early July 2024, leverage is unchanged as proceeds were used to refinance existing outstanding debt. Leverage remains within Fitch's implied "aa and above" benchmark range of 0.15x or lower for investment companies and it is also below PSP's internal limit for recourse debt. According to management, sufficient headroom prevails under its own threshold, even in a stressed scenario. Including repurchase agreements, securities sold short and collateral payable, leverage was equally low at 0.14x (FYE23: 0.16x). Fitch expects PSP to continue adopting a conservative capital management approach going forward.

Liquidity Metrics

Source: Fitch Ratings



Leverage Metrics



Exceptionally Strong Liquidity

Liquidity remained exceptionally strong at FYE24, including CAD12 billion in cash and money market securities, CAD89.8 billion in marketable securities and fixed-income instruments, as well as CAD3 billion in undrawn revolver capacity. Against outstanding debt at fair value of CAD27 billion, this translated to a sound liquidity coverage of 3.9x at FYE24, unchanged from the prior year-end. Based on Fitch's liquidity calculation (which adjusts marketable securities to only include AAA rated sovereign bonds and AA rated Canadian provincial bonds and excludes RCF capacity), liquidity coverage is lower but still appropriate, particularly given PSP's high asset flow predictability (including sizable net contribution inflows). Exposure to illiquid investments is material, but Fitch considers this in the context of PSP's long-term investment mandate and good predictability of liquidity needs at its associated pension plans.

Demonstrated Capital Market Access

PSP has demonstrated good capital access over a prolonged period, with six issuances at a cumulative value of around CAD4.9 billion that concluded during the fiscal year 2024. Over the next 12 months, Fitch expects PSP (via its capital market-facing, wholly owned subsidiary PSP Capital Inc.) to continue accessing markets opportunistically. Refinance risk is limited over the near term, with around CAD5 billion of issuance (or 19% of debt outstanding as of March 31, 2024) due in 2024 and 2025.

Debt Ratings

Debt Ratings: PSP Capital Inc.

Rating level	Rating	
Senior Unsecured: Long-Term	AAA	
Senior Unsecured: Short-Term	F1+	

Source: Fitch Ratings

The unsecured long-term debt rating is equalized with PSP's Long-Term IDR, reflecting PSP's predominantly unsecured funding profile and expectations for average recovery prospects in a stressed scenario. The commercial paper rating of 'F1+' is equalized with PSP's Short-Term IDR.

Debt Rating Sensitivities

The unsecured debt rating is sensitive to changes in PSP's Long-Term IDR and would be expected to move in tandem.

The commercial paper rating is sensitive to changes in PSP's Short-Term IDR and would be expected to move in tandem.

Group, Subsidiaries and Affiliated Companies

Group, Subsidiaries and Affiliates Sensitivities

PSP Capital Inc.'s ratings are equalized with those of its parent, PSP, to reflect the full guaranty provided to PSP Capital Inc. by PSP. PSP Capital, Inc.'s ratings would be expected to move in tandem with those of its parent.

Environmental, Social and Governance Considerations

Fitch Ratio	ngs	Public Sector Pension Inv	estment Board						Rat	NBFI ings Navigator		
Credit-Relevant ESG d	erivatio	1							ESG Relevar	ce to Credit Rating		
Public Sector Pension Investme						key driver	0	Issues				
Public Sector Pension Inv	vestment Bo	and has exposure to shift in social or consumer preferences as a result of an institution's soci	al positions, or social and/or political disapproval of core activities but this ha	is very low im	npact on the rating	key driver		Issues				
Governance is minimally	relevant to	the rating and is not currently a driver.				driver	0	Issues	4			
						potential drive	5	Issues	3			
						not a rating driv	3	Issues	2			
							6	Issues	1			
Environmental (E) Relevan	ice Scores			-								
General Issues	E Score	Sector-Specific Issues	Reference	E Releva	ance			Read This	0			
GHG Emissions & Air Quality	1	Regulatory risks, emissions fines or compliance costs related to owned equipment, which could impact asset demand, profitability, etc.	Sector Risk Operating Environment	5	Red	Grelevance scores ra I (5) is most relevant	to the cred	lit rating a	id green (1) i	s least relevant.		
Energy Management	1	Investments in or ownership of assets with below-average energy/fuel efficiency which could impact future valuation of these assets	Risk Profile	4	ESC eac	The Environmental [E], Social [5] and Governance (G) tables break on ESG general issues and the sector-specific issues that are most releva each industry group. Relevance scores are assigned to each sector sp issue, signaling the credit-relevance of the sector-specific issues to th issuer's overail credit rating. The Criteria Reference column highlight factor(s) within which the corresponding ESG issues are captured in for credit analysis. The vertical color bars are visualizations of the freque occurrence of the highest constituent relevance scores rageregate ESG cred						
Water & Wastewater Management	1	n.a.	n.a.	3	issu							
Waste & Hazardous Materials Management; Ecological Impacts	1	na.	n.a.	2	000							
Exposure to Environmental Impacts	2	Impact of extreme weather events on assets and/or operations and corresponding risk profile & management; catastrophe risk; credit concentrations	Business Profile; Asset Performance	1		relevance. The Credit-Relevant ESG Derivation table's far right column is a						
Social (S) Relevance Scores	5				visu	alization of the freq	uency of or	currence	of the highes	t ESG relevance		
General Issues	S Score	Sector-Specific Issues	Reference	S Releva		res across the comb of ESG Relevance to						
Human Rights, Community Relations, Access & Affordability	1	n.a.	n.a.	5	Rel	act to credit from Es evance Sub-factor is ier's credit rating (co	sues that a	re drivers	or potential d	rivers of the		
Customer Welfare - Fair Messaging, Privacy & Data Security	2	Fair lending practices; pricing transparency; repossession/foreclosure/collection practices; consumer data protection; legal/regulatory fines stemming from any of the above	Sector Risk Operating Environment; Risk Profile; Asset Performance	4	brie to r	of explanation for the eflect a negative impact.	relevance	score.All s	cores of '4' a	nd '5' are assumed		
Labor Relations & Practices	2	Impact of labor negotiations, including board/employee compensation and composition	Business Profile; Management & Strategy; Earnings & Profitability; Capitalisation & Leverage; Funding, Liquidity & Coverage	3	Cla	ssification of ESG is:						
Employee Wellbeing	1	n.a.	n.a.	2	clas Res	criteria. The General Issues and Sector-Specific Issues draw on the classification standards published by the United Nations Principles f Responsible Investing (PRI), the Sustainability Accounting Standards						
Exposure to Social Impacts	3	Shift in social or consumer preferences as a result of an institution's social positions, or social and/or political disapproval of core activities	Business Profile; Earnings & Profitability	1	(5A	SB), and the World E	iank.					
Governance (G) Relevance	Ecoror											
General Issues	GScore	Sector-Specific Issues	Reference	G Releva		EDIT-RELEVANT ES w relevant are E, S and		the overal	condit extinu			
						Hig	hly relevant,	a key rating (river that has a	significant impact on		
Management Strategy	3	Operational implementation of strategy	Management & Strategy	5				importanc	within Naviga			
Governance Structure	з	Board independence and effectiveness; ownership concentration; protection of creditor/stakeholder rights; legal /compliance risks; business continuity; key person risk; related party transactions	Management & Strategy	4		4 rati	ng in combina rei	ition with ot lative import	er factors. Equ ance within Na			
Group Structure	3	Organizational structure; appropriateness relative to business model; opacity; intra-group dynamics; ownership	Business Profile	3		3	anaged in a w	ay that resu	ts in no impact	w impact or actively on the entity rating. within Navigator.		
Financial Transparency	3	Quality and timing of financial reporting and auditing processes	Management & Strategy	2		2	Irrelevant b	o the entity	ating but relev	ant to the sector.		
				1		1	Irrelevant to	the entity r	ting and irrelev	ant to the sector.		

The highest level of ESG credit relevance is a score of '3', unless otherwise disclosed in this section. A score of '3' means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. Fitch's ESG Relevance Scores are not inputs in the rating process; they are an observation on the relevance and materiality of ESG factors in the rating decision. For more information on Fitch's ESG Relevance Scores, visit https://www.fitchratings.com/topics/esg/products#esg-relevance-scores.

FitchRatings

Financials

Income Statement

(CAD Mil., Years Ended March 31)	2021	2022	2023	2024
Investment income	32,588	23,562	12,084	20,208
Investment-related expenses	497	502	1,158	1,751
Net investment income	32,091	23,060	10,926	18,457
Operating expenses	510	588	744	731
Other income/expenses	-	-	-	30
Net income	31,581	22,472	10,182	17,756

FitchRatings

Balance Sheet

	0004			
(CAD Mil., Years Ended March 31)	2021	2022	2023	2024
Investments	232,547	263,836	283,411	302,674
Other assets	246	208	184	194
Total assets	232,793	264,044	283,595	302,868
Investment related liabilities	11,325	10,634	15,715	10,807
Trade payable and other liabilities	438	427	523	500
Borrowings	16,731	22,710	24,042	27,010
Total liabilities	28,494	33,771	40,280	38,317
Net investment assets	204,299	230,273	243,315	264,551
Source: Fitch Ratings				

Summary Analytics

(CAD Mil., Years Ended March 31)	2021	2022	2023	2024
Net asset growth (%)	20.4	12.7	5.7	8.7
Net contributions/beginning net assets (%)	1.8	1.7	1.2	1.4
One-year return (%)	18.4	10.9	4.4	7.2
Five-year return, annualized (%)	9.3	9.0	7.9	7.9
Ten-year return, annualized (%)	8.9	9.8	9.2	8.3
(Corporate debt)/net investment assets (x)	0.08	0.10	0.10	0.11
(Corporate debt + repos + shorts)/net investment assets (x)	0.12	0.13	0.16	0.14
Liquidity/(corporate debt) (x)	5.7	4.2	3.9	3.9

SOLICITATION & PARTICIPATION STATUS

For information on the solicitation status of the ratings included within this report, please refer to the solicitation status shown in the relevant entity's summary page of the Fitch Ratings website.

For information on the participation status in the rating process of an issuer listed in this report, please refer to the most recent rating action commentary for the relevant issuer, available on the Fitch Ratings website.

DISCLAIMER & DISCLOSURES

All Fitch Ratings (Fitch) credit ratings are subject to certain limitations and disclaimers. Please read these limitations and disclaimers by following this link: https://www.fitchratings.com/understandingcreditratings. In addition, the following https://www.fitchratings.com/rating-definitions-document details Fitch's rating definitions for each rating scale and rating categories, including definitions relating to default. Published ratings, criteria, and methodologies are available from this site at all times. Fitch's code of conduct, confidentiality, conflicts of interest, affiliate firewall, compliance, and other relevant policies and procedures are also available from the Code of Conduct section of this site. Directors and shareholders' relevant interests are available at https://www.fitchratings.com/site/regulatory. Fitch may have provided another permissible or ancillary service to the rated entity or its related third parties. Details of permissible or ancillary service(s) for which the lead analyst is based in an ESMA-or FCA-registered Fitch Ratings company (or branch of such a company) can be found on the entity summary page for this issuer on the Fitch Ratings website.

In issuing and maintaining its ratings and in making other reports (including forecast information), Fitch relies on factual information it receives from issuers and underwriters and from other sources. Fitch believes to be credible. Fitch conducts a reasonable investigation of the factual information relied upon by it in accordance with its ratings methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security or in a given jurisdiction. The manner of Fitch's factual investigation and the scope of the third-party verification it obtains will vary depending on the nature of the rated security and its issuer, the requirements and practices in the jurisdiction in which the rated security is offered and sold and/or the issuer is located, the availability and nature of relevant public information, access to the management of the issuer and its advisers, the availability of pre-existing third-party verifications such as audit reports, agreed-upon procedures to the particular security or in the particular jurisdiction of the issuer, and a variety of other factors. Users of Fitch's ratings and reports should understand that neither an enhanced factual investigation nor any third-party verification can ensure that all of the information free provide to Fitch and to the market in offering documents and other reports. In issuing its ratings and its reports, Fitch must rely on the work of experts, including independent auditors with respect to fitch and to the market in offering and precises. As a result, despite any verification or current facts, ratings and forecasts can be verified as forecasts. As a result, despite any verification of current facts, ratings and forecasts can be verified as forecasts. As a result, despite any verification of current facts, ratings and forecasts can be verified as forecasts to provide financial attements or conditions that we nevent or asset class.

The information in this report is provided "as is" without any representation or warranty of any kind, and Fitch does not represent or warrant that the report or any of its contents will meet any of the requirements of a recipient of the report. A Fitch rating is an opinion as to the creditworthiness of a security. This opinion and reports made by Fitch are based on established criteria and methodologies that Fitch is continuously evaluating and updating. Therefore, ratings and reports are the collective work product of Fitch and no individuals, or group of individuals, is solely responsible for a rating or a report. The rating does not address the risk of loss due to risks other than credit risk, unless such risk is specifically mentioned. Fitch is not engaged in the offer or sale of any security. All Fitch reports have shared authorship. Individuals is entitle in a Fitch report were involved in, but are not solely responsible for, the opinions stated therein. The individuals are named for contact purposes only. A report providing a Fitch rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. Ratings may be changed or withdrawn at any time for any reason in the sole discretion of Fitch. Fitch does not provide investment advice of any sort. Ratings are not a recommendation to buy, sell, or hold any security. Ratings do not comment on the adequacy of market price, the suitability of any security for a particular investor, or the tax-exempt nature or taxability of payments made in respect to any security. Fitch receives fees from issues, insurers, guarantors, other obligors, and underwriters for rating securities. Such fees generally vary from US\$10,000 to US\$15,000,000 (or the applicable currency equivalent) per issue. In certain cases, Fitch will rate all or a number of issues issued by a particular insurer or guarantor, for a single annual fee. Such fees are expected to vary f

For Australia, New Zealand, Taiwan and South Korea only: Fitch Australia Pty Ltd holds an Australian financial services license (AFS license no. 337123) which authorizes it to provide credit ratings to wholesale clients only. Credit ratings information published by Fitch is not intended to be used by persons who are retail clients within the meaning of the Corporations Act 2001.

Fitch Ratings, Inc. is registered with the U.S. Securities and Exchange Commission as a Nationally Recognized Statistical Rating Organization (the "NRSRO"). While certain of the NRSRO's credit rating subsidiaries are listed on Item 3 of Form NRSRO and as such are authorized to issue credit ratings on behalf of the NRSRO (see https://www.fitchratings.com/site/regulatory), other credit rating subsidiaries are not listed on Form NRSRO (the "non-NRSROs") and therefore credit rating subsidiaries are not issued on behalf of the NRSRO. However, non-NRSRO personnel may participate in determining credit ratings issued by or on behalf of the NRSRO.

Copyright © 2024 by Fitch Ratings, Inc., Fitch Ratings Ltd. and its subsidiaries. 33 Whitehall Street, NY, NY 10004. Telephone: 1-800-753-4824, (212) 908-0500. Reproduction or retransmission in whole or in part is prohibited except by permission. All rights reserved.