

Caisse de dépôt et placement du Québec

Key Rating Drivers

Strong Collateral Coverage: The ratings of Caisse de dépôt et placement du Québec (CDPQ) reflect its exceptionally strong asset overcollateralization and liquidity levels, creditor priority of debtholders to pensioners, captive nature of inflows, experienced management team, solid investment track record, relatively stable interest and dividend income, strong corporate governance, and a supportive operating environment and regulatory framework.

Rating Offsets: Offsetting factors include the competitive investment environment that may make it more challenging to identify attractive investment opportunities particularly at scale, the mandate to support economic development in Québec, which could yield outsized exposure to the province, the multi-contributor structure, which could increase investment and operational complexities, and the utilization of short-term wholesale funding.

Coronavirus Impact on Returns: Market dislocations, stemming from the coronavirus pandemic, have had a negative impact on fund returns in 2020. However, Fitch Ratings views CDPQ's market risk as being somewhat mitigated by its long-term investment horizon and ability to ride out shorter-term valuation movements. For the 10 years ended Dec. 31, 2019, CDPQ's investment returns were 9.2%, 100 bps above benchmark returns.

Captive Capital Flows: Captive inflows are highly predictable over time, which allows CDPQ to extend its investment horizon while maintaining appropriate liquidity levels. Net contributions averaged 0.7% of beginning net assets from 2015–2019.

Low Leverage: Fitch focuses on gross debt (excluding repos and securities sold short) to net assets (i.e. equity) as its primary leverage ratio for pension funds, given the focus on asset overcollateralization. Based on this measure, leverage was exceptionally low at 0.06x, at cost, at Dec. 31, 2019. While leverage is expected to increase modestly over time, it is constrained by the board limitation of debt-to-adjusted net assets of 0.10x.

Ample Liquidity: Liquidity is viewed as exceptionally strong given CDPQ's steady inflows, cash on hand, liquid investments, and investment income from its broad mandate. At Dec. 31, 2019, CDPQ had CAD46 billion of liquidity (consisting largely of government and provincial bonds), which was 2.2x outstanding corporate debt at fair value. CDPQ also had \$4 billion of available capacity under its committed revolving credit facility as of the same date.

Rating Sensitivities

Reduced Liquid Collateral Coverage: Negative rating action could result from a material increase in leverage, a material change in risk appetite, weak investment performance, an increase in investment concentrations and/or an actual or reasonably expected change in the rule of law that has the effect of calling into question credit priority.

Sovereign Sensitivity: The ratings are also sensitive to changes in the credit risk profile of Canada, to the extent that any such changes resulted in a reduction in Canada's Country Ceiling to a level below CDPQ's Issuer Default Rating (IDR). On June 24, 2020, Canada's IDR was downgraded to 'AA+' from 'AAA' but its Country Ceiling was affirmed at 'AAA'.

Fitch does not believe CDPQ's ratings are directly constrained by the Province of Québec's rating, based on the agency's belief that the province does not have the ability to directly impose controls over the pension manager or otherwise limit contributions to the fund, access the assets of the fund, or direct the fund to make outsized policy-oriented investments.

Ratings

Foreign Currency

Long-Term IDR	AAA
Short-Term IDR	F1+

Outlooks

Long-Term Foreign-Currency IDR	Stable
Short-Term Foreign-Currency IDR	Stable

Applicable Criteria

[Non-Bank Financial Institutions Rating Criteria \(February 2020\)](#)

Related Research

[U.S. Non-Bank Financial Institution Refinancing Risk: Coronavirus Impact Examined \(March 2020\)](#)

[Alternative Investment Manager Rating Navigator Compendium \(January 2020\)](#)

[Alternative Investment Manager Trends \(January 2020\)](#)

[Alternative Investment Managers – Uncalled Capital Escalates Amid Elevated Valuations \(December 2019\)](#)

[Fitch Ratings 2020 Outlook: Global Investment Managers \(November 2019\)](#)

Analysts

Meghan Neenan, CFA

+1 212 908 9121

meghan.neenan@fitchratings.com

Dafina Dunmore, CFA

+1 312 368 3136

dafina.dunmore@fitchratings.com

Issuer Ratings

Rating Level	Long-Term IDR	Short-Term IDR	Outlook
Caisse de dépôt et placement du Québec	AAA	F1+	Stable
CDP Financial Inc.	AAA	F1+	Stable

Source: Fitch Ratings.

The ratings assigned to CDP Financial Inc. are equalized with those of its parent to reflect the full guaranty provided to CDP Financial Inc. by CDPQ.

Debt Rating Classes

Rating Level	Commercial Paper	Unsecured Debt
CDP Financial Inc.	F1+	AAA

Source: Fitch Ratings.

The short-term IDRs and commercial paper (CP) rating of 'F1+' reflect the strongest intrinsic capacity for timely repayment of financial commitments and maintain the correspondence between short-term and long-term IDRs, as the 'F1+' IDR corresponds to a long-term IDR of 'AAA' under Fitch's criteria.

The unsecured debt rating is equalized with the long-term IDR, reflecting CDPQ's fully unsecured funding profile.

Ratings Navigator

Caisse de Depot et Placement du Quebec ESG Relevance:

Non-Bank FI Ratings Navigator
Investment Managers

Factor Levels	Operating Environment	Company Profile	Management & Strategy	Risk Appetite	Asset Performance	Earnings & Profitability	Capitalization & Leverage	Funding, Liquidity & Coverage	Issuer Default Rating
aaa	↑	↓					↓	↓	AAA Stable
aa+	↑	↓	↑		↑		↓	↓	AA+
aa	↑	↓	↑	↑	↑	↑			AA
aa-			↑	↑	↑	↑			AA-
a+				↑		↑			A+
a						↑			A
a-									A-
bbb+									BBB+
bbb									BBB
bbb-									BBB-
bb+									BB+
bb									BB
bb-									BB-
b+									B+
b									B
b-									B-
ccc+									CCC+
ccc									CCC
ccc-									CCC-
cc									CC
c									C
f									D or RD

Key Latest Developments

Management Changes

In November 2019, CDPQ's CEO of 11 years, Michael Sabia, announced his intention to retire in February 2020. On Jan. 29, 2020, CDPQ's board appointed Charles Emond as President and CEO. Emond had been serving as Executive Vice President (EVP) of Québec, Private Equity (PE) and Strategic Planning since joining the firm in February 2019 after nearly 20 years at Scotia Bank. Fitch does not anticipate a meaningful change in the firm's strategic direction given the transition in leadership.

On April 16, 2020, CDPQ announced several management changes, including the appointment of Macky Tall to Head of Real Assets and PE, a new investment business unit created to increase CDPQ's impact in those sectors. In this role, he will remain President and CEO of CDPQ Infra and has been appointed Chairman of Ivanhoe Cambridge. Separately, Helen Beck was appointed EVP and head of Equity Markets, Kim Thomassin was appointed EVP and Head of Québec and Stewardship Investing, and Chief Economist Martin Coiteux's mandate was expanded to take responsibility for the Global Strategy Team. Tall, Thomassin, Coiteux, and recently appointed Head of Liquid Markets (Vincent Delisle) will report to the CEO.

Bar Chart Legend

Vertical bars – VR range of Rating Factor
Bar Colors – Influence on final VR

- Higher influence
- Moderate influence
- Lower influence

Bar Arrows – Rating Factor Outlook

- ↑ Positive
- ↓ Negative
- ↕ Evolving
- Stable

Navigator Peer Comparison

Peer Group Summary	Operating Environment	Company Profile	Management & Strategy	Risk Appetite	Asset Performance	Earnings & Profitability	Capitalisation & Leverage	Funding, Liquidity & Coverage	Issuer Default Rating	Outlook/ Watch	Rating Action
Caisse de depot et placement du Quebec	aa+ ↑	aa+ ↓	aa ↑	aa- ↑	aa ↑	a+ ↑	aaa ↓	aaa ↓	AAA	Stable	14-Jul-20
OMERS Administration Corporation	aa+ ↑	aa+ ↓	aa ↑	aa- ↑	aa ↑	a+ ↑	aa+ ↓	aaa ↓	AAA	Stable	14-Jul-20

Company Summary and Key Qualitative Assessment Factors

Ratings Influenced by Country Ceiling of Canada

According to the Act Respecting the Caisse de dépôt et placement du Québec (Caisse Act), CDPQ is a mandatary of the State (i.e. Canada); however, it is not a crown corporation and operates independently of the sovereign and province of Québec. Fitch does not believe the province of Québec has the ability to directly impose controls over the fund or otherwise limit contributions to the fund, access the assets of the fund, or direct the fund to make outsized policy-oriented investments. As a result, CDPQ's ratings are not directly linked to those of the province of Québec. However, CDPQ's ratings are influenced by the Country Ceiling of Canada to the extent Fitch believed Canada was likely to impose controls over the fund.

On June 24, 2020, Fitch downgraded Canada's Long-Term Foreign and Local Currency IDRs to 'AA+' from 'AAA' but affirmed the Country Ceiling at 'AAA' with a Stable Outlook. Fitch believes there is some degree of cushion in this rating sensitivity given that 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 below 'AAA'.

Strong Corporate Governance Framework

Fitch believes CDPQ's corporate governance is very strong. The board of directors, whose members are appointed by the Government of Québec, can be composed of up to 15 members and two-thirds must be independent. Members are appointed for a five-year term renewable for a maximum of 10 years, with the exception of the Chairman, President and CEO positions, which can serve longer terms. The Chairman position must be, by law, independent of the President and CEO.

Second Largest Defined Benefit Pension Plan in Canada

Established in 1965 as a result of the Caisse Act, CDPQ is Canada's second largest defined benefit pension plan, with CAD340.1 billion in net assets as of Dec. 31, 2019. CDPQ was initially established to manage the funds of the Québec Pension Plan (QPP) but today manages investments for over 40 depositors with the objective of achieving optimal returns on capital within the framework of depositors' individual investment policies while contributing to Québec's economic development. CDPQ's eight largest depositors represented 96% of net assets at YE19.

Diverse Investment Portfolio

CDPQ has ten specialized investment portfolios across fixed income, equities, real assets and other investment categories. CDPQ's benchmark portfolio corresponds to the weighted average of the asset allocation decisions made by each depositor when their investment policies are established. Asset allocation decisions are made in the context of upper and lower limits to allow CDPQ to manage overall asset allocation at its discretion to optimize portfolio construction and returns.

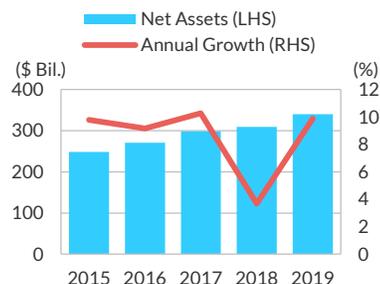
Mandate to Contribute to Québec's Economic Development

CDPQ, as part of its mandate under the Caisse Act, has a requirement to contribute to Québec's economic development. While Fitch believes the mandate could yield outsized exposure to the province, local market knowledge may also provide a competitive advantage when it comes to investing in the province. CDPQ had CAD70 billion of investments in Québec (including commitments) at YE19, including CAD47.6 billion in the private sector.

Market Risk Well-Managed

CDPQ's level of market risk in its portfolio has fallen considerably since 2013, in part due to adoption of an absolute-return management approach; the introduction of the global quality strategy; and increased exposure to foreign currencies. At Dec. 31, 2019, value-at-risk (VaR) was 13.7%, unchanged from a year ago. CDPQ also produces an absolute risk ratio, which is obtained by dividing the absolute risk of the actual portfolio by the absolute risk of the benchmark portfolio. This metric was 1.01 at YE19 compared to 0.99 a year earlier. CDPQ has upper and lower limits around this measure.

Net Asset Growth



Source: Fitch Ratings, CDPQ.

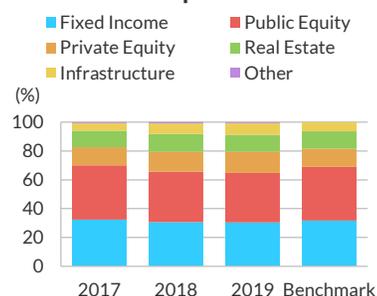
Largest Depositors

(As of Dec. 31, 2019)

Depositor	% of Net Assets
Retirement Plans Sinking Fund (Ministry of Finance)	27.3
Retraite Quebec (Quebec Pension Plan Fund)	24.0
Government and Public Employees Retirement Plan	22.6
Supplemental Pension Plan for Employees of the Quebec Construction Industry	7.6
Commission Des Normes, De L'Equite, De La Sante, Et De La Securite De Travail	5.3
Societe de L'Assurance Automobile du Quebec	3.8
Generations Fund	2.7
Pension Plan of Management Personnel	2.7
Total	96.0

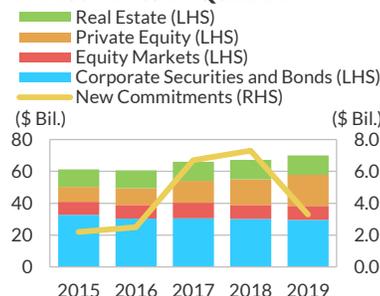
Source: Fitch Ratings, CDPQ.

Portfolio Composition



Source: Fitch Ratings, CDPQ.

Investments in Quebec



Source: Fitch Ratings, CDPQ.

Income Statement

(\$ Mil., Years Ended Dec. 31)	2015	2016	2017	2018	2019
Investment Income	8,131	9,682	9,576	10,222	10,838
Investment Expense	627	619	650	886	945
Net Investment Income	7,504	9,063	8,926	9,336	9,893
Operating Expenses	396	463	536	585	630
Net Income	7,108	8,600	8,390	8,751	9,263
Net Realized Gains	975	9,556	9,822	7,980	10,142
Net Unrealized Gains	12,026	261	6,384	(4,941)	11,741
Net Gains on Financial Instruments at FV	13,001	9,817	16,206	3,039	21,883
Net Investment Result before Distributions to Depositors	20,109	18,417	24,596	11,790	31,146
Distributions to Depositors	12,801	11,783	9,844	12,222	14,739
Comprehensive Income Attributable to Depositors	7,308	6,634	14,752	(432)	16,407

Source: CDPQ

Balance Sheet

(\$ Mil., Years Ended Dec. 31)	2015	2016	2017	2018	2019
Assets					
Cash	420	651	947	675	994
Amounts Receivable from Transactions Being Settled	1,288	3,898	2,447	4,587	6,223
Advances to depositors	776	1,068	1,056	903	960
Investment Income, Accrued and Receivable	1,226	1,173	1,395	1,352	1,391
Other Assets	262	194	255	482	584
Investments	286,845	308,875	331,050	342,004	382,467
Total Assets	290,817	315,859	337,150	350,003	392,619
Liabilities					
Amounts Payable on Transactions Being Settled	1,224	1,687	2,102	1,113	1,537
Other Financial Liabilities	529	536	691	1,172	1,143
Investment Liabilities	41,039	42,890	35,845	38,207	49,830
Total Liabilities	42,792	45,113	38,638	40,492	52,510
Net Assets Attributable to Depositors	248,025	270,746	298,512	309,511	340,109

Source: CDPQ.

Performance Metrics

(\$ Mil., Years Ended Dec. 31)	2015	2016	2017	2018	2019
Net Asset Growth (%)	9.78	9.15	10.27	3.69	9.89
Net Contributions/Beginning Net Assets (%)	0.89	1.73	1.18	(0.27)	(0.16)
One-Year Return (%)	9.10	7.60	9.30	4.20	10.40
Five-Year Return, Annualized (%) ^a	10.90	10.20	10.20	8.40	8.10
Operating Expenses per \$100 of Average Net Assets (x)	0.18	0.20	0.22	0.22	0.23
(CP + Term Notes)/(Net Assets + CP + Term Notes), Fair Value (x)	0.05	0.05	0.04	0.05	0.06
(CP + Term Notes)/Net Assets, Cost (x)	0.04	0.04	0.04	0.04	0.06
(CP + Term Notes + Repos + Short)/Net Assets, Fair Value (x)	0.15	0.15	0.12	0.12	0.14
Liquidity/CP (x)	12.54	9.05	10.22	6.42	5.19
Liquidity/(CP + Term Notes) (x)	4.20	3.57	3.95	2.83	2.35
Cash	420	651	947	675	994
Non-Cash Investment Assets	286,845	308,875	331,050	342,004	382,467
Less: Assets Pledged	21,450	23,624	17,883	17,315	30,665
Assets Available to Creditors	265,815	285,902	314,114	325,364	352,796
Available Collateral Coverage of Debt (%)	24.25	23.74	26.40	24.93	17.98

^aFour-year return in 2015.

Source: Fitch Ratings, CDPQ.

Key Financial Metrics – Latest Developments

Captive Flows Provide Predictability

The predictability of CDPQ's cash inflows and outflows favorably influences Fitch's assessment of its asset performance. The plan has member captivity, and depositors can adjust contributions to ensure adequate plan funding. Net contributions were negative in 2018 and 2019 due to planned withdrawals by the Generations Fund but are expected to turn positive in 2020. Net contributions averaged 0.7% of beginning net assets from 2015–2019, which are in line with Fitch's quantitative benchmark range for 'bbb' category investment managers. The benchmark implied score is adjusted up to 'aa' given the captive nature of the flows and the predictability of inflows and outflows over an extended period.

Long-Term Investment Returns Exceed Benchmarks

CDPQ achieved a net investment return of 10.4% in 2019, which underperformed benchmark returns by 1.5%. However, for the period 2015-2019, annualized returns were 8.1%, surpassing index returns by 90bps. With the exception of real assets, all asset classes have exceeded index returns over the last five- and ten-year period. The expected rate of returns for each depositor vary depending on depositor's plan demographics, risk appetite and asset allocation. For 2019, returns for the eight main depositors varied from 9.5% to 10.8%. Returns for 2020 could be pressured by market volatility and the economic impact of the coronavirus.

Low Leverage Target

CDPQ's board has limited the amount of debt that CDPQ may issue to 10% (0.10x) of its net assets attributable to depositors. CDPQ's leverage is measured on a fair value basis and is calculated as CP + term notes divided by net assets + CP + term notes. On this basis, leverage was 0.06x at YE19, up from 0.05x at YE18. Fitch's baseline measure of leverage for CDPQ is gross debt (excluding repos, shorts and non-recourse debt)/net assets, at cost. On this basis, leverage was 0.06x at YE19, up from 0.04x at YE18, which is low. Fitch believes leverage may tick up modestly over time, but it is expected to remain well within board limits.

Strong Funding Market Access

CDPQ has demonstrated strong access to the funding markets across a variety of geographies, including Canada, the U.S. and Europe. At YE19, CDPQ had CAD8.8 billion of CP outstanding and CAD12.3 billion of unsecured term notes, at fair value. CDPQ issued \$2 billion of 1.0%, three-year medium-term notes (MTNs) in April 2020 and \$2.5 billion of 0.875% five-year MTNs in June 2020. Proceeds are expected to be used for general corporate purposes and/or for the refinancing of EUR750 million of term notes due in June 2020 and CAD 1 billion due in July 2020. Fitch expects CDPQ will continue to opportunistically access the medium-term note market.

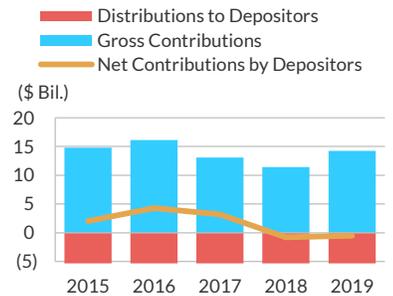
Exceptionally Strong Liquidity Profile

Liquidity is viewed as exceptionally strong given predictable and reliable contributions, cash on hand, liquid investments, investment income from CDPQ's broad investment mandate, and the ability to use pension contributions to satisfy debt obligations. When managing liquidity, CDPQ establishes a minimum threshold sufficient to meet its potential commitments as well as those of its depositors; rebalance the overall portfolio; and maintain the desired flexibility in the event of a crisis, including to take advantage of attractive investment opportunities.

At Dec. 31, 2019, CDPQ had CAD46 billion of liquidity (consisting of cash and liquid government securities) and \$4 billion of available capacity under its committed revolving credit facility. Fitch views CDPQ's very strong liquidity as a mitigating factor to the than 100% committed third-party backup liquidity support for the CP outstanding.

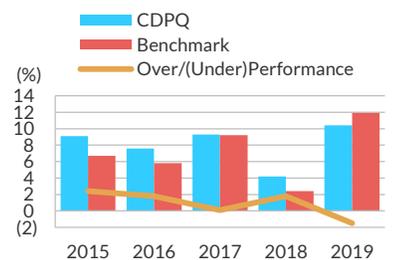
This liquidity reserve covered gross debt outstanding (CP and term notes) by 2.20x (at fair value) at YE19. Fitch believes CDPQ's coverage ratios demonstrate the firm's strong liquidity profile. Fitch also considers collateral coverage of gross debt, looking at cash plus unencumbered investment assets. On this basis, collateral coverage was exceptionally strong, amounting to 16.7x (at fair value) at YE19, which Fitch views favorably.

Fund Flows



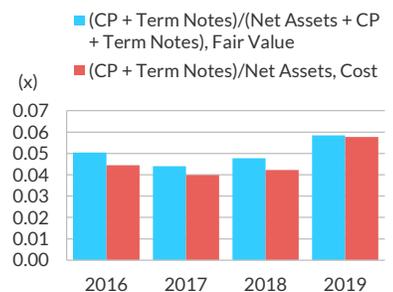
Source: Fitch Ratings, CDPQ .

Investment Performance Versus Benchmark



Source: Fitch Ratings, CDPQ .

Leverage Metrics



Source: Fitch Ratings, CDPQ .

Liquidity Coverage



Source: Fitch Ratings, CDPQ .

Environmental, Social and Governance Considerations

Credit-Relevant ESG Derivation

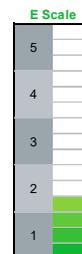
Caisse de Depot et Placement du Quebec has 5 ESG potential rating drivers

- Caisse de Depot et Placement du Quebec has exposure to shift in social or consumer preferences as a result of an institution's social positions, or social and/or political disapproval of core activities but this has very low impact on the rating.
- Governance is minimally relevant to the rating and is not currently a driver.

				Overall ESG Scale	
key driver	0	issues	5		
driver	0	issues	4		
potential driver	5	issues	3		
not a rating driver	3	issues	2		
	6	issues	1		

Environmental (E)

General Issues	E Score	Sector-Specific Issues	Reference
GHG Emissions & Air Quality	1	Regulatory risks, emissions fines or compliance costs related to owned equipment, which could impact asset demand, profitability, etc.	Operating Environment
Energy Management	1	Investments in or ownership of assets with below-average energy/fuel efficiency which could impact future valuation of these assets	Risk Appetite
Water & Wastewater Management	1	n.a.	n.a.
Waste & Hazardous Materials Management; Ecological Impacts	1	n.a.	n.a.
Exposure to Environmental Impacts	2	Impact of extreme weather events on assets and/or operations and corresponding risk appetite & management; catastrophe risk; credit concentrations	Company Profile; Asset Performance



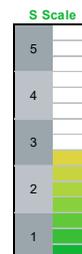
How to Read This Page

ESG scores range from 1 to 5 based on a 15-level color gradient. Red (5) is most relevant and green (1) is least relevant.

The Environmental (E), Social (S) and Governance (G) tabl break out the individual components of the scale. The right-hand b shows the aggregate E, S, or G score. General Issues are relev across all markets with Sector-Specific Issues unique to a particu industry group. Scores are assigned to each sector-specific issu. These scores signify the credit-relevance of the sector-spec issues to the issuing entity's overall credit rating. The Reference b highlights the factor(s) within which the corresponding ESG issu are captured in Fitch's credit analysis.

Social (S)

General Issues	S Score	Sector-Specific Issues	Reference
Human Rights, Community Relations, Access & Affordability	1	n.a.	n.a.
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	Operating Environment; Risk Appetite; Asset Performance
Labor Relations & Practices	2	Impact of labor negotiations, including board/employee compensation and composition	Company Profile; Management & Strategy; Earnings & Profitability; Capitalization & Leverage; Funding, Liquidity & Coverage
Employee Wellbeing	1	n.a.	n.a.
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	Company Profile; Earnings & Profitability



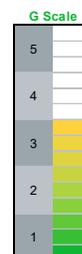
The Credit-Relevant ESG Derivation table shows the overall ES score. This score signifies the credit relevance of combined E, S a G issues to the entity's credit rating. The three columns to the left the overall ESG score summarize the issuing entity's sub-compon ESG scores. The box on the far left identifies some of the main ES issues that are drivers or potential drivers of the issuing entity's cre rating (corresponding with scores of 3, 4 or 5) and provides a b explanation for the score.

Classification of ESG issues has been developed from Fitch's sector ratings criteria. The General Issues and Sector-Spec Issues draw on the classification standards published by the Unit Nations Principles for Responsible Investing (PRI) and the Sustainability Accounting Standards Board (SASB).

Sector references in the scale definitions below refer to Sector displayed in the Sector Details box on page 1 of the navigator.

Governance (G)

General Issues	G Score	Sector-Specific Issues	Reference
Management Strategy	3	Operational implementation of strategy	Management & Strategy
Governance Structure	3	Board independence and effectiveness; ownership concentration; protection of creditor/stakeholder rights; legal/compliance risks; business continuity; key person risk; related party transactions	Management & Strategy
Group Structure	3	Organizational structure; appropriateness relative to business model; opacity; intra-group dynamics; ownership	Company Profile
Financial Transparency	3	Quality and timing of financial reporting and auditing processes	Management & Strategy



CREDIT-RELEVANT ESG SCALE

How relevant are E, S and G Issues to the overall credit rating

5	Highly relevant, a key rating driver that has a significant impact on the rating on an individual basis. Equivalent to "higher" relative importance within Navigator.
4	Relevant to rating, not a key rating driver but has an impact on the rating in combination with other factors. Equivalent to "moderate" relative importance within Navigator.
3	Minimally relevant to rating, either very low impact or actively managed in a way that results in no impact on the entity rating. Equivalent to "lower" relative importance within Navigator.
2	Irrelevant to the entity rating but relevant to the sector.
1	Irrelevant to the entity rating and irrelevant to the sector.

The ratings above were solicited and assigned or maintained at the request of the rated entity/issuer or a related third party. Any exceptions follow below.

ALL FITCH CREDIT RATINGS ARE SUBJECT TO CERTAIN LIMITATIONS AND DISCLAIMERS. PLEASE READ THESE LIMITATIONS AND DISCLAIMERS BY FOLLOWING THIS LINK: [HTTPS://FITCHRATINGS.COM/UNDERSTANDINGCREDITRATINGS](https://fitchratings.com/understandingcreditratings). IN ADDITION, RATING DEFINITIONS AND THE TERMS OF USE OF SUCH RATINGS ARE AVAILABLE ON THE AGENCY'S PUBLIC WEB SITE AT WWW.FITCHRATINGS.COM. 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. FITCH MAY HAVE PROVIDED ANOTHER PERMISSIBLE SERVICE TO THE RATED ENTITY OR ITS RELATED THIRD PARTIES. DETAILS OF THIS SERVICE FOR RATINGS FOR WHICH THE LEAD ANALYST IS BASED IN AN EU-REGISTERED ENTITY CAN BE FOUND ON THE ENTITY SUMMARY PAGE FOR THIS ISSUER ON THE FITCH WEBSITE.

Copyright © 2020 by Fitch Ratings, Inc., Fitch Ratings Ltd. and its subsidiaries. 33 Whitehall Street, NY, NY 10004. Telephone: 1-800-753-4824, (212) 908-0500. Fax: (212) 480-4435. Reproduction or retransmission in whole or in part is prohibited except by permission. All rights reserved. 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 letters, appraisals, actuarial reports, engineering reports, legal opinions and other reports provided by third parties, the availability of independent and competent third-party verification sources with respect 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 Fitch relies on in connection with a rating or a report will be accurate and complete. Ultimately, the issuer and its advisers are responsible for the accuracy of the information they 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 financial statements and attorneys with respect to legal and tax matters. Further, ratings and forecasts of financial and other information are inherently forward-looking and embody assumptions and predictions about future events that by their nature cannot be verified as facts. As a result, despite any verification of current facts, ratings and forecasts can be affected by future events or conditions that were not anticipated at the time a rating or forecast was issued or affirmed.

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 individual, 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 identified 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 issuers, insurers, guarantors, other obligors, and underwriters for rating securities. Such fees generally vary from US\$1,000 to US\$750,000 (or the applicable currency equivalent) per issue. In certain cases, Fitch will rate all or a number of issues issued by a particular issuer, or insured or guaranteed by a particular insurer or guarantor, for a single annual fee. Such fees are expected to vary from US\$10,000 to US\$1,500,000 (or the applicable currency equivalent). The assignment, publication, or dissemination of a rating by Fitch shall not constitute a consent by Fitch to use its name as an expert in connection with any registration statement filed under the United States securities laws, the Financial Services and Markets Act of 2000 of the United Kingdom, or the securities laws of any particular jurisdiction. Due to the relative efficiency of electronic publishing and distribution, Fitch research may be available to electronic subscribers up to three days earlier than to print subscribers.

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.