

Genossenschaftliche FinanzGruppe

Update

Key Rating Drivers

Strong Company Profile: Genossenschaftliche FinanzGruppe's (GFG) leading and diversified bancassurance business model, underpinned by its strong domestic retail and small SME banking franchise, has a high influence on the group's ratings. The ratings also reflect GFG's strong risk-adjusted capitalisation and low leverage, its sound asset quality, its solid profitability, well above the German average, and its funding profile, which is outstanding by international standards.

Strong Mutual Support Record: GFG is not a legal entity but a cooperative banking network whose cohesion is ensured by a mutual support scheme. GFG's Issuer Default Ratings (IDRs) apply to each member bank, including DZ BANK AG Deutsche Zentral-Genossenschaftsbank (DZ BANK). The scheme has been consistently highly effective and has a long record of ensuring GFG's cohesion, monitoring members' risks and enforcing corrective measures when needed. No creditor of a member of the scheme has suffered losses since its inception in 1934.

Pandemic Risk Subsiding: The risk of a material weakening in GFG's operating environment that would have led to a lasting deterioration of the group's asset quality and profitability, has subsided in 2021. We expect insolvencies to rise moderately despite the extension of state support measures to the German economy to end-1Q22 so as to accommodate the pandemic's resurgence. However, GFG's four-year average impaired loans ratio should comfortably remain within the implied 'a' category.

Margins Under Pressure: GFG's profitability has been much higher and more stable than that of the overall German banking sector over the long term, and we expect its pre-impairment profitability to remain sound. However, ultra-low interest rates and stiff competition will further erode the group's net interest margins. So far, the strong growth of GFG's loan book and of its net fee income has offset this erosion, but the group is increasingly relying on charging negative rates on retail depositors to counter the attrition of its net interest income (NII).

Large Capital Buffers: GFG's leverage ratio is strong by international standards. We adjust our assessment of the group's risk-weighted capital ratios upwards to account for the use of the standardised approach by GFG's local banks to measure credit risk for all asset classes, resulting in a higher risk-weight density than international peers'. We expect GFG's common equity Tier 1 (CET1) ratio to remain broadly stable, as strong earnings retention is offset by loan growth that we expect to be slower than in previous years, but to still exceed the German sector average.

Rating Sensitivities

Upgrade Unlikely: An upgrade of GFG's and its members' IDRs is unlikely given the already high ratings and in light of the adverse interest-rate environment that is likely to prevail over the long term. An upgrade would require greater cost efficiency, which is likely to necessitate a lengthy streamlining of the group's structure, especially at the local banks.

Decreasing Margins and Capitalisation: The persistence of low interest rates could eventually trigger a downgrade of the Long-Term IDRs, especially if GFG's operating profit/risk-weighted assets (RWAs) falls durably below 1%. The ratings are also sensitive to the CET1 ratio deteriorating below 13%, which could result from net interest margin erosion and continued strong balance sheet growth. An impaired loans ratio durably above 3% or a downgrade of our operating environment score for German banks would also put pressure on GFG's ratings.

Ratings

Foreign Currency

Long-Term IDR	AA-
Short-Term IDR	F1+

Viability Rating	aa-
------------------	-----

Support Rating	5
Support Rating Floor	NF

Sovereign Risk

Long-Term Foreign-Currency IDR	AAA
Long-Term Local-Currency IDR	AAA
Country Ceiling	AAA

Outlooks

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

Applicable Criteria

[Bank Rating Criteria \(November 2021\)](#)

Related Research

[Genossenschaftliche FinanzGruppe \(July 2021\)](#)

[Fitch Revises Outlooks on German Cooperative Banks and DZ BANK to Stable; Affirms at 'AA-' \(July 2021\)](#)

[Genossenschaftliche FinanzGruppe \(February 2021\)](#)

Analysts

Patrick Rioual
+49 69 768076 123
patrick.rioual@fitchratings.com

Marco Diamantini
+49 69 768076 114
marco.diamantini@fitchratings.com

Debt Rating Classes

Rating level	Rating
DZ BANK AG Deutsche Zentral-Genossenschaftsbank	
Long-term deposit rating ^a	AA
Short-term deposit rating ^a	F1+
Long-term senior preferred debt ^{a, b}	AA
Short-term senior preferred debt ^{a, b}	F1+
Long-term senior non-preferred debt ^a	AA-
Tier 2 subordinated debt ^a	A
Deutsche Apotheker- und Aerztebank eG	
Long-term deposit rating	AA-
Short-term deposit rating	F1+
Muenchener Hypothekenbank eG	
Long-term deposit rating	AA
Short-term deposit rating	F1+
Local cooperative banks (814 banks at end-1Q21)	
Long-term deposit ratings	AA-
Short-term deposit ratings	F1+

^a Also applies to DZ BANK's subsidiary DZ HYP AG

^b Also applies to DZ BANK's subsidiary DZ PRIVATBANK S.A.

Source: Fitch Ratings

The long-term deposit and senior preferred debt ratings of DZ BANK and its banking subsidiaries, the long-term deposit rating of Muenchener Hypothekenbank eG (Muenchener Hyp), and DZ BANK's Derivative Counterparty Rating are one notch above their respective Long-Term IDRs of 'AA-' because of the protection provided by resolution buffers to preferred creditors. In our view, resolution would only occur in the extremely unlikely event that GFG's mutual support scheme fails to protect group members' viability.

The deposit ratings of Deutsche Apotheker- und Aerztebank eG's (apoBank) and of the 814 local cooperative banks are aligned with GFG's IDRs due to the absence of sustainable significant resolution debt buffers at these entities. Each local bank is regulated individually as a less significant institution. Consequently, the German regulator's preferred resolution strategy for these banks consists of standard insolvency procedures rather than the preferred resolution strategy of bail-in for the DZ BANK group and for Muenchener Hyp, each of which is directly supervised by the European Single Resolution Board (SRB) and follows a single-point-of-entry approach. Therefore, the predominantly deposit-funded local banks have no incentive to build up resolution buffers. This is also the case for apoBank, which is directly supervised by the SRB, but is not required to maintain resolution buffers in excess of its capital requirements.

The ratings of the subordinated Tier 2 notes issued by DZ BANK and its subsidiaries are two notches below GFG's Viability Rating (VR), which is the standard notching for this type of debt under Fitch Ratings' criteria. We use GFG's VR as anchor rating as we believe that GFG, by protecting the viability of DZ BANK and its subsidiaries, increases the likelihood that all due payments on these notes will continue to be met.

Ratings Navigator

Genossenschaftliche FinanzGruppe



Banks
Ratings Navigator

Rating	Peer Ratings	Operating Environment	Company Profile	Management & Strategy	Risk Appetite	Financial Profile				Viability Rating	Support Rating Floor	Issuer Default Rating
						Asset Quality	Earnings & Profitability	Capitalisation & Leverage	Funding & Liquidity			
aaa										aaa	AAA	AAA
aa+										aa+	AA+	AA+
aa										aa	AA	AA
aa-										aa-	AA-	AA- Stable
a+										a+	A+	A+
a										a	A	A
a-										a-	A-	A-
bbb+										bbb+	BBB+	BBB+
bbb										bbb	BBB	BBB
bbb-										bbb-	BBB-	BBB-
bb+										bb+	BB+	BB+
bb										bb	BB	BB
bb-										bb-	BB-	BB-
b+										b+	B+	B+
b										b	B	B
b-										b-	B-	B-
ccc+										ccc+	CCC+	CCC+
ccc										ccc	CCC	CCC
ccc-										ccc-	CCC-	CCC-
cc										cc	CC	CC
c										c	C	C
f										f	NF	D or RD

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

Significant Changes

Global Supply Chain Disruptions Slow Down Economic Recovery

Global supply-side shortages affected the German post-pandemic recovery in 2021. As this shock hit the country's manufacturing sector severely due to its deep integration in global trade flows, Fitch has revised down its 2021 GDP growth forecast for Germany to +2.8% from +3.6%, well below the +5.0% expected for the eurozone. The global supply chain disruptions are likely to persist in 2022 and to result in weak exports for an extended period. There is also a risk of sharp slowdown in China, Germany's second-largest export market (EUR96 billion in 2020). In combination with German corporates' precautionary funding at the start of the pandemic, we expect this to translate into muted corporate loan growth of 2% in 2022, i.e. less than half the expected GDP growth of 4.4%, despite some catch-up after the pandemic.

House Price Inflation and Retail Deposit Charging Mitigate Margin Erosion

Modest profits will remain the German banking sector's main weakness in 2022, even though we expect GFG to continue to perform considerably better than most domestic peers, both in 2022 and in the longer term. Excessive competition will still prevent adequate loan pricing despite isolated evidence that some competitors have begun to approach new business more selectively. Banks will consequently continue to rely on strong housing loan growth (we expect +7% in each of 2021 and 2022) driven by high housing price inflation (Fitch expects +7% to +9% in 2022 after +13% in 2021, which would result in a doubling of prices nationwide since 2010) to counter the creeping net interest margin erosion.

Charging negative rates on retail deposits is still much less widespread than for corporates. However, alongside housing loan growth, we believe this will be the sector's main earnings stabiliser in 2022, although legal challenges could impede implementation. Fitch believes passing the ECB's -50bp rate on to all retail deposits above EUR10,000 could soon become the market standard as banks are pricing increasingly aggressively, not least because of the rapidly dwindling inhibitions of savings and cooperative banks, which dominate the retail market, in doing so. The need to progress on this front is pressing, as households' rising reinvestment of excess cash into higher-yielding securities failed to curb the growth of German banks' retail deposits below 5% in 2021.

DZ BANK Set to Post Record Profit in 2021 Amid Strong Market Conditions

DZ BANK's record high pre-tax profit of EUR1.8 billion in 1H21 was already at the upper end of its EUR1.5 billion to EUR2 billion long-term full-year target. This result was mainly driven by the release of precautionary pandemic-related loan impairment charges (LICs) booked in 2020 and booming capital markets. The latter led to a strong performance of the asset management and insurance businesses, which together accounted for more than 70% of DZ BANK's pre-tax profit. Strong market conditions have persisted in 2H21. In combination with expected low LICs in the German banking sector, we believe this could lead to a full-year pre-tax profit close to EUR3 billion at DZ BANK. In addition, DZ BANK's product suppliers pay high distribution fees to GFG's local banks. Hence, DZ BANK will make a very high contribution to GFG's 2021 profit.

In 1H21, NII declined by 5% yoy at DZ BANK (consolidated) and by 12% at its subsidiary BSH, Germany's leading home loan and savings institution (Bausparkasse), despite strong loan origination. BSH used to be DZ BANK's third pillar of sizeable and reliable earnings beside asset management and insurance. BSH still outperforms its domestic peers due to the strong distribution capabilities of GFG's local banks, but pressure on its NII is rising due to the Bausparkasse model's high vulnerability to low interest rates and limited flexibility. DZ BANK's participation in the ECB's TLTRO is likely to mitigate the decline in DZ BANK's NII in 2021. However, we expect muted demand for corporate loans to exacerbate the pressure on NII in 2022.

As the third-largest German asset manager and the local cooperative banks' product supplier, DZ BANK benefits from retail customers in search of yield, who increasingly invest in investment funds (almost 40% of DZ BANK's EUR24 billion net new money in 1H21 came from retail customers). We expect this to continue in 2022, even though capital market performance is likely to normalise. This is because negative interest rates charged on current accounts and the unusually high inflation strongly incentivise traditionally risk-averse German households to reallocate their savings to higher-yielding investment products.

Summary Financials and Key Ratios

	31 Dec 20		31 Dec 19	31 Dec 18	31 Dec 17
	(USDm)	(EURm)	(EURm)	(EURm)	(EURm)
Summary income statement					
Net interest and dividend income	22,364	18,382	18,185	18,368	18,638
Net fees and commissions	9,050	7,439	7,092	6,816	6,491
Other operating income	2,151	1,768	3,665	817	2,247
Total operating income	33,565	27,589	28,942	26,001	27,376
Operating costs	21,943	18,036	18,142	18,079	17,884
Pre-impairment operating profit	11,622	9,553	10,800	7,922	9,492
Loan and other impairment charges	2,831	2,327	832	151	576
Operating profit	8,791	7,226	9,968	7,771	8,916
Other non-operating items (net)	n.a.	n.a.	211	n.a.	n.a.
Tax	2,667	2,192	3,133	2,369	2,843
Net income	6,124	5,034	7,046	5,402	6,073
Other comprehensive income	n.a.	n.a.	1,055	-453	-208
Fitch comprehensive income	6,124	5,034	8,101	4,949	5,865
Summary balance sheet					
Assets					
Gross loans	1,083,475	890,576	844,552	794,916	761,880
Loan loss allowances	12,738	10,470	9,119	8,988	7,363
Net loans	1,070,737	880,106	835,433	785,928	754,517
Interbank	24,004	19,730	22,439	18,800	51,042
Derivatives	n.a.	n.a.	25,232	20,530	22,325
Other securities and earning assets	509,265	418,597	390,104	371,554	363,597
Total earning assets	1,604,005	1,318,433	1,273,208	1,196,812	1,191,481
Cash and due from banks	147,161	120,961	87,421	75,169	32,594
Other assets	44,448	36,535	23,459	21,196	19,241
Total assets	1,795,615	1,475,929	1,384,088	1,293,177	1,243,316
Liabilities					
Customer deposits	1,141,020	937,876	880,398	842,420	801,031
Interbank and other short-term funding	195,780	160,924	156,316	119,300	113,065
Other long-term funding	76,410	62,806	46,793	58,677	68,581
Trading liabilities and derivatives	56,932	46,796	54,896	48,742	44,181
Total funding	1,470,142	1,208,402	1,138,403	1,069,139	1,026,858
Other liabilities	177,304	145,737	129,525	116,160	111,608
Preference shares and hybrid capital	n.a.	n.a.	204	243	492
Total equity	148,170	121,790	115,956	107,635	104,358
Total liabilities and equity	1,795,615	1,475,929	1,384,088	1,293,177	1,243,316
Exchange rate		USD1 = EUR0.821963	USD1 = EUR0.89015	USD1 = EUR0.873057	USD1 = EUR0.83382

Source: Fitch Ratings, Fitch Solutions, CFG

Summary Financials and Key Ratios

	31 Dec 20	31 Dec 19	31 Dec 18	31 Dec 17
Ratios (annualised as appropriate)				
Profitability				
Operating profit/risk-weighted assets	1.0	1.5	1.2	1.5
Net interest income/average earning assets	1.4	1.5	1.5	1.6
Non-interest expense/gross revenue	65.4	63.2	69.9	65.6
Net income/average equity	4.2	6.3	5.1	6.0
Asset quality				
Growth in gross loans	5.5	6.2	4.3	3.9
Loan impairment charges/average gross loans	0.3	0.1	0.0	0.1
Capitalisation				
Common equity Tier 1 ratio (excluding reserves for general banking risks)	14.4	13.6	13.5	13.3
Tangible common equity/tangible assets	8.3	8.2	8.3	8.4
Basel leverage ratio	7.5	7.0	6.9	6.8
Funding and liquidity				
Loans/customer deposits	95.0	95.9	94.4	95.1
Liquidity coverage ratio	n.a.	174.3	166.0	161.0
Customer deposits/funding	77.6	79.0	80.5	79.9

Source: Fitch Ratings, Fitch Solutions, CFG

Sovereign/Institutional Support Assessment

The Support Rating and Support Rating Floor reflect our view that, due to the EU's Bank Recovery and Resolution Directive, GFG's senior creditors can no longer rely on full extraordinary support from the German sovereign if a member bank becomes non-viable.

Support Rating Floor:	NF		
Support Factors	Positive	Neutral	Negative
Sovereign ability to support system			
Size of banking system relative to economy			✓
Size of potential problem	✓		
Structure of banking system		✓	
Liability structure of banking system		✓	
Sovereign financial flexibility (for rating level)	✓		
Sovereign propensity to support system			
Resolution legislation with senior debt bail-in			✓
Track record of banking sector support		✓	
Government statements of support			✓
Sovereign propensity to support bank			
Systemic importance		✓	
Liability structure of bank		✓	
Ownership		✓	
Specifics of bank failure		✓	

Environmental, Social and Governance Considerations

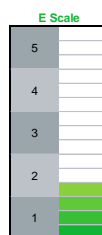
FitchRatings Genossenschaftliche FinanzGruppe

Credit-Relevant ESG Derivation

Genossenschaftliche FinanzGruppe has 5 ESG potential rating drivers				Overall ESG Scale	
<ul style="list-style-type: none"> ➔ Genossenschaftliche FinanzGruppe has exposure to compliance risks including fair lending practices, mis-selling, repossession/foreclosure practices, consumer data protection (data security) but this has very low impact on the rating. ➔ Governance is minimally relevant to the rating and is not currently a driver. 	key driver	0	issues	5	
	driver	0	issues	4	
	potential driver	5	issues	3	
		4	issues	2	
	not a rating driver	5	issues	1	

Environmental (E)

General Issues	E Score	Sector-Specific Issues	Reference
GHG Emissions & Air Quality	1	n.a.	n.a.
Energy Management	1	n.a.	n.a.
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; Management & Strategy; Risk Appetite; Asset Quality



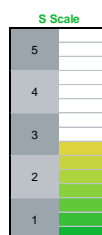
How to Read This Page
ESG scores range from 1 to 5 based on a 15-level color gradation. Red (5) is most relevant and green (1) is least relevant.

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

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

Social (S)

General Issues	S Score	Sector-Specific Issues	Reference
Human Rights, Community Relations, Access & Affordability	2	Services for underbanked and underserved communities; SME and community development programs; financial literacy programs	Company Profile; Management & Strategy; Risk Appetite
Customer Welfare - Fair Messaging, Privacy & Data Security	3	Compliance risks including fair lending practices, mis-selling, repossession/foreclosure practices, consumer data protection (data security)	Operating Environment; Company Profile; Management & Strategy; Risk Appetite
Labor Relations & Practices	2	Impact of labor negotiations, including board/employee compensation and composition	Company Profile; Management & Strategy
Employee Wellbeing	1	n.a.	n.a.
Exposure to Social Impacts	2	Shift in social or consumer preferences as a result of an institution's social positions, or social and/or political disapproval of core banking practices	Company Profile; Financial Profile

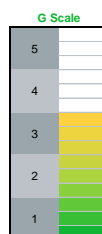


Classification of ESG issues has been developed from Fitch's sector ratings criteria. The General Issues and Sector-Specific Issues draw on the classification standards published by the United Nations Principles for Responsible Investing (PRI) and the Sustainability Accounting Standards Board (SASB).

Sector references in the scale definitions below refer to Sector as 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; Earnings & Profitability; Capitalisation & Leverage
Group Structure	3	Organizational structure; appropriateness relative to business model; opacity, intra-group dynamics; ownership	Company Profile
Financial Transparency	3	Quality and frequency 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.

Unless otherwise disclosed in this section, the highest level of ESG credit relevance is a score of '3'. This 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. For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg.

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.

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 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.

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 ratings issued by those 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 © 2021 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.