

Sparkassen-Finanzgruppe (Sparkassen)

Key Rating Drivers

Mutual Support Drives Ratings: The Issuer Default Ratings (IDRs) of the 318 savings banks rated as part of Sparkassen-Finanzgruppe (SFG) are group ratings based on mutual support. SFG is not a legal entity but a banking network whose cohesion rests on a mutual support scheme. Based on Annex 4 of Fitch Ratings' *Bank Rating Criteria* for banking structures backed by mutual support schemes, SFG's IDRs apply to each member bank, and we assign a Viability Rating (VR) to SFG, but not to the individual savings banks.

Outlook Revision: The Outlook revision on SFG's Long-Term IDR to Stable from Negative in June 2021 was driven by the revision of the trends for asset quality along with earnings and profitability to stable from negative. This reflects our view that SFG's VR of 'a+' offers sufficient headroom to absorb a realistic deterioration in its asset quality and earnings as a result of the pandemic.

Capitalisation Remains Rating Strength: SFG's capitalisation is much stronger than the German banking sector average and reflects the savings banks' consistently high profit retention. SFG's common equity Tier 1 (CET1) capital ratio rose slightly to 16.4% at end-2020 (2019: 16.0%) as profit retention outpaced risk-weighted assets (RWAs) inflation, driven by strong loan growth. The group's leverage ratio remains very strong and stable at 8.5%.

Robust Asset Quality: SFG's asset quality benefits from its prudent risk appetite. This has been driven by conservative underwriting standards, strong collateral and low concentrations, as well as from comprehensive state support programmes that have contained the increase in unemployment since the start of the pandemic.

We expect SFG's impaired loans to rise moderately by end-2021 as support measures (e.g. furlough schemes) are being phased out and the effects of the crisis become more apparent. However, we expect the four-year-average non-performing loans ratio (which we estimate was about 1%-1.3% at end-2020) to remain below 2% in the medium term.

Resilient Profitability: In 2020 SFG's operating profit/RWAs ratio (which we assess in the context of SFG's very conservative RWAs calculation) was robust at 0.9% (2019: 1.1%), owing to resilient new business supported by its strong market position and a moderate rise in loan impairment charges (LICs) to 18bp of gross loans (2019: 7bp). We expect moderate pressure on profitability in 2021, despite a recovery in business activity, as LICs should remain material.

Manageable Landesbanken Risks: SFG's ratings factor in contingent risks from exposure to the Landesbanken. We believe these risks remain manageable, despite the challenging environment particularly for banks undergoing significant restructurings.

Rating Sensitivities

Unexpectedly High Credit Losses: We view SFG as more resilient to the impact of the pandemic than the overall banking sector. However, we could downgrade the ratings if the economic disruption intensified, making a swift recovery from 2021 less likely. In this event, SFG's ratings could come under pressure from lower revenues and, more importantly, unexpectedly high credit losses if asset quality weakens beyond our base case assumptions.

Group Cohesion: The ratings are sensitive to Fitch's reassessment of SFG's relatively weak cohesion, which drives its Environmental, Social and Governance (ESG) relevance score of '4'.

Ratings

Issuer Long-Term IDR Short-Term IDR	A+ F1+
Viability Rating	a+
Support Rating Support Rating Floor	5 NF

Sovereign Risk

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

Outlooks

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

Applicable Criteria

Bank Rating Criteria (February 2020)

Related Research

Fitch Revises Outlook on Sparkassen-Finanzgruppe to Stable; Affirms at 'A+' (June 2021)

Global Economic Outlook (June 2021)

Analysts

Markus Glabach +49 69 768076 195 markus.glabach@fitchratings.com

Roger Schneider +49 69 768076 242 roger.schneider@fitchratings.com





Debt Rating Classes

Rating level	Rating	
Long-term deposit rating	A+	
Short-term deposit ratings	F1+	
Source: Fitch Ratings		

Deposit Ratings Aligned with IDRs to Reflect Lack of Debt Resolution Buffers

The savings banks' deposit ratings are aligned with SFG's IDRs due to the banks' absence of material resolution debt buffers that would provide their depositors with additional protection in a resolution. We do not assign a deposit rating to SFG as it is not a legal entity.

We define SFG as consisting of the savings banks only. Each savings bank is predominantly deposit-funded and regulated individually as a less significant institution. Consequently, the German regulator's preferred resolution strategy for savings banks consists of standard insolvency procedures in the highly unlikely event SFG's institutional protection scheme (IPS) fails to protect their viability. The savings banks therefore have no incentive to build up resolution buffers.

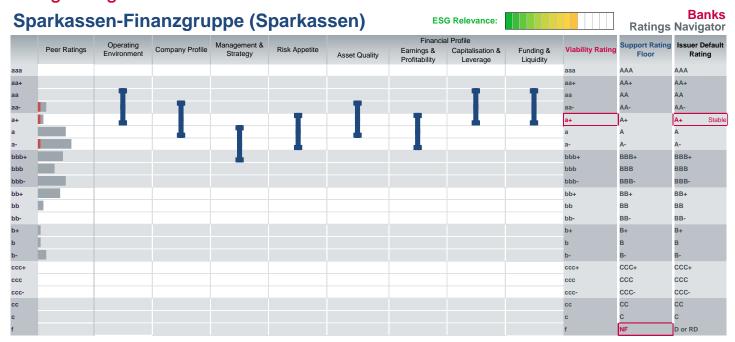
We exclude from our definition of SFG the Landesbanken, the savings banks' central institutions, most of which have large resolution debt buffers in their capacity as domestic systemically important banks that follow single-point-of-entry approaches and bail-in as preferred resolution strategies. Therefore we do not expect the savings banks' depositors to benefit from the Landesbanken's debt buffers in a resolution.

Short-Term Ratings Driven by Strong Funding and Liquidity Profile

The savings banks' large and rising retail deposit base and leading collective market share in the German retail deposit market underpin SFG's strong funding and liquidity profile, which drives the group's 'aa-' score for funding and liquidity. The 'F1+' Short-Term IDR assigned to SFG and the savings banks is the higher of two options mapping to their 'A+' Long-Term IDRs.



Ratings Navigator



Significant Changes

Risk from Pandemic has Subsided

We revised the Outlooks on SFG's Long-Term IDR, asset quality, and earnings & profitability to Stable from Negative in June 2021 because the risk of a significant deterioration in the underlying metrics has subsided since our previous review in August 2020, and we expect the VR of 'a+' to be sufficiently resilient to plausible downside scenarios. SFG's business model focusing on lending to German SMEs and households proved resilient in 2020 despite a severe decline in GDP from repeated and extended lockdowns in Germany.

Large state programmes to support companies and households affected by the pandemic, and regulatory forbearance for the classification of crisis-driven loan payment holidays and non-performing loans (NPLs) have strongly mitigated German banks' negative rating migration, RWAs inflation, and provisioning needs since 2Q20. The extensive use of furlough schemes since 2Q20 has protected household income and contained the rise in the unemployment rate to 4.2% at end-2020. This has strongly supported borrowers' ability to service their loans. The use of loan moratoria has been much lower than in most European countries since the start of the crisis.

Consumer spending declined less in Germany than in other European economies in 2020, despite restrictive lockdowns and tighter restrictions since December 2020, which continued during most of 1H21 and required all non-essential outlets to close and led some regional governments to impose travel bans. Consumer spending contracted by 6.1% in 2020, compared with 11% in the UK and 8% on average in the eurozone.

The economic performance in Germany was better than expected, and better than that of most large European peers in 2020 as only a relatively low proportion of the economy was affected by the lockdowns. We expect the economy to regain momentum as restrictions are being eased and vaccination progresses. Fitch's June 2021 Global Economic Outlook forecasts the German GDP to recover close to its pre-pandemic level by end-2021. The legal obligation for companies that qualify for state support to file for bankruptcy was suspended until end-April 2021. We expect insolvencies in Germany to peak between 2H21 and 1H22 because we expect a large proportion of government support programmes to remain in place until the end of the lockdown.



We expect SFG's impaired loans to rise moderately by end-2021, but we expect the four-year-average NPL ratio (about 1%- 1.3% at end-2020, based on Fitch's estimates) to remain below 2% in the medium term. The NPL increase will be mitigated by the group's low risk appetite, conservative underwriting standards, strong collateral and low concentrations. We expect that some of SFG's more vulnerable micro and small SME borrowers will not fully recover once state support measures are lifted, and many corporates and SMEs are likely to emerge from the crisis with durably weaker credit profiles. However, we do not expect pressure on SFG's mortgage loans, given their robust collateralisation and mortgage borrowers' strong payment behaviour.

SFG's profit was resilient in 2020 owing to its strong market position, despite LICs rising to 18bp of gross loans (7bp in 2019). In 2020, SFG's operating profit/RWAs remained robust at 0.9% (1.1% in 2019), comfortably within our expectations for an earnings & profitability score of 'a', when adjusted to neutralise the group's strongly overstated RWAs density that results from the savings banks' use of the standardised approach to assess their credit risks. We expect profitability to remain challenged in 2021, despite a recovery in business activity and consumer spending, as LICs will remain material.

Operating Environment Score for German Banks Stabilised

The outlook revision to Stable from Negative in June 2021 reflects our view that the economic fallout from the coronavirus crisis no longer represents a near-term risk to the operating environment, which was our base case when we downgraded the score to 'aa-'/Negative from 'aa'/Stable as part of the Covid-19-driven banking sector review in March 2020.

The German banking sector's high fragmentation, intense competition, as well as vulnerable business models including limited foreign diversification and untested strategic orientations at most large banks, have kept the sector's profits remarkably low, despite years of strong economic environment before the pandemic. We expect this unfavourable market structure to persist after the pandemic, ruling out a higher score within the 'aa' range.

Brief Company Summary

Leading Nationwide Franchise and Stable Business

SFG is not a legal entity but a savings bank network, whose cohesion rests on a mutual support mechanism that the regulator also recognises as a deposit guarantee scheme. The scheme has an impeccable record of protecting all creditors by safeguarding the savings banks' viability.

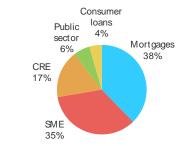
The savings banks are controlled by their respective municipalities. This ensures high client loyalty within their local communities, where the banks are socially engaged, as well as equipped with deep, performance-enhancing knowledge of their local economic environment.

SFG's stable and leading market positions rest on the savings banks' strong shared brand, strategy and marketing activities. Their business model focuses on retail and SME lending and does not rely on volatile businesses. Only a few savings banks engage in trading activities. SFG is also the largest provider of public development loans in Germany. Since the start of the Covid-19 crisis, the savings banks have been instrumental in providing SMEs with quick access to government support measures channelled through KfW.

Each savings bank is allowed to operate only within its local area, but SFG collectively has leading nationwide market shares of 35% in mortgage and SME lending and is the largest domestic deposit taker with a 30% market share at end-2020. The savings banks also closely cooperate with specialist members of the broader public-sector banking group (especially Landesbanken, insurers and asset managers). This underpins SFG's above-average market position, especially in rural areas, where competition is less intense.

SFG Loan Book Split

Total: EUR905bn at end-2020



Source: Fitch Ratings



Summary Financials and Key Ratios

	31 Dec 19	31 Dec 18
Summary income statement	(EURm)	(EURm)
Net interest and dividend income	20,397	21,152
Net fees and commissions	8,168	7,69
Other operating income	-69	-572
Total operating income	28,507	28,275
Operating costs	20,136	19,290
Pre-impairment operating profit	8,371	8,985
Loan and other impairment charges	0	0
Operating profit	8,371	8,985
Other non-operating items (net)	-4,091	-4,412
Tax	2,449	2,775
Net income	1,831	1,798
Summary balance sheet		
Gross loans	861,208	823,009
Interbank	57,673	63,822
Other securities and earning assets	273,526	275,358
Total earning assets	1,206,572	1,176,083
Cash and due from banks	77,156	50,668
Other assets	16,239	15,851
Total assets	1,299,967	1,242,602
Customer deposits	987,421	941,996
Interbank and other short-term funding	135,421	127,565
Other long-term funding	17,418	17,702
Total funding	1,140,260	1,087,263
Other liabilities	39,601	40,490
Total equity	120,106	114,849
Total liabilities and equity	1,299,967	1,242,602
Ratios (annualised as appropriate)		
Profitability		
Operating profit/risk-weighted assets	1.1	1.3
Net interest income/average earning assets	1.7	1.8
Non-interest expense/gross revenue	70.6	68.2
Net income/average equity	1.6	1.6
Asset quality		
Growth in gross loans	4.7	7.1
Loan impairment charges/average gross loans	0.1	0.0
Capitalisation		
Common equity tier 1 ratio	16.0	16.2
Tangible common equity/tangible assets	9.2	9.2
Funding and liquidity		
Loans/customer deposits	87.2	87.4
Customer deposits/funding	86.6	86.6
Source: Fitch Ratings, Fitch Solutions, SFG		



Key Financial Metrics - Latest Developments

Pre-Impairment Profitability Strong First Line of Defence

Profitability weakened moderately in 2020 but, owing to the savings banks' strong market position, remains (on a par with the cooperative banks) by a wide margin the strongest and most resilient of all large German banking groups. SFG's pre-impairment income suffered from a further decline in its net interest income to EUR19.6 billion (2019: EUR20.2 billion), which dominate SFG's revenue mix. This was only partially offset by a EUR200 million increase in commission income and about EUR200 million cost savings from gradual staff reductions and process optimizations.

SFG's cost-income ratio of 67% (SFG's calculation) in 2020 is reasonable in light of its branch-heavy model and significantly better than the German banking sector average. Regulatory cost inflation and SFG's commitment to its dense branch network will constrain the savings potential from cost-cutting initiatives. Investments in big data could improve revenues, but are likely to be dwarfed by pandemic-driven credit and valuation losses in the short term.

We expect SFG's net interest margin to continue to erode gradually. This is because savings banks generally do not hedge interest rate risk in their banking books, while the pandemic has increased the likelihood that interest rates will remain extremely low for a long time. The uncertainty related to the crisis could weigh on demand from borrowers, which might constrain SFG's ability to mitigate the pressure on its net interest margin by maintaining strong loan growth similar to the last few years.

We expect most savings banks to remain highly reluctant to pass on negative rates to their retail depositors in the foreseeable future. In addition, we believe that charging rising levels of commissions for already existing services will become increasingly difficult without alienating client relationships. However, sizeable potential still exists to charge increasingly negative rates to corporate borrowers. Similarly, if negative rates on retail deposits become inevitable at some point, the strength of the savings banks' franchises should allow them to manage the resulting client attrition (and protect revenue generation) better than most large domestic competitors.

Capitalisation Remains Sound

SFG's CET1 ratio increased to sound 16.4% at end-2020 owing to profit retention outpacing a further RWAs increase driven by strong loan growth of 5.2% in 2020. We expect SFG to protect its franchise by growing faster than the market while maintaining adequate loss-absorbing capacity as it continues to strengthen its capital reserves. The stable trend on SFG's capital score, reflects the significant headroom available at the current score of 'aa-'. as we expect the bank to remain clearly profitable through the crisis.

Saving banks' use of the standardised approach for credit-risk RWAs for all asset classes strongly limits SFG's vulnerability to rating migration and to regulatory RWA inflation. The standardised approach also strongly understates the group's CET1 and total capital ratios (by up to 35%, in our view) compared with European mutual banking groups with similar risk profiles and operating in similar environments, but which make extensive use of the internal rating-based approach. SFG's stable leverage ratio of 8.5% at end-2020 is much stronger than those of domestic and foreign peers.

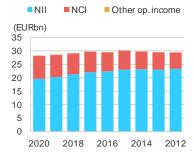
SFG is not subject to Supervisory Review and Evaluation Process and MREL requirements or resolution planning at group level. Each savings bank is subject to individual SREP requirements, which mainly address their vulnerability to unhedged interest rate risks in their banking books.

The savings banks' status as public-law institutions constrains their ability to raise capital from the controlling municipalities. Instead, capital weaknesses at individual savings banks are generally addressed by merging them into stronger neighbouring savings banks.

Funding Dominated by Stable and Granular Deposits

The savings banks' large and steadily rising stock of retail deposits as well as their high and stable market shares underpin SFG's strong funding and liquidity profile. The group's size and resilience in previous crises, owing to its strong brand recognition and entrenched customer relationships, makes its deposit base less sensitive to market sentiment than those of smaller

Resilient Revenue Generation



Source: Fitch

Consistent High Capital Generation



Source: SFG, Fitch Ratings



competitors. This has also been the case since the beginning of the pandemic, and we expect its stability to remain intact through the current crisis.

The strong increase in German households' savings rates since March 2020 has generated a large influx of deposits that is unlikely to reverse as long as economic conditions do not normalise. The savings banks' overnight deposits continue to increase as a proportion of their total deposits. However, this does not increase SFG's sensitivity to deposit outflows. This is because competitors are also subject to the same trend, but their modest profitability will constrain their ability to engage in aggressive deposit-pricing to lure depositors from SFG.

SFG's client deposits rose by 7.9% yoy to EUR1.08 billion at end-2020. This represents a stable 30% of the German deposit market (38% of retail and 14% of corporate deposits). Savings banks typically have highly liquid balance sheets, as shown by SFG's high aggregated liquidity coverage ratio of 204% at end-2020. This reflects the group's comfortable ratio of highly liquid assets to deposits.

All statements regarding SFG's 2020 performance and balance sheet items refer to preliminary data released by Deutscher Sparkassen-and Giroverband (DSGV).

Sovereign Support Assessment

The Support Rating and Support Rating Floor reflect our view that, due to the bank resolution framework, senior creditors cannot rely on full extraordinary state support.

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			\checkmark
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

SFG has an ESG Relevance Score of '4' for Group Structure in contrast to a typical relevance score of '3' for comparable banks. This reflects our view that SFG is one of the least cohesive groups to which Fitch assigns group ratings. SFG does not produce consolidated financial accounts and its aggregated risk reporting is less advanced than other European mutual support banking groups rated by Fitch. This means that ESG issues are credit relevant to the issuer, but not a key rating driver by itself. However, the score has a moderate negative impact on the rating in combination with other factors. The score also reflects the often lengthy and complex decision-making process of the group and limited enforcement rights, because SFG is not a consolidated legal entity.

Except for the matters discussed above, the highest level of ESG credit relevance, if present, is a score of 3. This means ESG issues are credit-neutral or have only a minimal credit impact on SFG, either due to their nature or to the way in which they are being managed by the SFG. For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg.

Credit-Relevant ESG Derivation erall ESG Scale Sparkassen-Finanzgruppe (Sparkassen) has 1 ESG rating driver and 4 ESG potential rating drivers Sparkassen-Finanzgruppe (Sparkassen) has exposure to organizational structure; appropriateness relative to business model; opacity; intra-group dynamics; ownership which, in combination with other factors, impacts the rating. Sparkassen-Finanzgruppe (Sparkassen) has exposure to compliance risks including fair lending practices, mis-selling, repossession/foreclosure practices, consumer data protection (data 1 driver issues security) but this has very low impact on the rating. Sparkassen-Finanzgruppe (Sparkassen) has exposure to operational implementation of strategy but this has very low impact on the rating 4 potential driver issues Sparkassen-Finanzgruppe (Sparkassen) has exposure to board independence and effectiveness; ownership concentration; protection of creditor/stakeholder rights; legal /compliance risks; business continuity, key person risk; related party transactions but this has very low impact on the rating. 2 Sparkassen-Finanzgruppe (Sparkassen) has exposure to quality and frequency of financial reporting and auditing processes but this has very low impact on the rating. issues not a rating driv 5

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

E	Scale
5	
4	
3	
2	
1	
-	

ss	cale
5	
4	
3	
2	
1	

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

	CREDIT-RELEVANT ESG SCALE
Но	ow relevant are E, S and G issues to the overall of
5	Highly relevant, a key rating driver that has a the rating on an individual basis. Equivalent to importance within Navigator.
4	Relevant to rating, not a key rating driver but I rating in combination with other factors. Equiv- relative importance within Navigator.
3	Minimally relevant to rating, either very low im managed in a way that results in no impact on Equivalent to "lower" relative importance within
2	Irrelevant to the entity rating but relevant to the

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		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
	_		

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, 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.

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.

elevant 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. 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 © 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. 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 hey provide to Fitch an

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 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). 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 stateme

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.