

IKB Deutsche Industriebank AG

Key Rating Drivers

Resilient Financials Drive Stable Outlook: Fitch Ratings expects IKB Deutsche Industriebank AG's (IKB) asset quality and profitability to remain stable and adequate amid easing pandemic-induced risks. Germany's economy is recovering from the 2020 recession and IKB has performed significantly better so far through the pandemic than we had expected.

Independent Specialised Corporate Lender: IKB's Issuer Default Ratings (IDRs) and Viability Rating (VR) reflect the bank's niche franchise and business model focusing on unsecured public development loans (PDLs; 56% of IKB's loan book at end-1H21) and lending to German mid-cap corporates. The ratings also reflect IKB's strongly improving financial profile – including adequate capitalisation, funding and liquidity – after over a decade of restructuring.

Restructuring Successfully Completed: IKB's franchise rests on decades of relationships with the majority of larger German mid-cap companies with turnover above EUR250 million, helped by its cooperation with KfW (AAA/Stable/F1+), the largest German PDL provider. IKB's modestly diversified business model in terms of product offering, foreign diversification and ability to generate fee income independently from its lending business constrains our assessment of its business profile.

Robust Asset Quality: IKB's good asset-quality metrics have been resilient to the pandemic. Its non-performing loan (NPL) ratio slightly increased to 1.9% at end-1H21, supported by the bank's moderate risk appetite based on sound underwriting standards. However, our assessment of asset quality is constrained by the bank's large single loan exposures relative to its capital. We expect IKB's four-year average NPL ratio to remain below 2% in 2022.

Stable Profitability: IKB's adequate profitability benefits from its lean processes and low-cost organisation. Its cost efficiency is well above average and mitigates the strong competitive pressure prevailing in German corporate banking. We expect the bank's pre-impairment profits to remain a sufficient first line of defence to absorb potential credit losses, allowing a four-year average operating profit/risk-weighted assets (RWAs) of at least 0.5% over the next two years.

Adequate Capitalisation: IKB's common equity Tier 1 (CET1) capital ratio of 15.1% at end-1H21 provides a reasonable buffer over its regulatory requirement. The ratio is likely to decline in the next quarters as a result of loan growth but should remain above 13% in the medium term.

Stable Funding, Sound Liquidity: German state-owned development banks fund with matching maturities IKB's entire PDL book, for which the bank does not carry funding or asset-liability mismatch risks. IKB funds its commercial loan book mainly with corporate and retail deposits as well as central bank and bilateral repos, given its still underdeveloped access to the capital markets. Liquidity has been sound during the pandemic.

Rating Sensitivities

Significantly Stronger Franchise: An upgrade of IKB's ratings would notably require more diversified client, funding and revenue bases, without negatively affecting the bank's risk profile. Given the bank's post-restructuring strategic plan and specialised business model, we view this as unlikely in the near to medium term. An upgrade would also be contingent on IKB materially and sustainably improving its operating profitability toward an operating profit/RWAs of 1.5% while maintaining a good asset quality and a CET1 ratio above 13%.

Unexpectedly High Credit Losses: IKB's financial profile offers some headroom at the current VR level. Pressure on the VR could arise from a material deterioration in asset quality, earnings and capitalisation, with a decline of the operating profit/RWAs below 0.5% and of the CET1 ratio below 12% without clear recovery prospects. Evidence of significantly loosening underwriting standards or weaknesses in its risk controls would also likely have negative rating implications.

Ratings

Foreign Currency

Long-Term IDR	BBB
Short-Term IDR	F3
Viability Rating	bbb
Government Support Rating	No Support

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

[Fitch Revises IKB Deutsche Industriebank AG's Outlook to Stable; Affirms Long-Term IDR at 'BBB' \(December 2021\)](#)

[Fitch Ratings 2022 Outlook: Western European Banks \(December 2021\)](#)

[Global Economic Outlook \(December 2021\)](#)

Analysts

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

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

Ratings Navigator

IKB Deutsche Industriebank AG							ESG Relevance: 	Banks Ratings Navigator		
Operating Environment	Business Profile	Risk Profile	Financial Profile				Implied Viability Rating	Viability Rating	Government Support Rating	Issuer Default Rating
			Asset Quality	Earnings & Profitability	Capitalisation & Leverage	Funding & Liquidity				
	20%	10%	20%	15%	25%	10%				
aaa							aaa	aaa	aaa	AAA
aa+							aa+	aa+	aa+	AA+
aa							aa	aa	aa	AA
aa-							aa-	aa-	aa-	AA-
a+							a+	a+	a+	A+
a							a	a	a	A
a-							a-	a-	a-	A-
bbb+							bbb+	bbb+	bbb+	BBB+
bbb							bbb	bbb	bbb	BBB Sta
bbb-							bbb-	bbb-	bbb-	BBB-
bb+							bb+	bb+	bb+	BB+
bb							bb	bb	bb	BB
bb-							bb-	bb-	bb-	BB-
b+							b+	b+	b+	B+
b							b	b	b	B
b-							b-	b-	b-	B-
ccc+							ccc+	ccc+	ccc+	CCC+
ccc							ccc	ccc	ccc	CCC
ccc-							ccc-	ccc-	ccc-	CCC-
cc							cc	cc	cc	CC
c							c	c	c	C
f							f	f	ns	D or RD

The Key Rating Driver (KRD) weightings used to determine the implied VR are shown as percentages at the top. In cases where the implied VR is adjusted upwards or downwards to arrive at the VR, the KRD associated with the adjustment reason is highlighted in red.
■ Higher influence ■ Moderate influence

VR Adjustments

The asset quality score is below the implied score to reflect the loan concentrations inherent in IKB's specialised business model focused on unsecured lending for larger corporates. The earnings & profitability score is above the implied score because IKB's historic performance is negatively distorted by its restructuring, which is now completed. The capitalisation & leverage score is below the implied score to reflect the cyclical nature of unsecured corporate loans, which dominate the bank's balance sheet.

Significant Changes

Economic Normalisation Will Help to Stabilise German Banks' Performance in 2022

The pandemic's resurgence adds uncertainty to the pace of the economic recovery, and modest profitability will remain German banks' main weakness in the foreseeable future.

Supply Chain Disruption Main Short-Term Risk for Corporates Alongside Pandemic

We expect muted corporate loan growth of 2% in Germany in 2022, less than half the expected GDP growth rate of 4.4%. Given German corporates' deep integration in global trade flows, the recovery in German industrial activity (and, thus, demand for corporate loans) is particularly vulnerable to global supply chain disruptions and inflationary pressures that seem likely to persist well into 2022. German corporates' accumulation of precautionary funding at the start of the pandemic could also weigh on loan demand.

German Banks' Asset Quality to Remain Strong Thanks to Robust Corporate Sector

Some corporates have yet to fully recover and adapt to the operating environment post-pandemic. However, the German corporate sector's strengthened capitalisation over the past decade, precautionary funding in 2020, and current opportunistic margin increases amid inflationary pressures, should keep corporate defaults low in 2022. Thus, we expect the German banking sector's NPL ratio to remain close to 1.6%. Even if the resurgence of the pandemic

prompts banks to delay the release of their sizeable residual stock of loan loss allowances driven by post-model adjustments booked in 2020, we expect German banks' net LICs in 2022 to be equivalent to less than 1% of the banking sector's CET1 capital, similar to 2021.

Brief Company Summary and Key Qualitative Assessments

Specialist in German Mid-Cap Lending and Public Development Loans

IKB has simplified its business model through more than a decade of restructuring, notably by selling its leasing subsidiary and streamlining its previously fragmented client base. Its private equity ownership has helped to achieve a rigorous client-tiering and prioritise business development. Its lean processes and product offering result in a more efficient cost base and more stringent cost management than its domestic competitors. It has maintained acceptable margins and competitiveness in key lending products despite its small market shares and intense competition in the German corporate banking market, which constrain its pricing power.

IKB's focus on structuring and transmitting PDLs results in a leading expertise in this important advisory-heavy market for German corporates. Its adequate risk/return profile is underpinned by its lean processes and its regional coverage model, but also its larger competitors' reluctance (for cost reasons) to devote more resources to the structuring-intensive part of the PDL market.

Restructuring Successfully Completed

IKB was loss-making until mid-2019, when it completed the last stage of its restructuring and eliminated legacy legal risks. We view its efficiency improvement, and its return to profitability since then, as sustainable. The execution of the business plan benefits from an experienced and credible management team and a solid record of cost-cutting. The management team was recently expanded from two to four members. We expect further significant cost relief over the next few years, some of which has already been contractually secured.

Business Model Ensures Funding Stability and Limits Asset-Liability Mismatch

IKB's funding mainly consists of deposits, repos and maturity-matched funding from 'AAA' rated German state-owned development banks (predominantly KfW) for the entire PDL portfolio, for which IKB consequently does not carry funding or asset-liability mismatch risks. IKB's volatile profitability until 2019 has historically constrained its capital market access and debt issuance franchise. However, the bank's stabilised performance should increasingly facilitate its access to market funding on acceptable terms.

IKB is a member of the voluntary deposit protection scheme of German private commercial banks, which covers liabilities to non-banks (including non-retail customer deposits). This allows the bank to attract deposits at low costs, compensating for its still-underdeveloped capital market access. IKB's corporate and institutional deposits are moderately concentrated, and many relationships pre-date the bank's restructuring. IKB also originates retail deposits via its own online platform. Retail deposits are price-sensitive, although the bank's active depositor management results in adequate stability and retention.

Summary Financials and Key Ratios

	30 Jun 21		31 Dec 20 ^a	31 Mar 20
	6 Months - Interim	6 Months - Interim	9 Months	12 Months
	(USDm)	(EURm)	(EURm)	(EURm)
Summary income statement				
Net interest and dividend income	129	108	166	201
Net fees and commissions	17	14	21	40
Other operating income	40	34	61	88
Total operating income	186	156	247	329
Operating costs	130	109	157	241
Pre-impairment operating profit	56	47	90	89
Loan and other impairment charges	-2	-2	20	30
Operating profit	58	49	71	59
Other non-operating items (net)	-1	-1	-7	-50
Tax	2	2	-10	1
Net income	55	47	73	8
Summary balance sheet				
Assets				
Gross loans	11,055	9,302	8,942	9,714
- Of which impaired	210	177	144	154
Loan loss allowances	197	166	169	185
Net loans	10,857	9,136	8,774	9,530
Interbank	3,460	2,911	2,044	2,199
Derivatives	14	12	19	20
Other securities and earning assets	4,065	3,421	3,492	4,123
Total earning assets	18,396	15,480	14,329	15,871
Cash and due from banks	436	367	2,313	344
Other assets	281	237	272	388
Total assets	19,113	16,083	16,913	16,603
Liabilities				
Customer deposits	5,674	4,775	5,758	6,140
Interbank and other short-term funding	10,357	8,715	8,528	7,670
Other long-term funding	1,020	859	927	1,112
Trading liabilities and derivatives	19	16	17	22
Total funding and derivatives	17,070	14,364	15,229	14,944
Other liabilities	278	234	237	285
Total equity	1,765	1,485	1,447	1,374
Total liabilities and equity	19,113	16,083	16,913	16,603
Exchange rate		USD1 = EUR0.841468	USD1 = EUR0.821963	USD1 = EUR0.91274

^a In 2020, IKB changed its financial year-end to 31 December from 31 March, using a transitional nine-month period ending on 31 December 2020
Source: Fitch Ratings, Fitch Solutions, IKB Deutsche Industriebank AG

Summary Financials and Key Ratios (Cont.)

Ratios (annualised as appropriate)	30 Jun 21	31 Dec 20 ^a	31 Mar 20
Profitability			
Operating profit/risk-weighted assets	1.2	1.1	0.5
Non-interest expense/gross revenue	70.0	63.5	73.1
Net income/average equity	6.4	6.8	0.6
Asset quality			
Impaired loans ratio	1.9	1.6	1.6
Loan loss allowances/impaired loans	93.7	117.0	119.8
Loan impairment charges/average gross loans	0.0	0.3	0.3
Capitalisation			
Common equity Tier 1 ratio	15.1	14.5	12.0
Tangible common equity/tangible assets	8.5	8.5	8.2
Basel leverage ratio	7.6	7.5	7.1
Funding and liquidity			
Loans/customer deposits	194.8	155.3	158.2
Liquidity coverage ratio	205.0	271.0	235.0
Customer deposits/funding	33.3	37.9	41.2

Source: Fitch Ratings

^a In 2020, IKB changed its financial year-end to 31 December from 31 March, using a transitional nine-month period ending on 31 December 2020
Source: Fitch Ratings, Fitch Solutions, IKB Deutsche Industriebank AG

Key Financial Metrics – Latest Developments

Resilient Asset Quality and Moderate NPL Inflows Likely in 2022

Comprehensive state support to the economy through the pandemic has so far underpinned IKB's resilient asset quality and profitability by strongly containing corporate failures and unemployment. Some of this support has been extended until end-1Q22 to accommodate the resurgence of the pandemic. IKB's unsecured midcap lending remains vulnerable to the pandemic, as it is exposed to cyclical industries (e.g. basic metals, construction) and sectors we consider to be more affected, including automotive, real estate and retail. Selective business origination, sound risk management, adequate risk-adjusted pricing, reasonable diversification by industry and a high share of lower-risk PDLs mitigate the concentration risk from large loans.

Net Interest Income (NII) from Lending Dominates Revenue

IKB's robust net lending margin of 1.8% in 1H21 (1.9% in 1H20) benefits from its rigorous pricing policy despite the competitive pressure. New business normalised in 1H21 to EUR1.7 billion (EUR0.9 billion in 1H20), and the bank aims to originate new business of at least EUR2.5 billion in 2021 to achieve its target net income of EUR100 million, which is plausible, in our view.

Positive Impact on Capital from Basel IV

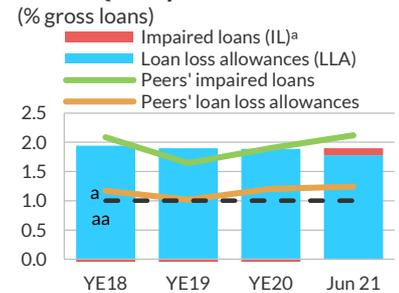
IKB's high Basel leverage ratio of 7.6% in comparison to its 15.1% CET1 ratio at end-1H21 reflects its high share of unsecured loans, which results in an above-average RWA density of 52%. The latter decreased from 68% at end-2019 due to an increased share of PDL business, which carries low risk-weights. The bank expects positive effects from Basel IV, due to a lower loss-given-default standard parameter. The output floor will not be constraining.

Opportunistic Use of ECB Facilities Sustains NII and Enhances Funding

IKB's ECB funding (essentially TLTRO) rose to EUR3.3 billion at end-1H21 from EUR1.2 billion at end-2019. This reflects its opportunistic take-up of TLTRO III, whose conditions the ECB further eased in 2Q20 to tackle the impact of the pandemic. IKB's large TLTRO III take-up supports its excess liquidity, leading to a liquidity coverage ratio of 205% at end-1H21.

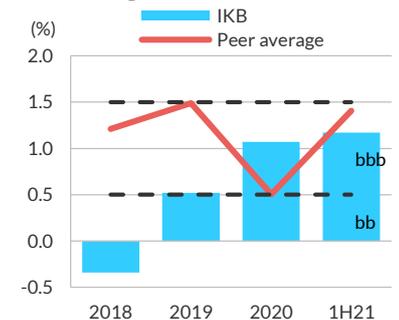
Dashed lines: indicative ranges and implied scores for core metrics for banks operating in environments scored in the 'aa' category. Peer average includes IKB, Aareal Bank AG (VR: bbb+), Landesbank Saar (bb+), NIBC Bank N.V. (bbb), Bayerische Landesbank (bbb) and Landesbank Baden-Wuerttemberg (bbb).

Asset Quality



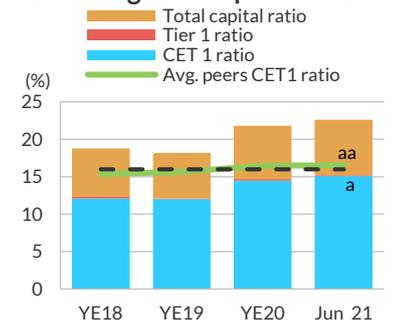
^a YE18-YE20 ILS fully covered by LLAs
Source: Fitch Ratings, banks

Operating Profit/RWAs



Source: Fitch Ratings, banks

Risk-Weighted Capital Ratios



Source: Fitch Ratings, banks

Government Support Assessment

IKB's Government Support Rating (GSR) of 'no support' reflects Fitch's view that, due to the EU's Bank Recovery and Resolution Directive, senior creditors can no longer rely on full extraordinary support from the sovereign if the bank becomes non-viable.

GSR Key Rating Drivers

Typical D-SIB GSR for sovereign's rating level (assuming high propensity)	a+ to a-
Actual country D-SIB GSR	no support
GSR	no support
Government ability to support D-SIBs	
Sovereign Rating	AAA/Stable
Size of banking system	Negative
Structure of banking system	Neutral
Sovereign financial flexibility (for rating level)	Positive
Government propensity to support D-SIBs	
Resolution legislation	Negative
Support stance	Negative
Government propensity to support bank	
Systemic importance	Negative
Liability structure	Neutral
Ownership	Neutral

Key Rating Drivers' influence on GSR

 Higher
 Lower

Environmental, Social and Governance Considerations

The highest level of ESG credit relevance is a score of '3'. ESG issues are credit-neutral or have only a minimal credit impact on IKB, either due to their nature or to the way in which they are being managed by IKB. For more information on our ESG Relevance Scores, visit www.fitchratings.com.

FitchRatings IKB Deutsche Industriebank AG

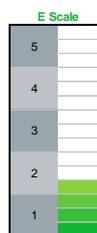
Banks
Ratings Navigator

Credit-Relevant ESG Derivation

Credit-Relevant ESG Derivation			Overall ESG Scale				
IKB Deutsche Industriebank AG has 5 ESG potential rating drivers			key driver	0	issues	5	
<ul style="list-style-type: none"> IKB Deutsche Industriebank AG 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. 			driver	0	issues	4	
			potential driver	5	issues	3	
			not a rating driver	4	issues	2	
				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 scores. 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.

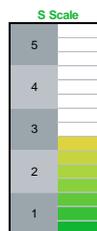
The Credit-Relevant ESG Derivation table shows the overall ESG score. This score signifies the credit relevance of combined E, S and G issues to the entity's credit rating. The three columns to the left of the overall ESG score summarize the issuing entity's sub-component ESG scores. The box on the far 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.

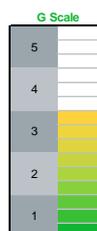
Social (S)

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



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.

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.