

ING Groep N.V.

Update

Key Rating Drivers

Business Profile Drives Ratings: ING Groep N.V.'s (ING) ratings are driven by the group's strong franchise in retail and wholesale banking in the Benelux region, its diversified business model, moderate risk appetite, and sound through-the-cycle asset quality and earnings. The ratings are underpinned by the well-balanced funding profile. ING's ratings also balance the bank's current sound capitalisation with the medium-term target for its regulatory capital ratios, which is low compared to similarly rated peers.

Leading Franchise in Key Markets: ING's stable universal business model, well-entrenched market position in retail and wholesale banking in the Benelux region, good pricing power and geographic diversification, particularly in neighbouring countries, underpin the bank's credit profile. ING's retail focus and limited exposure to capital market activities result in sound and recurrent revenue generation.

Moderate Risk Appetite: ING's moderate risk appetite is supported by sound and conservative underwriting standards focused on secured lending, centralised credit and market risk controls. Pockets of risk related to cyclical industries and volatile country exposure appear well managed, in Fitch Ratings' view.

Sound Asset Quality: ING's low-risk business model, sound underwriting and well-diversified and secured lending underpin the bank's sound asset quality. ING's impaired loans ratio has been consistently below that of the large Dutch banks, and has proven resilient through previous credit cycles. Fitch expects impaired loans to increase from a sound starting point, given the weaker economic environment affecting mainly SME and corporate borrowers. However, the impaired loans ratio should remain below 3% of gross loans in the next 18 months.

Business Profile Supports Earnings: ING's sound earnings generation reflects its strong franchise in retail and corporate banking in the Benelux region, limited exposure to volatile businesses, and diversification into selected markets with growth potential. Despite the benefits from higher interest rates, we expect operating profit/risk-weighted assets (RWAs) in 2023 will be in line with the current four-year average of about 2%. This is due to weakening lending growth, above-historical-average loan impairment charges and some cost inflation.

Weaker Risk-Weighted Capital Ratios: The group's risk-weighted capital ratios are sound and compare adequately with similarly rated peers. We expect ING to gradually steer its CET1 ratio towards its target of about 12.5% by 2025 (under Basel III end-game rules) through further capital distributions, which is a lower level than most other 'a+' rated peers.

Stable Funding Profile: The group's funding profile reflects a strong franchise in some deposit-rich jurisdictions, such as Belgium and Germany. Its wholesale funding maturities are reasonably spread out over time, and the group's ample buffer of high-quality liquid assets further mitigates refinancing risk.

Ratings Reflect Consolidated Group: Fitch assesses the group on a consolidated basis as ING Bank, the group's main operating company, is ING's only significant asset, and the probabilities of default of the two entities are highly correlated. ING acts as the holding company for the group and its Viability Rating (VR) is equalised with ING Bank's VR. The group is regulated on a consolidated basis, there is no double leverage at the holding company level, and liquidity is managed centrally. We view the fungibility of capital between the holding company and the bank as high.

Ratings

Foreign Currency	
Long-Term IDR	A+
Short-Term IDR	F1
Derivative Counterparty Rating	A+(dcr)

Viability Rating a+

Government Support Rating ns

Sovereign Risk (Netherlands)

Long-Term Foreign- and Local-Currency IDRs	AAA
Country Ceiling	AAA

Outlooks

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

Applicable Criteria

[Bank Rating Criteria \(September 2022\)](#)

Related Research

[Large European Banks Quarterly Credit Tracker \(March 2023\)](#)

[Global Economic Outlook \(March 2023\)](#)

[Netherlands \(March 2023\)](#)

[Major Belgian and Dutch Banks - Peer Review 2023 \(February 2023\)](#)

[Fitch Affirms ING Groep N.V. at 'A+'; Outlook Stable \(November 2022\)](#)

Analysts

Andreea Playoust, CFA
 +33 1 44 29 91 71
andreea.playoust@fitchratings.com

Francesca Vasciminno
 +39 02 9475 7057
francesca.vasciminno@fitchratings.com

Rating Sensitivities

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

We could downgrade ING Bank's and ING's IDRs and VRs if there was a material deterioration in asset quality with the impaired loan ratio increasing above 3% over a prolonged period, or if the operating profit/RWAs ratio durably declines below 2%. Rating pressure would also arise if convergence to the targeted CET1 ratio is more rapid than anticipated, reflecting more aggressive capital distributions, in particular if it is not accompanied by stronger operating profitability as expected in the group's strategic plan.

An adverse change in ING's risk appetite could be negative for the ratings, for example if the contribution of more volatile activities or countries with lower rated operating environments to ING's earnings grows rapidly.

ING's IDRs and VR could also be downgraded in case of a significant build-up of double leverage at the holding company, although this is not Fitch's expectation.

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

An upgrade of both entities' IDRs and VRs is unlikely in the short term, and would require a material improvement in the group's business profile from higher business diversification and enhanced franchises in mature markets outside Benelux, which would lead to further improvement in profitability, coupled with stronger asset quality and capitalisation metrics in line with 'aa' category assessments under Fitch's criteria.

Other Debt and Issuer Ratings

Rating level	ING Groep N.V.	ING Bank N.V.
Deposits: long-term/short-term	-	AA-/F1+
Senior unsecured: long-term/short-term	A+/F1	AA-/F1+
Subordinated Tier 2 debt	A-	A-
Subordinated AT1 debt	BBB	-

Source: Fitch Ratings

ING Bank's IDRs, Senior Unsecured Debt and Deposit Ratings

ING Bank's Long-Term IDR and senior unsecured debt are one notch above the bank's VR, since Fitch believes the risk of default on senior obligations, as measured by the Long-Term IDR, is lower than the risk of the bank failing, as measured by its VR. Fitch believes external senior creditors benefit from resolution funds ultimately raised by the holding company and designated to protect ING Bank's creditors in a group failure scenario.

The one-notch uplift reflects the bank's significant and sustainable buffer of junior debt that could be made available to protect its senior third-party creditors from default in case of failure, either in resolution or as part of a private sector solution (i.e. distressed debt exchange).

We expect the buffer to be sustainable. Our expectation is based on the bank's need to meet the end-state minimum requirement for own funds and eligible liabilities (MREL), set at 28.71% of RWAs starting 1 January 2024. The group has adopted a single-point-of-entry resolution strategy, and ING Groep N.V. is the resolution entity. All MREL instruments, including senior unsecured debt, are issued at group level and downstreamed to ING Bank as junior-ranked instruments to third-party senior debt.

ING Bank's long-term and short-term deposit ratings are at 'AA-' and 'F1+' as deposits rank pari passu with senior preferred debt and derivatives claims in the Netherlands.

Derivative Counterparty Ratings

We rate the Derivative Counterparty Ratings (DCRs) of ING Bank and ING at the same level as the entities' respective Long-Term IDRs because under Dutch legislation, derivative counterparties have no definitive preferential status over other senior obligations in resolution.

Subordinated Debt and Other Hybrid Securities

The subordinated Tier 2 debt securities issued by ING Bank and ING are notched down twice from the respective VRs, reflecting baseline notching for this type of debt under Fitch's criteria.

Additional Tier 1 (AT1) instruments issued by ING are rated four notches below its VR. The notching reflects poor recoveries of these securities given their deep subordination (two notches) as well as incremental risk of non-performance relative to the VR due to fully discretionary coupons (two notches).

Significant Changes from Last Review

Weaker Economic Outlook but Resilient Environment for Banks

Fitch expects Dutch GDP growth to weaken significantly to 1.1% in 2023 and 1.4% in 2024, following strong 4.6% growth in 2022. The economic slowdown, driven by high inflation and rising interest rates, may hurt business and consumer confidence and erode households' real incomes, resulting in moderate pressure on banks' asset quality, mainly stemming from the most vulnerable SME and corporate borrowers.

However, Fitch believes this will not permanently damage the stable and well-developed Dutch economy and, thus, should not impair Dutch banks' capacity to generate sound business volumes. We believe the operating environment score at 'aa-/stable, reflecting a tight labour market, high household savings and ample fiscal room, has some headroom to absorb a weakening of the economic outlook.

Higher Interest Rates to Feed Through Revenue In 2023

ING executed its strategy well in 2022, further consolidating its retail banking franchise in selected countries, improving revenue diversification, and continuing digital improvements. After an adequate 2022, ING expects to grow revenue by more than 10% in 2023, mainly from improved deposit margins, in line with Fitch's forecasts. Given the uplift from higher interest rates, ING revised its revenue objective up to 4%-5% CAGR, from 3%, for 2021-2025. This revenue increase should result in a moderate profitability improvement as higher inflation-driven costs and above-long-term-average LICs will weigh on ING's operating profit.

We expect the operating profit/RWAs ratio to increase to about 2.2% in 2023 (2022: 1.8%), which is commensurate with the group's average through-the-cycle level. ING kept recurring operating costs under control in 2022, and, thanks to higher revenue, we expect the cost/income ratio to decline to about 55% in 2023 (2022: 58% excluding one-offs, as calculated by Fitch), comparing closely with European peers and moving closer to the 2025 target of 50%-52%.

LICs accounted for 29bp of average gross loans, and were slightly above ING's through-the-cycle average of about 25bp. Russia-related provisions and management overlays due to weaker economic prospects were the main drivers for LICs in 2022. The impaired loans ratio remained at a healthy level of about 1.8% at end-2022, despite a slight increase in impaired loans in 4Q22. We expect the ratio to increase on the back of the weaker economic environment, but to remain below 3% up to end-2023.

ING reported a CET1 ratio of 14.5% at end-2022 but we expect the ratio to decrease below 14% by end-2023, driven by additional capital distributions as the group steers the ratio towards its 2025 target of about 12.5%.


Sound Funding and Liquidity

ING's stable funding profile is supported by strong franchises in deposit-rich markets, such as Belgium and Germany, and very good access to wholesale funding. Customer deposits accounted about 74% of ING's total funding at end-2022 and the bulk of deposits is represented by granular and stable retail deposits. Customer deposits increased by almost 4% in 2022 (following 1.3% growth in 2021, and 6% in 2020), and we expect deposit growth to moderate in 2023 as depositors will start drawing on some of the excess liquidity accumulated during the pandemic. The gross loans/customer deposits ratio, which has been consistently better than domestic peers', was about 100% at end-2022.

ING has good access to wholesale debt funding and benefits from a large international investor pool. Debt maturities are reasonably well-spread.

The buffer of high-quality liquid assets increased over the year to EUR187 billion, or about 19% of total assets, at end-2022 (end-2021: 17%). The liquidity buffer comfortably covers the volume of short-term funding and annual long-term funding refinancing needs in the next 18 months. By end-2022, ING had already reimbursed EUR29.5 billion out of the EUR65.5 billion taken up under ECB's targeted longer-term refinancing operations. We expect ING will repay the remainder of the central bank funding in the next 12 months with its large liquid asset buffer, by issuing covered bonds or using other sources of central bank refinancing.

Ratings Navigator

ING Groep N.V.							ESG Relevance: 	Banks Ratings Navigator		
Operating Environment	Business Profile	Risk Profile	Financial Profile				Implied Viability Rating	Viability Rating	Government Support	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+ Sta
a							a	a	a	A
a-							a-	a-	a-	A-
bbb+							bbb+	bbb+	bbb+	BBB+
bbb							bbb	bbb	bbb	BBB
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. The shaded areas indicate the benchmark-implied scores for each KRD.

Financials

Financial Statements

	31 Dec 22		31 Dec 21	31 Dec 20	31 Dec 19
	Year end (USDm)	Year end (EURm)	Year end (EURm)	Year end (EURm)	Year end (EURm)
	Audited - unqualified	Audited - unqualified	Audited - unqualified	Audited - unqualified	Audited - unqualified
Summary income statement					
Net interest and dividend income	14,831	13,905	13,737	13,711	14,194
Net fees and commissions	3,825	3,586	3,517	3,011	2,868
Other operating income	1,340	1,256	1,269	1,152	1,127
Total operating income	19,996	18,747	18,523	17,874	18,189
Operating costs	11,562	10,840	10,671	10,701	10,352
Pre-impairment operating profit	8,434	7,907	7,852	7,173	7,837
Loan and other impairment charges	1,985	1,861	516	2,675	1,120
Operating profit	6,449	6,046	7,336	4,498	6,717
Other non-operating items (net)	-580	-544	-554	-689	117
Tax	1,840	1,725	1,877	1,246	1,954
Net income	4,029	3,777	4,905	2,563	4,880
Other comprehensive income	-3,350	-3,141	-1,809	-1,590	684
Fitch comprehensive income	678	636	3,096	973	5,564
Summary balance sheet					
Assets					
Gross loans	682,819	640,184	632,712	603,332	616,175
- Of which impaired	12,048	11,296	11,512	12,799	10,151
Loan loss allowances	6,383	5,984	5,275	5,779	4,590
Net loans	676,437	634,200	627,437	597,553	611,585
Interbank	16,755	15,709	20,189	20,495	26,193
Derivatives	37,047	34,734	21,300	30,821	23,951
Other securities and earning assets	193,094	181,037	164,696	166,019	163,771
Total earning assets	923,333	865,680	833,622	814,888	825,500
Cash and due from banks	93,449	87,614	106,520	111,087	53,202
Other assets	15,490	14,523	11,148	11,300	13,042
Total assets	1,032,272	967,817	951,290	937,275	891,744
Liabilities					
Customer deposits	683,444	640,770	617,296	609,642	574,433
Interbank and other short-term funding	112,502	105,477	126,827	125,062	77,874
Other long-term funding	120,431	112,911	93,648	85,570	122,294
Trading liabilities and derivatives	45,906	43,040	28,171	34,827	34,508
Total funding and derivatives	962,283	902,198	865,942	855,101	809,109
Other liabilities	16,219	15,206	14,804	13,365	14,904
Preference shares and hybrid capital	16,837	15,786	15,890	13,150	13,069
Total equity	53,770	50,413	54,654	55,659	54,662
Total liabilities and equity	1,032,272	967,817	951,290	937,275	891,744
Exchange rate		USD1 = EUR0.93756	USD1 = EUR0.884173	USD1 = EUR0.821963	USD1 = EUR0.89015

Source: Fitch Ratings, Fitch Connect, ING Groep N.V.

Key Ratios

	31 Dec 22	31 Dec 21	31 Dec 20	31 Dec 19
Ratios (annualised as appropriate)				
Profitability				
Operating profit/risk-weighted assets	1.8	2.3	1.5	2.1
Net interest income/average earning assets	1.6	1.6	1.6	1.7
Non-interest expense/gross revenue	58.1	58.1	60.1	57.1
Net income/average equity	7.2	8.8	4.6	9.1
Asset quality				
Impaired loans ratio	1.8	1.8	2.1	1.7
Growth in gross loans	1.2	4.9	-2.1	3.3
Loan loss allowances/impaired loans	53.0	45.8	45.2	45.2
Loan impairment charges/average gross loans	0.3	0.1	0.4	0.2
Capitalisation				
Common equity Tier 1 ratio	14.5	15.9	15.5	14.6
Tangible common equity/tangible assets	5.1	5.6	5.8	5.9
Basel leverage ratio	5.1	5.9	4.8	4.6
Net impaired loans/common equity Tier 1	11.1	12.5	14.8	11.7
Funding and liquidity				
Gross loans/customer deposits	99.9	102.5	99.0	107.3
Liquidity coverage ratio	134.0	139.0	137.0	127.0
Customer deposits/total non-equity funding	73.8	71.7	72.5	71.9
Net stable funding ratio	132.0	137.0	n.a.	n.a.

Source: Fitch Ratings, Fitch Connect, ING Groep N.V.

Support Assessment

Commercial Banks: Government Support

Typical D-SIB GSR for sovereign's rating level (assuming high propensity)	A+ to A-
Actual jurisdiction D-SIB GSR	ns
Government Support Rating	ns

Government ability to support D-SIBs

Sovereign Rating	AAA/ Stable
Size of banking system	Negative
Structure of banking system	Negative
Sovereign financial flexibility (for rating level)	Neutral

Government propensity to support D-SIBs

Resolution legislation	Negative
Support stance	Negative

Government propensity to support bank

Systemic importance	Neutral
Liability structure	Neutral
Ownership	Neutral

The colours indicate the weighting of each KRD in the assessment.

■ Higher influence ■ Moderate influence ■ Lower influence

No Support

ING's Government Support Rating 'No Support' reflects Fitch's view that senior creditors cannot rely on receiving full extraordinary support from the sovereign in the event that the bank becomes non-viable. The EU's Bank Recovery and Resolution Directive and the Single Resolution Mechanism for eurozone banks provide a framework for resolving banks that requires senior creditors participating in losses, if necessary, instead of, or ahead of, a bank receiving sovereign support.

Subsidiaries and Affiliates

ING Financial Markets LLC (INGFM)

INGFM's Short-Term IDR of 'F1+' is equalised with that of its parent, ING Bank, because there is, in Fitch's view, an extremely high probability of extraordinary support from ING Bank, if required. INGFM is a broker based in the US and offers various financial services for ING Bank's corporate and institutional clients.

Fitch believes ING Bank has a strong willingness to provide support to INGFM because a default of INGFM would entail considerable reputational risk for the parent, given the single point-of-entry resolution group. We also take into consideration INGFM's high integration with the parent and INGFM's strategic importance as part of ING Bank's international wholesale-banking franchise.

In our opinion, any required support for INGFM would most likely be immaterial relative to its parent's ability to provide it. INGFM accounted for about 3% of ING Bank's total assets and equity at end-2021.

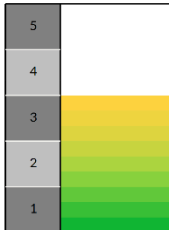
In the support assessment we use ING Bank's Long-Term IDR (one notch above its VR of 'a+' due to a significant and sustainable buffer of junior debt) as the anchor rating in assessing its ability to support its US subsidiary. We believe that INGFM's senior creditors could benefit from junior debt buffers raised by its parent. This is because INGFM is covered under the single-point-of-entry resolution strategy for ING.

INGFM's Short-Term IDR is sensitive to ING Bank's Short-Term IDR. It is also sensitive to adverse changes in our assessment of ING Bank's propensity to support its US subsidiary, which we do not expect in the medium term. As the Short-Term IDR is at the highest possible level, it cannot be upgraded.

Optional section 'Subsidiaries And Affiliates Rating Sensitivities' has been hidden. It can be displayed and enabled for authoring by re-enabling it via the side-bar.

Environmental, Social and Governance Considerations

Overall ESG

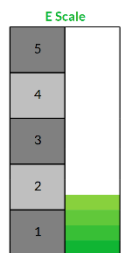


How relevant are E, S and G issues to the overall credit rating?

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.

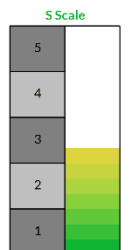
Environmental (E)

General Issues	Score	Impact	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	Business Profile (incl. Management & governance); Risk Profile; Asset Quality



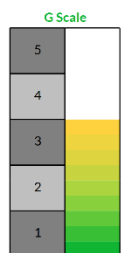
Social (S)

General Issues	Score	Impact	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	Business Profile (incl. Management & governance); Risk Profile
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; Business Profile (incl. Management & governance); Risk Profile
Labor Relations & Practices	2		Impact of labor negotiations, including board/employee compensation and composition	Business Profile (incl. Management & governance)
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	Business Profile (incl. Management & governance); Financial Profile



Governance (G)

General Issues	Score	Impact	Sector-Specific Issues	Reference
Management Strategy	3		Operational implementation of strategy	Business Profile (incl. Management & governance)
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	Business Profile (incl. Management & governance); Earnings & Profitability; Capitalisation & Leverage
Group Structure	3		Organizational structure; appropriateness relative to business model; opacity; intra-group dynamics; ownership	Business Profile (incl. Management & governance)
Financial Transparency	3		Quality and frequency of financial reporting and auditing processes	Business Profile (incl. Management & governance)



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 © 2023 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.