

12 JUN 2023

Fitch Downgrades UBS and Upgrades Credit Suisse on Closing of Acquisition; Outlooks Stable

Fitch Ratings - Paris - 12 Jun 2023: Fitch Ratings has downgraded the Long-Term Issuer Default Ratings (IDRs) of UBS Group AG to 'A' from 'A+' and of UBS AG to 'A+' from 'AA-'. Fitch has also upgraded Credit Suisse AG's Long-Term IDR to 'A+' from 'BBB+'. The Outlooks on the Long-Term IDRs are Stable. UBS Group AG and UBS AG's Long-Term IDRs have been removed from Rating Watch Negative, and Credit Suisse AG's from Rating Watch Evolving, where they were placed on 21 March 2023 after UBS announced it had agreed to acquire Credit Suisse. A full list of rating actions is below.

The rating actions reflect the completion, announced on 12 June 2023, of Credit Suisse Group AG's acquisition by UBS Group AG.

We have also downgraded UBS Group AG's and UBS AG's Viability Ratings (VR) to 'a' from 'a+', as we expect the enlarged group's (UBS) business and risk profiles to be exposed to execution risk from the complex and lengthy integration of Credit Suisse into UBS. UBS will need to stabilise and restore Credit Suisse's franchise and ensure its business is aligned with UBS's more conservative risk appetite. UBS's management will also have to swiftly regain the confidence of Credit Suisse's key stakeholders, in particular wealth management clients and depositors, to prevent a further deterioration in Credit Suisse's franchise and contagion to the rest of the UBS group.

We expect the integration to initially weigh on the enlarged group's operating profitability, as UBS will need to stabilise Credit Suisse's severely impaired revenue generation capacity, while rapidly aligning its cost base with its future earnings potential and completing the wind-down of non-core activities initiated by Credit Suisse, especially in its investment bank. Given the complexity of both organisations, we expect this challenging integration to take several years.

We have upgraded the ratings of Credit Suisse AG and its subsidiaries to reflect the strong shareholder support now available from UBS, as well as the integration into, and ultimately its alignment with, UBS.

The Stable Outlooks on the Long-Term IDRs reflect UBS's ample resources (in particular, a strong and established record of business and financial performance, proven restructuring expertise, and substantial upside to future earnings generation) to absorb high integration costs and manage the risks that will arise from the restructuring, while retaining a strong credit profile consistent with the group's ratings.

We have upgraded and subsequently withdrawn the issuer ratings of Credit Suisse Group AG, which has ceased to exist following its merger into UBS Group AG. We have also withdrawn the ratings of Credit Suisse Group AG's Additional Tier 1 (AT1) instruments following their full write-off imposed by the Swiss regulator to facilitate the acquisition and consequently the cancellation of these instruments by the issuer.

We have aligned the ratings of Credit Suisse Group AG's senior unsecured debt instruments with those of UBS Group AG, to which they have been transferred following the merger of the two holding companies, with UBS Group AG being the surviving entity.

Key Rating Drivers

The ratings reflect Fitch's expectation that the successful integration of Credit Suisse can ultimately strengthen UBS's diverse business model, well-executed strategy and leading position in global wealth management, complemented by a leading Swiss retail and corporate bank and an investment bank with moderate ambitions in terms of scale and risk appetite and focused on supporting the wealth management business.

However, the ratings also reflect the execution risk that we expect to weigh on UBS's otherwise highly stable business model and conservative approach to risk as it integrates Credit Suisse over the coming years.

While we expect the group's performance to initially suffer, we believe UBS has the potential to ultimately restore its above-average combination of strong asset quality, sound, diversified, feedominated earnings, solid capitalisation and resilient funding, and benefit from increased scale and diversification in core businesses, compared with its peer group of European global trading and universal banks (GTUBs).

Group VR Reflects Initiated Integration: We have assigned a group VR of 'a' to UBS Group AG's main operating companies UBS AG and Credit Suisse AG. The group VR reflects our view that UBS AG and Credit Suisse AG have substantially the same failure risk as the group as a whole. This is because the group will operate both entities as core banks, with Credit Suisse AG initially remaining a distinct legal entity and operating as a sub-group beside UBS AG's sub-group until the legal and operational integration of Credit Suisse AG and its subsidiaries into UBS AG, which could take several years to complete.

Debt Buffers Drive IDR Uplift: The Long-Term IDRs and long-term senior debt ratings of UBS AG and Credit Suisse AG are one notch above the group VR because the group's junior and holdco senior debt buffers would provide both entities' senior creditors with additional protection upon failure. We expect the holdco to remain the group's designated single point of entry in a resolution, and the Credit Suisse AG sub-group to be included in UBS AG's resolution group. Therefore, we expect the group's resolution buffers to be available for UBS AG and Credit Suisse AG's creditors, with no material fungibility constraints arising from the group's complex structure.

As Credit Suisse's balance sheet continues to shrink, we expect the debt buffers of the UBS group to increasingly exceed its regulatory requirements, even though these are likely to be raised to account for UBS's larger size and systemic importance.

Asset Quality to Remain Strong: We expect UBS to maintain significantly better asset quality than its peers through the restructuring, based on prudent underwriting standards and a loan book that is predominantly collateralised by securities (Lombard loans) and real estate (to a large extent residential property in Switzerland). Credit Suisse has historically exhibited higher risk appetite than UBS for specific asset classes, such as leverage finance and securitised products. However, Credit Suisse's failure was not rooted in asset quality issues, and its average Stage 3 ratio of 1.0% in 2019-2022 was only slightly above UBS's 0.7% and less than half the average of European GTUBs.

A CHF9 billion second-loss guarantee from the Swiss government covering certain defined non-core assets inherited from Credit Suisse provides substantial protection in case UBS's losses on these assets exceed its CHF5 billion first-loss tranche.

Credit Suisse Will Weigh on Earnings: We expect UBS's profitability to suffer from the complex restructuring of a heavily loss-making Credit Suisse in 2023 and 2024. Therefore, we have downgraded the group's earnings & profitability score by one notch. We expect that UBS will act diligently to align Credit Suisse's cost base with the bank's severely eroded revenue base, but it will take time to sustainably restore an acceptable level of profitability. However, we expect the group's profitability to start recovering from 2025. This should ensure a rolling four-year operating profit/risk-weighted assets (RWA) in line with our expectations for the 'a' range and above the European GTUBs' 2019-2022 average through the restructuring.

Capitalisation Score Reflects Downside Risk: UBS's pro-forma common equity Tier 1 (CET1) ratio of about 14% upon closing is above management's long-term 13% guidance. Notwithstanding the asset guarantee from the state, we have downgraded the group's capitalisation & leverage score to 'a-' from 'a+' to reflect downside risks, if restructuring, integration and litigation costs are significantly higher than anticipated.

Over the medium term, we believe there is substantial upside to internal capital generation. This will also help UBS to meet future higher regulatory capital requirements likely to be imposed by the Swiss regulator to reflect the group's larger size. We expect UBS to manage down its CET1 and leverage ratios toward its guidance of about 13% and at least 3.7% in the long term.

Stabilisation of Funding Profile Necessary: We expect UBS to maintain its prudent liquidity management and continue to benefit from its deposit-rich wealth management, Swiss retail and corporate client base and good, diversified access to debt markets. However, the repeated massive and sudden deposit outflows incurred by Credit Suisse since last year suggest that wealth management deposits can be significantly more confidence-sensitive and so more volatile during idiosyncratic or market crises than previously assumed.

Consequently, one of UBS's most pressing challenges will be to stabilise and restore Credit Suisse's funding franchise by regaining depositor confidence and increasing debt issuance to facilitate repayment of the central bank facilities and avoid contagion to the rest of the group. We have therefore downgraded the group's funding & liquidity score by one notch to 'a', which constrains the Short-Term IDRs to 'F1', the lower option that maps to the entities' Long-Term IDRs.

Rating Sensitivities

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

The Stable Outlook indicates our view that UBS's initial capitalisation and expected earnings generation will provide sufficient flexibility to absorb anticipated restructuring and integration costs. We could downgrade the group's IDRs and VR if unforeseen and severe challenges during the integration signal a heightened risk that UBS may not conclusively address Credit Suisse's intrinsic weaknesses.

Risks include UBS's ability to restore Credit Suisse's reputation and rebuild a franchise that complements its own businesses as well as facing greater costs (including litigation costs) than currently envisaged. A downgrade would be triggered if we believe challenges in the integration of Credit Suisse will durably weaken the group's business, risk and financial profiles, in which case we would likely lower our assessment of the majority of the VR's key rating drivers.

UBS Group AG's ratings are also sensitive to the holdco's double leverage exceeding 120%, without a clear path to reducing it below that threshold.

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

We could upgrade the group's IDRs and VR once Credit Suisse's integration and restructuring have materially progressed, if we have sufficient evidence that execution risk has significantly and durably receded, and that the enlarged group's business model, franchise and financial metrics will remain sustainably close to UBS's strong historical characteristics, allowing solid strategic execution through the cycle.

However, the Stable Outlook signals that an upgrade is unlikely in the short term. This is commensurate with management's guidance that the integration and restructuring will take three to five years.

OTHER DEBT AND ISSUER RATINGS: KEY RATING DRIVERS

The Derivative Counterparty Ratings (DCR) assigned to various entities of the group are in line with the respective issuer's Long-Term IDRs because derivative counterparties in Switzerland, Germany, Spain and the UK have no preferential status over other senior obligations in a resolution. The senior unsecured notes are aligned with the respective IDRs. UBS Bank USA's uninsured deposits are rated one notch above the bank's IDRs because the depositor preference applicable in the US would result in superior recovery prospects upon default.

UBS AG and Credit Suisse AG's Tier 2 as well as UBS Group AG's AT1 debt ratings are notched down from the group's VR to reflect their non-performance and loss severity risks relative to those captured in the VR. The Tier 2 debt ratings are notched twice for loss severity. The ratings of the AT1 notes are notched twice for loss severity and twice for non-performance due to discretionary coupon omission.

Sovereign Support Not Permanent: UBS Group AG's, UBS AG's and Credit Suisse AG's Government

Support Ratings (GSRs) of 'no support' reflect our view that the group's senior creditors cannot rely on receiving full extraordinary support from the sovereign if the group becomes non-viable, because Swiss legislation and regulation include provisions to bail in senior creditors in case of failure.

An upgrade of the GSRs would require a positive reassessment of the Swiss sovereign's propensity of support. However, the resolution regime makes this highly unlikely, in our view. The Swiss government has been instrumental in facilitating Credit Suisse's rescue takeover by UBS. In addition, UBS will benefit from the government's second-loss guarantee on Credit Suisse's difficult to assess assets, and from large extraordinary liquidity facilities from the Swiss central bank even after the completion of the acquisition.

However, these measures are not perennial and cannot be construed as a structurally increased propensity of extraordinary support by the authorities. In addition, in Fitch's view the Swiss legislator is expected to tighten its too-big-too-fail regulations to limit the risk of recourse to taxpayers' money that could otherwise arise in case of UBS's failure, in light of its significantly increased systemic importance.

OTHER DEBT AND ISSUER RATINGS: RATING SENSITIVITIES

The DCRs, senior debt and deposit ratings are primarily sensitive to changes to the respective IDRs. The Tier 2 and AT1 debt ratings are primarily sensitive to changes in the group's VR. The AT1 ratings are also sensitive to changes in Fitch's assessment of their non-performance risk relative to the risk captured in the VR. This may result, for example, from a material increase in the risk of outsized losses, less prudent capital management or shifts in regulatory requirements, particularly if this causes the CET1 capital buffers above requirements to fall below 100bp of RWA.

SUBSIDIARIES & AFFILIATES: KEY RATING DRIVERS

UBS Switzerland AG (UBS Switzerland)

Core Subsidiary, Leading Domestic Bank: The 'a' VR of UBS Switzerland, which houses UBS's Swiss private and commercial banking, reflects its leading domestic franchise, moderate credit risk and sound funding profile. Our assessment of UBS Switzerland's capitalisation, funding and liquidity reflects the bank's deep integration with UBS AG, and the high fungibility of liquidity and capital within UBS AG.

Debt Buffers Drive Uplift: UBS Switzerland's Long-Term IDR is one notch above its VR, because the group's buffers of junior and holdco debt provide senior creditors with additional protection in case of failure. Its Short-Term IDR of 'F1' is the lower option that maps to its Long-Term IDR, because it is constrained by the bank's funding & liquidity score of 'a'. The bank's Shareholder Support Rating (SSR) is aligned with UBS AG's Long-Term IDR as we view support from the group as extremely likely, if needed, given UBS Switzerland's core role for UBS. Consequently, while UBS Switzerland's Long-Term IDR is derived from its VR, it is also floored at the level of UBS AG's Long-Term IDR.

Credit Suisse (Schweiz) AG (CS Schweiz)

UBS to Stabilise Business Model: Credit Suisse AG's subsidiary CS Schweiz houses Credit Suisse's

Swiss retail- and commercial-banking and wealth management businesses. Its 'bb' VR is below its implied VR of 'bbb', as we assign a higher importance to our business profile assessment of 'bb'. This is because we view as uncertain the extent and the permanence of the erosion of CS Schweiz's revenue generation capacity, following the unexpectedly sizeable outflows of deposits and assets under management it has incurred until March 2023.

Uncertain Strategic Future: CS Schweiz's SSR and Long-Term IDR are one notch below the Long-Term IDR of Credit Suisse AG, of which CS Schweiz has been historically a core part. However, UBS AG has yet to unveil its strategic intentions for CS Schweiz, and a sale appears possible given the bank's leading domestic franchise that could be operated independently from the group. The Rating Watch Positive (RWP) on the VR reflects our view that the acquisition by UBS should rapidly stabilise CS Schweiz's business profile, either by combining it with UBS Switzerland, or by positioning CS Schweiz for a potential sale in light of public pressure to prevent the emergence of a dominant player in the Swiss market.

Other UBS and Credit Suisse Entities

Critical Roles of UBS Entities: UBS AG's German entity UBS Europe SE houses most of UBS's wealth management and investment banking business in the EU. As a deposit-taker, UBS AG's subsidiary UBS Bank USA is a key part of UBS's American wealth management business. Both subsidiaries' IDRs and SSRs, and UBS Europe's DCR, reflect our view of an extremely high likelihood of support from UBS AG if needed. This is based on both subsidiaries' core functions for important clients of the group, as well as high reputational risk for UBS, should either subsidiary default.

We align both entities' Long-Term IDRs with UBS AG's Long-Term IDR (rather than its VR) because their junior and internal bail-in debt buffers would protect their senior creditors in a resolution.

Strong Incentive to Support: The SSRs and IDRs of Credit Suisse AG's subsidiaries, UK-based Credit Suisse International, Germany-based Credit Suisse (Deutschland) AG, Spain-based Credit Suisse Bank (Europe) S.A., and Credit Suisse (USA), Inc., are equalised with Credit Suisse AG's IDRs. We believe the group is extremely likely to support, in case of need, these historically core entities of Credit Suisse. Regardless of whether UBS decides to combine them with its own corresponding subsidiaries or wind them down, we believe that for reputational reasons, the group could not afford not to support them.

Credit Suisse AG New York branch's (Credit Suisse AG NY) IDRs are aligned with those of Credit Suisse AG. Because the branch is part of the same legal entity and in our view there are no country risk restrictions, we believe the branch's senior creditors would be treated identically to those of Credit Suisse AG.

The Short-Term IDRs of UBS Europe, UBS Bank USA, Credit Suisse International, Credit Suisse (Deutschland) AG, Credit Suisse Bank (Europe) S.A. and Credit Suisse (USA), Inc. are the lower option mapping to their Long-Term IDRs as the Short-Term IDRs are constrained by the group's funding and liquidity score of 'a'.

SUBSIDIARIES AND AFFILIATES: RATING SENSITIVITIES

A downgrade of UBS AG's ratings would trigger a downgrade of UBS Switzerland's ratings given the latter's strong integration within the group, unless UBS Switzerland proves resilient to specific stress affecting the group. An upgrade of UBS AG's ratings would trigger an upgrade of UBS Switzerland's IDRS and SSR, and could also trigger an upgrade of UBS Switzerland's VR, especially if we believe that the group's risk profile has stabilised and maintained its strong pre-Credit Suisse characteristics, and if we believe UBS Switzerland is benefiting from this stabilisation.

UBS Europe's and UBS Bank USA's ratings are primarily sensitive to changes in UBS AG's IDRs.

The IDRs and SSRs of CS Schweiz, Credit Suisse AG NY, Credit Suisse International, Credit Suisse (Deutschland) AG, Credit Suisse Bank (Europe) S.A. and Credit Suisse (USA), Inc. are primarily sensitive to changes in Credit Suisse AG's IDRs. We could also widen the notching of CS Schweiz's IDRs and SSRs from Credit Suisse AG's IDRs if we estimate that a sale of CS Schweiz by UBS has become likely. We could upgrade CS Schweiz's IDRs and SSR and align them with Credit Suisse AG's if UBS confirms its role as core entity, either combined with UBS Switzerland or by continuing to operate under its existing franchise. The RWP on CS Schweiz's VR indicates that a downgrade of the VR is unlikely.

These entities' Long-Term IDRs would also be downgraded if we no longer believe that their senior creditors would benefit from the group's junior and holdco senior debt in a resolution.

VR ADJUSTMENTS

UBS Group AG, UBS AG, Credit Suisse AG, UBS Switzerland and Credit Suisse (Schweiz)'s asset quality scores have been assigned below the implied scores due to the following adjustment reason: non-loan exposures (negative).

Credit Suisse (Schweiz)'s VR has been assigned below the implied VR due to the following adjustment reason: business profile (negative).

Credit Suisse (Schweiz)'s business profile score has been assigned below the implied score due to the following adjustment reason: historical & future developments (negative).

Credit Suisse (Schweiz)'s capitalisation & leverage score has been assigned below the implied score due to the following adjustment reason: internal capital generation and growth (negative).

Credit Suisse (Schweiz)'s funding & liquidity score has been assigned below the implied score due to the following adjustment reason: deposit structure (negative).

Best/Worst Case Rating Scenario

International scale credit ratings of Financial Institutions and Covered Bond issuers have a best-case rating upgrade scenario (defined as the 99th percentile of rating transitions, measured in a positive direction) of three notches over a three-year rating horizon; and a worst-case rating downgrade scenario (defined as the 99th percentile of rating transitions, measured in a negative direction) of four notches over three years. The complete span of best- and worst-case scenario credit ratings for all rating categories ranges from 'AAA' to 'D'. Best- and worst-case scenario credit ratings are based on

historical performance. For more information about the methodology used to determine sectorspecific best- and worst-case scenario credit ratings, visit https://www.fitchratings.com/site/re/ 10111579

REFERENCES FOR SUBSTANTIALLY MATERIAL SOURCE CITED AS KEY DRIVER OF RATING

The principal sources of information used in the analysis are described in the Applicable Criteria.

Public Ratings with Credit Linkage to other ratings

The ratings of the following entities are directly linked to those of UBS Group AG: UBS AG, UBS Switzerland, UBS Europe, UBS Bank USA, Credit Suisse AG, Credit Suisse International, Credit Suisse (USA), Inc., Credit Suisse (Deutschland) AG, Credit Suisse NY, Credit Suisse (Schweiz) AG and Credit Suisse Bank (Europe) S.A.

ESG Considerations

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

Fitch Ratings Analysts

Roderic Finn

Director Primary Rating Analyst +44 20 3530 1139 Fitch Ratings Ltd 30 North Colonnade, Canary Wharf London E14 5GN

Patrick Rioual

Senior Director Primary Rating Analyst +33 1 44 29 91 21 Fitch Ratings Ireland Ltd 28 avenue Victor Hugo Paris 75116

Patrick Rioual

Senior Director Secondary Rating Analyst +33 1 44 29 91 21

Roderic Finn

Director Secondary Rating Analyst +44 20 3530 1139 Alan Adkins Managing Director Committee Chairperson +44 20 3530 1702

Media Contacts

Peter Fitzpatrick London +44 20 3530 1103 peter.fitzpatrick@thefitchgroup.com

Applicable Criteria

Bank Rating Criteria (pub.07 Sep 2022) (including rating assumption sensitivity)

Non-Bank Financial Institutions Rating Criteria (pub.05 May 2023) (including rating assumption sensitivity)

Additional Disclosures

Solicitation Status

Endorsement Status

Credit Suisse (Deutschland) AG	UK Issued, EU Endorsed
Credit Suisse (USA), Inc.	UK Issued, EU Endorsed
Credit Suisse Bank (Europe) S.A.	UK Issued, EU Endorsed
Credit Suisse Group AG	UK Issued, EU Endorsed
Credit Suisse Group Funding (Guernsey) Limited	UK Issued, EU Endorsed
Credit Suisse International	UK Issued, EU Endorsed
Credit Suisse NY	UK Issued, EU Endorsed

UBS Bank USA	EU Issued, UK Endorsed
UBS Europe SE	EU Issued, UK Endorsed
UBS Group AG	EU Issued, UK Endorsed
UBS Switzerland AG	EU Issued, UK Endorsed

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. ESMA and the FCA are required to publish historical default rates in a central repository in accordance with Articles 11(2) of Regulation (EC) No 1060/2009 of the European Parliament and of the Council of 16 September 2009 and The Credit Rating Agencies (Amendment etc.) (EU Exit) Regulations 2019 respectively.

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.

dv01, a Fitch Solutions company, and an affiliate of Fitch Ratings, may from time to time serve as loan data agent on certain structured finance transactions rated by Fitch Ratings.

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.

Endorsement policy

Fitch's international credit ratings produced outside the EU or the UK, as the case may be, are endorsed for use by regulated entities within the EU or the UK, respectively, for regulatory purposes, pursuant to the terms of the EU CRA Regulation or the UK Credit Rating Agencies (Amendment etc.) (EU Exit) Regulations 2019, as the case may be. Fitch's approach to endorsement in the EU and the UK can be found on Fitch's Regulatory Affairs page on Fitch's website. The endorsement status of international credit ratings is provided within the entity summary page for each rated entity and in the transaction detail pages for structured finance transactions on the Fitch website. These disclosures are updated on a daily basis.