

Cooperative Banking Sector Germany Members Affirmed At 'A+/A-1' On Resilience To Worsening Macroeconomy; Outlook Stable

December 14, 2022

S&PGR Afms Coop Banking Sector Germany At 'A+/A-1'; Otlk Stbl

- Rising interest rates may hit short-term profits due to revaluation losses on long-dated securities but not fundamentally challenge the long-term profitability of the Cooperative Banking Sector Germany.
- Despite a weaker economic environment in Germany, we expect credit losses to remain contained due to prudent underwriting and a good diversification of the lending book.
- Furthermore, we expect that strong capital and liquidity buffers will remain core credit strengths for cooperative members and the support mechanism will continue to deliver stability in the next phase of the credit cycle.
- We therefore affirmed our 'A+/A-1' long- and short-term issuer credit ratings on all core members of the Cooperative Banking Sector Germany.
- We also lowered our issue rating on DZ Banks' additional Tier 1 (AT1) instruments to 'BBB-' from 'BBB' and revised down our stand-alone credit profile (SACP) assessment for Deutsche Apotheker- und Aerztebank's eG (Apobank) to 'bbb-' from 'bbb' due to its weakening business and franchise.
- The outlook on the long-term issuer credit ratings is stable and reflects sufficient headroom to absorb expected headwinds such as valuation and credit losses.

FRANKFURT (S&P Global Ratings) Dec. 14, 2022--S&P Global Ratings today affirmed its 'A+/A-1' long- and short-term issuer credit ratings on all core entities of the Cooperative Banking Sector Germany, including DZ Bank, Apobank, and DZ Hyp. The outlook is stable.

At the same time, we revised down our SACP on Apobank to 'bbb-' from 'bbb' and lowered our issue ratings on DZ Bank's regulatory AT1 instruments to 'BBB-' from 'BBB'.

Cooperative Banking Sector Germany

Rising interest rates may hit short-term profits but not fundamentally challenge members' long-term profitability. German cooperative banks use their sizeable excess deposits to extend long-term loans, mainly mortgages and small and midsize enterprise (SME) loans, and buy long-dated term fixed-rate securities, predominantly high-quality government or corporate bonds.

PRIMARY CREDIT ANALYSTS

Heiko Verhaag, CFA, FRM

Frankfurt
+ 49 693 399 9215
heiko.verhaag
@spglobal.com

Claudio Hantzsche

Frankfurt
+ 49 693 399 9188
claudio.hantzsche
@spglobal.com

SECONDARY CONTACT

Harm Semder

Frankfurt
+ 49 693 399 9158
harm.semder
@spglobal.com

With the rapid increase in interest rates, members are exposed to potential valuation losses on their investment portfolios, a risk that they often do not proactively hedge and will likely lead to material reported valuation losses and only modest positive net income this year. Amid an uncertain interest rate trajectory, this profit volatility may continue next year but we expect valuation losses to gradually reverse over time because members will hold investments to maturity. More fundamentally and beyond this short-term volatility, access to a stable deposit base offers a natural hedge in a rising interest rate environment because retail deposits are largely nonremunerated and rate insensitive. As cooperative members gradually originate higher-yielding assets, we expect a positive boost to net interest income. However, key to our expectation is cooperative members defending their strong deposit franchises amid higher rates.

Credit losses should remain contained despite a weakening economic environment in

Germany. We currently expect a mild recession for Germany, with a real GDP reduction of 0.5% in 2023 and recovery to 1% growth in 2024. Ahead of this recession, we see SMEs suffering from the inflationary shock. This will also hit cooperative banks given their strong lending market share in the segment, which is the backbone of Germany's economy. We expect any severe impact to be mitigated by the sector's prudent underwriting standards, solid granularity of exposures, strong fiscal support, and relatively robust corporate financial buffers. At the same time, we consider the German residential real estate market largely resilient with no particular increase in credit costs. This considers a relatively short-lived recession in 2023 and only a mild increase in unemployment. We currently expect credit costs of 15 basis points (bps)-20 bps in 2022 and 2023 on the sector's consolidated loan book, mainly driven by SME exposure.

Strong capital and liquidity buffers will remain key credit strengths. Due to its strong historical retention of earnings, the German cooperative sector has built solid capital buffers. Capitalization ratios may erode slightly due to the valuation losses expected this year, but we assume this is limited and short lived. By year-end 2022, we expect the sector's risk-adjusted capital (RAC) ratio to reduce to about 14.0%-14.5%, from 14.6% at year-end 2021. Looking ahead, we expect good profitability and reduced lending growth which, combined with still-high earnings retention, should lead the RAC ratio to increase toward 15%, which is very high compared to peers. In addition, we expect that the cooperative sector will continue to enjoy the benefits from its strong funding franchise and still manage its liquidity prudently, a key strength underpinning its creditworthiness.

Oversight and collective support mechanisms should continue to deliver stability for the cooperative sector.

Through its governing bodies and the protection scheme, the Bundesverband der Deutschen Volksbanken und Raiffeisenbanken e.V. (BVR) ensures that cooperative banks are appropriately capitalized for their risk profile. We understand that the BVR is tightly monitoring banks with larger rate sensitivity and weaker capital positions and pushing them to take mitigating measures. Key to our assessment is that BVR has sufficient influence and effective control to impose remedial actions in case of need. Furthermore, if there is financial stress at individual banks we expect the sector to provide sufficient support and facilitate mergers with other banks. In our view, this support mechanism, although relatively unique in Europe, has been tested over time and will continue to deliver stability for the cooperative sector in the next phase of the credit cycle.

The hit to DZ Bank's capitalization and increased volatility ahead increase risks for its

high-trigger AT1 instruments. The bank's regulatory common equity Tier 1 (CET1) ratio reduced to 12.01% as of third-quarter 2022 (12.4% including nonaudited interim third-quarter results)

from 15.3% in 2021. We acknowledge that about half of this impact is explained by the open interest rate position from accounting mismatches at its insurance subsidiary R+V Versicherung that will be reversed with the 2023 introduction of International Financial Reporting Standard 17, which introduces fair valuation of obligations to policyholders. Nevertheless, valuation effects at its subsidiary Bausparkasse Schwäbisch Hall and risk-weighted asset (RWA) growth also contributed to the drop in CET1 ratio. This reduced the distance to DZ Bank's high trigger (7% regulatory AT1 instruments to below 700 bps. Although we think its CET1 ratio could recover to above 13% by year-end 2022 and above 14% by year-end 2023, we reflect the reduced distance to trigger in the lower issue rating of 'BBB-'.

Outlook

Our stable outlook on the Cooperative Banking Sector Germany, including all core group members, reflects our expectation that the sector will maintain its strong capitalization and solid operating profitability, providing a strong buffer to absorb valuation and credit losses that arise over 2022 and 2023 amid increasing rates and the economic downturn.

Downside scenario: We could lower our ratings on the sector's core members if a sudden repricing of deposits depresses structural profitability or if credit costs rise substantially above our current expectations.

We could also lower the rating if the sector's market position deteriorates materially, leading to financial difficulties for several cooperative members and weakening the BVR's capacity to support them.

Upside scenario: We currently consider a positive rating action remote. A prerequisite is that we revise up the anchor for German domestic banks to 'a-', highlighting that the economic environment has become more supportive and structural challenges in German retail and SME banking have eased.

ESG credit indicators: E-2, S-2, G-2

Deutsche Apotheker- und Ärztebank eG

Apobank's business franchise has weakened amid continued customer dissatisfaction, which is among the factors that prompted our downward SACP revision to 'bbb-' from 'bbb'.

Operational stability has been a concern for Apobank, the largest cooperative bank in the sector, ever since the migration of its core banking information technology (IT) system in 2020, which resulted in considerable pressure from customers to quickly restore service quality. Although we understand that recent problems, which delayed the execution of certain types of bank transfers for several days, were not directly related to the IT migration, and in contrast to the former were smaller in their scope, such repeated instances increase risks to customer loyalty and ultimately the bank's customer franchise and revenue expectations, in our view. At a higher level, these instances may be indicative of past shortcomings in governance culture and managerial responsiveness, which will take time and effort to resolve. We think the same concerns around the qualitative composition of Apobank's supervisory board also drove last year's European Central Bank (ECB) decision to increase Apobank's pillar 2 requirement (P2R) 125 bps to 2.5% of regulatory RWAs, which represents the largest absolute increase in P2Rs among all

ECB-supervised institutions.

The managerial overhaul adds execution risks to improving the bank's subpar financial metrics.

In the past, Apobank's monetization of its affluent clientele, particularly in terms of fee income, has been below potential such that its profitability and cost-efficiency metrics compare weakly to those of relevant peers, with a 2.3% return on average common equity and 78% cost-to-income ratio at June 30, 2022. Following a complete managerial overhaul at its board of directors since 2020, the bank has significantly adjusted its strategy to focus on its competitive strengths in servicing retail and SME clients within the health care professions. Although we consider this new focus promising, execution may be impeded by the scope of the managerial overhaul. Furthermore, even under a sharpened strategic focus, Apobank's business model and revenue streams remain relatively narrow and concentrated and therefore a limiting factor to its stand-alone creditworthiness.

Outlook

Our stable outlook on Apobank mirrors the stable outlook on the Cooperative Banking Sector Germany, and reflects our expectation that Apobank will remain a core member of the group and would likely receive support under any foreseeable circumstances.

Downside scenario: We would lower our ratings on Apobank if we revise down the group credit profile (GCP) on the Cooperative Banking Sector Germany.

Upside scenario: To upgrade Apobank we would need to revise up the GCP on the Cooperative Banking Sector Germany, which we currently consider a remote scenario.

Environmental, Social, And Governance

ESG credit indicators: To: E-2, S-2, G-3; From: E-2, S-2, G-2

Governance factors are a moderately negative consideration in our analysis of Apobank. We consider the composition and relative minority of independent supervisory board members with sufficient banking expertise as a relative weakness. Although the significant managerial overhaul over the past two years has sharpened the bank's strategic objectives, overall execution, particularly strengthening the franchise and profitability, may be at risk due to the scope of the managerial changes.

DZ Hyp AG

DZ Hyp is expected to be resilient to headwinds in the German commercial real estate (CRE) markets. With the sharp and rapid increase in interest rates over the course of 2022, risks in the German and other real estate markets have increased after years of surging prices under ultra-low rates. This is particularly true for CRE segments, which represent a substantial share of DZ Hyp's exposures and where floating interest rates are more prevalent than in retail mortgage lending. However, while CRE valuations are expected to decline, rents will likely remain stable or in some cases increase due to indexation clauses. At the same time, we consider DZ Hyp's asset quality to be resilient against moderately high stress levels considering its prudent underwriting

standards in retail and corporate exposures, demonstrated by low loan-to-value and high debt-service-coverage ratios. Nevertheless, the bank's business model and the stability of its SACP rest on significant ongoing support from parent DZ Bank. This is demonstrated, for example, by the profit-and-loss transfer agreement, capital and liquidity waivers, and ongoing funding support.

Outlook

Our stable outlook DZ Hyp mirrors the stable outlook on the Cooperative Banking Sector Germany, and our expectation that DZ Hyp will remain a core member of the group for the foreseeable future.

Downside scenario: We would lower our ratings on DZ Hyp if we revise down the GCP on the Cooperative Banking Sector Germany.

Upside scenario: To upgrade DZ Hyp we would need to revise up the GCP on the Cooperative Banking Sector Germany, which we currently consider a remote scenario.

ESG credit indicators: E-2, S-2, G-2

Ratings Score Snapshot

Cooperative Banking Sector Germany (GCP)

	To	From
Issuer Credit Rating	A+/Stable/A-1	A+/Stable/A-1
SACP	a+	a+
Anchor	bbb+	bbb+
Business position	Strong (+1)	Strong (+1)
Capital and earnings	Strong (+1)	Strong (+1)
Risk position	Adequate (0)	Adequate (0)
Funding and liquidity	Strong/Strong(+1)	Strong/strong(+1)
Comparable ratings analysis	0	0
Support	0	0
ALAC support	0	0
GRE support	0	0
Group support	0	0
Sovereign support	0	0
Additional factors	0	0

SACP--Stand-alone credit profile.

Deutsche Apotheker- und Ärztebank

	To	From
Issuer Credit Rating	A+/Stable/A-1	A+/Stable/A-1
SACP	bbb-	bbb
Anchor	bbb+	bbb+
Business position	Moderate (-1)	Adequate (0)
Capital and earnings	Adequate (0)	Adequate (0)
Risk position	Moderate(-1)	Moderate (-1)
Funding and liquidity	Adequate/adequate (0)	Adequate/adequate (0)
Comparable ratings analysis	0	0
Support	+5	+4
ALAC support	0	0
GRE support	0	0
Group support	+5	+4
Sovereign support	0	0
Additional factors	0	0

SACP--Stand-alone credit profile.

DZ Hyp AG

	To	From
Issuer Credit Rating	A+/Stable/A-1	A+/Stable/A-1
SACP	bbb-	bbb-
Anchor	bbb+	bbb+
Business position	Moderate (-1)	Moderate (-1)
Capital and earnings	Moderate (-1)	Moderate (-1)
Risk position	Adequate (0)	Adequate (0)
Funding and liquidity	Adequate/adequate (0)	Adequate/adequate (0)
Comparable ratings analysis	0	0
Support	+5	+5
ALAC support	0	0
GRE support	0	0
Group support	+5	+5
Sovereign support	0	0
Additional factors	0	0

SACP--Stand-alone credit profile.

Related Criteria

- General Criteria: Hybrid Capital: Methodology And Assumptions, March 2, 2022
- Criteria | Financial Institutions | General: Financial Institutions Rating Methodology, Dec. 9, 2021
- Criteria | Financial Institutions | Banks: Banking Industry Country Risk Assessment Methodology And Assumptions, Dec. 9, 2021
- General Criteria: Environmental, Social, And Governance Principles In Credit Ratings, Oct. 10, 2021
- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Financial Institutions | General: Risk-Adjusted Capital Framework Methodology, July 20, 2017
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011

Related Research

- Update: Cooperative Banking Sector Germany; Aug. 26, 2022
- Deutsche Apotheker- und Aerztebank eG, June 2, 2022
- DZ Hyp AG, May 11, 2022
- Cooperative Banking Sector Germany, March 25, 2022

Ratings List

***** Cooperative Banking Sector Germany *****

Downgraded

	To	From
DZ Bank AG Deutsche Zentral-Genossenschaftsbank Frankfurt am Main		
Junior Subordinated	BBB-	BBB

Ratings Affirmed

Aachener Bank eG

meine Volksbank Raiffeisenbank eG, Rosenheim

levoBank eG

Zevener Volksbank eG

Winterbacher Bank eG

Wiesbadener Volksbank eG

Westerwald Bank eG Volks- und Raiffeisenbank

Waldecker Bank eG

Volksbank-Raiffeisenbank eG Itzehoe

Volksbank-Raiffeisenbank Wuerzburg eG

Volksbank-Raiffeisenbank Starnberg-Herrsching-Landsberg eG

Volksbank-Raiffeisenbank Oberbayern Suedost eG

Volksbank-Raiffeisenbank Niederschlesien eG

Volksbank-Raiffeisenbank Meissen Grossenhain eG

Volksbank-Raiffeisenbank Glauchau eG

Volksbank-Raiffeisenbank Fuerstenfeldbruck eG

Volksbank-Raiffeisenbank Deggingen eG

Volksbank in der Hohen Mark eG

Volksbank in Sudwestfalen eG

Volksbank in Schaumburg eG

Volksbank im Wesertal eG

Volksbank im Hochsauerland eG

Volksbank im Harz eG

Volksbank im Bergischen Land eG

Volksbank eG, Wolfenbuettel

Volksbank eG, Warendorf

Volksbank eG, Syke

Volksbank eG, Offenburg und Villingen-Schwenningen

Volksbank eG, Nienburg/Weser

Volksbank eG, Hildesheim

Volksbank eG, Fredenbeck

Volksbank eG, Adelebsen

Volksbank eG im Kreis Freudenstadt

Volksbank eG Westrhauderfehn

Volksbank eG Ueberlingen

Volksbank eG Sudheide-Isenhagener Land-Altmark

Volksbank eG Sottrum

Volksbank eG Seesen

Volksbank eG Sangerhausen

Volksbank eG Osterholz-Scharmbeck

Volksbank eG Mosbach

Volksbank eG Loeningen

Volksbank eG Konstanz

Volksbank eG Koethen

Volksbank eG Grebenhain

Volksbank eG Gera.Jena.Rudolstadt

Volksbank eG Gardelegen

Volksbank eG Friesoythe

Volksbank eG Bremerhaven-Cuxland

Volksbank eG Braunschweig Wolfsburg

Volksbank eG Bad Laer-Borgloh-Hilter-Melle

Volksbank an der Niers eG

Volksbank am Wuerttemberg eG

Volksbank Zwickau eG

Volksbank Zuffenhausen eG

Volksbank Wulfsen eG

Volksbank Worpsswede eG

Volksbank Wittgenstein eG

Volksbank Wittenberg eG

Volksbank Wissmar eG

Volksbank Winsener Marsch eG

Volksbank Wilhelmshaven eG

Volksbank Wickede (Ruhr) eG

Volksbank Westerstede eG

Volksbank Westerkappeln-Saerbeck eG

Volksbank Westenholz eG

Volksbank Weschnitztal eG

Volksbank Vorpommern eG

Volksbank Vogtland-Saale-Orla eG

Volksbank Visbek eG

Volksbank Viersen eG

Volksbank Versmold eG

Volksbank Vechta eG

Volksbank Ulrichstein eG

Volksbank Uelzen-Salzwedel eG

Volksbank Ueberwald-Gorxheimertal eG

Volksbank Ueberherrn eG

Volksbank Trossingen eG

Volksbank Trier eG

Volksbank Thueringen Mitte eG

Volksbank Sulmtal eG

Volksbank Suedkirchen-Capelle-Nordkirchen eG

Volksbank Sued-Emsland eG

Volksbank Sudmunsterland-Mitte eG

Volksbank Stuttgart eG

Volksbank Stoermede-Hoerste eG

Volksbank Stendal eG

Volksbank Staufen eG

Volksbank Stade-Cuxhaven eG

Volksbank Sprockhoevel eG

Volksbank Spree-Neisse eG

Volksbank Solling eG

Volksbank Senden eG

Volksbank Selm-Bork eG

Volksbank Seligenstadt eG

Volksbank Schwarzwald-Donau-Neckar eG

Volksbank Schwanewede eG

Volksbank Schubach eG

Volksbank Schnathorst eG

Volksbank Schlangen eG

Volksbank Schermbeck eG

Volksbank Sauerland eG

Volksbank Sandhofen eG

Volksbank Ruhr Mitte eG

Volksbank Rottweil eG

Volksbank Rot eG

Volksbank Rietberg eG

Volksbank Riesa eG

Volksbank Rheinboellen eG

Volksbank RheinAhrEifel eG

Volksbank Rhein-Wehra eG

Volksbank Rhein-Ruhr eG

Volksbank Rhein-Nahe-Hunsrück eG

Volksbank Rhein-Lippe eG

Volksbank Rhein-Lahn-Limburg eG

Volksbank Rhein-Erft-Koln eG

Volksbank Rhede eG

Volksbank Remseck eG

Volksbank Rathenow eG

Volksbank Raiffeisenbank Regensburg-Schwandorf eG

Volksbank Raiffeisenbank Laupheim-Illertal eG

Volksbank Raiffeisenbank Bayern Mitte eG

Volksbank Raiffeisenbank Bad Kissingen eG

Volksbank Raesfeld und Erle eG

Volksbank Plochingen eG

Volksbank Pirna eG

Volksbank Pfullendorf eG

Volksbank Pforzheim eG

Volksbank Oyten eG

Volksbank Ostlippe eG

Volksbank Olpe-Wenden-Drolshagen eG

Volksbank Ochtrup-Laer eG

Volksbank Oberberg eG

Volksbank Ober-Moerlen eG

Volksbank Nottuln eG

Volksbank Nordschwarzwald eG

Volksbank Nordhuemmling eG

Volksbank Nordharz eG

Volksbank Niedersachsen-Mitte eG

Volksbank Niederrhein eG

Volksbank Niedergrafschaft eG

Volksbank Neckartal eG

Volksbank Münsterland Nord eG

Volksbank Muensingen eG

Volksbank Moenchgladbach eG

Volksbank Mockmuhl eG

Volksbank Mittweida eG

Volksbank Mittleres Erzgebirge eG

Volksbank Mittlerer Schwarzwald eG

Volksbank Mittlerer Neckar eG

Volksbank Mittelhessen eG

Volksbank Messkirch eG Raiffeisenbank

Volksbank Marl-Recklinghausen eG

Volksbank Mainspitze eG

Volksbank Main-Tauber eG

Volksbank Magdeburg eG

Volksbank Lueneburger Heide eG

Volksbank Luebeck eG

Volksbank Luebbecker Land eG

Volksbank Lohne-Muehlen eG

Volksbank Loebau-Zittau eG

Volksbank Lindenberg eG

Volksbank Limbach eG

Volksbank Leonberg-Strohgau eG

Volksbank Lauterecken eG

Volksbank Lauterbach-Schlitz eG

Volksbank Lastrup eG

Volksbank Langendernbach eG

Volksbank Laichinger Alb eG

Volksbank Lahr eG

Volksbank Krefeld eG

Volksbank Krautheim eG

Volksbank Kraichgau eG

Volksbank Koeln Bonn eG

Volksbank Kleverland eG

Volksbank Klettgau-Wutoeschingen eG

Volksbank Kirnau eG

Volksbank Kierspe eG

Volksbank Kempen-Grefrath eG

Volksbank Karlsruhe Baden-Baden eG

Volksbank Kaiserslautern eG

Volksbank Jever eG

Volksbank Jerichower Land eG

Volksbank Immenstadt eG

Volksbank Hohenzollern-Balingen eG

Volksbank Hohenlohe eG

Volksbank Hohenlimburg eG

Volksbank Hochrhein eG

Volksbank Heuchelheim eG

Volksbank Herrenberg-Nagold-Rottenburg eG

Volksbank Herford-Mindener Land eG

Volksbank Hellweg eG

Volksbank Heinsberg eG

Volksbank Heimbach eG

Volksbank Heiden eG

Volksbank Haseluenne eG

Volksbank Hamm/Sieg eG

Volksbank Hameln-Stadthagen eG

Volksbank Halle/Westf. eG

Volksbank Halle (Saale) eG

Volksbank Haaren eG

Volksbank Gronau-Ahaus eG

Volksbank Goepfingen eG

Volksbank Glan-Muenchweiler eG

Volksbank Gescher eG

Volksbank Gemen eG

Volksbank Geeste-Nord eG

Volksbank Geest eG

Volksbank Gebhardshain eG

Volksbank GMHuetten-Hagen-Bissendorf eG (GHB)

Volksbank Friedrichshafen-Tettng eG

Volksbank Freiburg eG

Volksbank Franken eG

Volksbank Flein-Talheim eG

Volksbank Filder eG

Volksbank Feldatal eG

Volksbank Eutin Raiffeisenbank eG

Volksbank Euskirchen eG

Volksbank Ettlingen eG

Volksbank Essen-Cappeln eG

Volksbank Esens eG

Volksbank Ermstal-Alb eG

Volksbank Erft eG

Volksbank Enniger-Ostenfelde-Westkirchen eG

Volksbank Emstek eG

Volksbank Emstal eG

Volksbank Emmerich-Rees eG

Volksbank Elsen-Wewer-Borchen eG

Volksbank Eisenberg eG

Volksbank Eifel eG

Volksbank Duesseldorf Neuss eG

Volksbank Duennwald-Holweide eG

Volksbank Dreilaendereck eG

Volksbank Dreieich eG

Volksbank Dortmund-Nordwest eG

Volksbank Dettenhausen eG

Volksbank Dessau-Anhalt eG

Volksbank Demmin eG

Volksbank Delitzsch eG

Volksbank Delbrueck-Hoevelhof eG

Volksbank Deisslingen eG

Volksbank Darmstadt-Südhessen eG

Volksbank Dammer Berge eG

Volksbank Daaden eG

Volksbank Chemnitz eG

Volksbank Butzbach eG

Volksbank Buehl eG

Volksbank Bruchsal-Bretten eG

Volksbank Bremen-Nord eG

Volksbank Breisgau-Markgraeflerland eG

Volksbank Breisgau Nord eG

Volksbank Braunlage eG

Volksbank Brandoberndorf eG

Volksbank Boerssum-Hornburg eG

Volksbank Boerde-Bernburg eG

Volksbank Boenen eG

Volksbank Bochum Witten eG

Volksbank Bocholt eG

Volksbank Bielefeld-Gütersloh eG

Volksbank Berg eG

Volksbank Beilstein-Ilsfeld-Abstatt eG

Volksbank Beckum-Lippstadt eG

Volksbank Baumberge eG

Volksbank Bad Saulgau eG

Volksbank Bad Salzuflen eG

Volksbank Backnang eG

Volksbank Ascheberg-Herbern eG

Volksbank Anroechte eG

Volksbank Ammerbuch eG

Volksbank Alzey-Worms eG

Volksbank Altshausen eG

Volksbank Allgau-Oberschwaben eG

Volksbank Albstadt eG

Volks- und Raiffeisenbank Saale-Unstrut eG

Volks- und Raiffeisenbank Prignitz eG

Volks- und Raiffeisenbank Muldentale eG

Volks- und Raiffeisenbank Fuerstenwalde Seelow Wriezen eG

Vereinte Volksbank eG

Vereinigte Volksbanken eG, Sindelfingen

Vereinigte Volksbank eG, Brakel

Vereinigte Volksbank eG Saarlouis - Losheim am See - Sulzbach/Saar

Vereinigte Volksbank eG Ganderkesee-Hude-Bookholzberg-Lemwerder

Vereinigte Volksbank eG Bramgau Osnabrueck Wittlage

Vereinigte Volksbank Raiffeisenbank eG, Reinheim

Vereinigte Volksbank Raiffeisenbank eG Simmern

Vereinigte VR Bank eG, Wyk auf Foehr

Vereinigte VR Bank Kur- und Rheinpfalz eG

Vereinigte Raiffeisenbank Burgstaedt eG

VerbundVolksbank OWL eG

VR-Bankverein Bad Hersfeld-Rotenburg eG

VR-Bank in Suedoldenburg eG

VR-Bank in Suedniedersachsen eG

VR-Bank in Mittelbaden eG

VR-Bank eG Wuersele

VR-Bank eG Osnabruecker Nordland

VR-Bank eG Magstadt-Weissach

VR-Bank Westmuensterland eG

VR-Bank Werdenfels eG

VR-Bank Uckermark-Randow eG

VR-Bank Taufkirchen-Dorfen eG

VR-Bank Suedwestpfalz eG Pirmasens - Zweibruecken

VR-Bank Spangenberg-Morschen eG

VR-Bank Rottal-Inn eG

VR-Bank Passau eG

VR-Bank Ostbayern-Mitte eG

VR-Bank Ostalb eG

VR-Bank Nordeifel eG

VR-Bank NordRhoen eG

VR-Bank Neu-Ulm eG

VR-Bank Mittelsachsen eG

VR-Bank Mittelfranken Mitte eG

VR-Bank Mitte eG

VR-Bank Memmingen eG

VR-Bank Ludwigsburg eG

VR-Bank Lichtenfels-Ebern eG

VR-Bank Langenau-Ulmer Alb eG

VR-Bank Landshut eG

VR-Bank Landsberg-Ammersee eG

VR-Bank Landau-Mengkofen eG

VR-Bank Ismaning Hallbergmoos Neufahrn eG

VR-Bank Isar-Vils eG

VR-Bank Hunsrueck-Mosel eG

VR-Bank Handels- und Gewerbebank eG

VR-Bank Gerolzhofen eG

VR-Bank Freudenberg-Niederfischbach eG

VR-Bank Flaeming-Elsterland eG

VR-Bank Fichtelgebirge-Frankenwald eG

VR-Bank Feuchtwangen-Dinkelsbuehl eG

VR-Bank Ellwangen eG

VR-Bank Ehningen-Nufringen eG

VR-Bank Dornstetten-Horb eG

VR-Bank Donau-Mindel eG

VR-Bank Coburg eG

VR-Bank Bonn Rhein-Sieg eG

VR-Bank Bad Salzungen Schmalkalden eG

VR-Bank Altenburger Land eG

VR-Bank Alb-Blau-Donau eG

VR Smart Finanz Bank GmbH

VR PartnerBank eG Chattengau-Schwalm-Eder

VR PLUS Altmark-Wendland eG

VR GenoBank DonauWald eG

VR Bank in Holstein eG

VR Bank eG, Monheim am Rhein

VR Bank eG, Alsheim

VR Bank eG Heuberg-Winterlingen

VR Bank eG Bergisch Gladbach-Leverkusen

VR Bank Zwischen Den Meeren eG

VR Bank Westthuringen eG

VR Bank Westkueste eG

VR Bank Weimar eG

VR Bank Tuebingen eG

VR Bank Suedpfalz eG

VR Bank Suedliche Weinstrasse-Wasgau eG

VR Bank Schwaebischer Wald eG

VR Bank Schleswig-Mittelholstein eG

VR Bank Riedlingen-Federsee eG

VR Bank Rhein-Neckar eG

VR Bank Rhein-Mosel eG

VR Bank Ravensburg-Weingarten eG

VR Bank Oldenburg Land eG

VR Bank Nord eG

VR Bank Niederbayern-Oberpfalz eG

VR Bank Neuburg-Rain eG

VR Bank Muenchen Land eG

VR Bank Mittlere Oberpfalz eG

VR Bank Mittelhaardt eG

VR Bank Metropolregion Nuernberg eG

VR Bank Mecklenburg eG

VR Bank Main-Kinzig-Buedingen eG

VR Bank Lausitz eG

VR Bank Lahn-Dill eG

VR Bank Kitzingen eG

VR Bank Ihre Heimatbank eG

VR Bank Hohenneuffen-Teck eG

VR Bank HessenLand eG

VR Bank Heilbronn Schwabisch Hall eG

VR Bank Fulda eG

VR Bank Enz plus eG

VR Bank Dinklage-Steinfeld eG

VR Bank Bayreuth-Hof eG

VR Bank Bamberg-Forchheim eG Volks- Raiffeisenbank

VR Bank Bad Orb-Gelnhausen eG

VR Bank Augsburg-Ostallgaeu eG

VR Bank Alzey-Land-Schwabenheim eG

VBU Volksbank im Unterland eG

Union Investment Service Bank AG

TeamBank AG Nuernberg

TEBA Kreditbank GmbH & Co. KG

Sylter Bank eG

Spreewaldbank eG

Sparda-Bank West eG

Sparda-Bank Suedwest eG

Sparda-Bank Ostbayern eG

Sparda-Bank Nuernberg eG

Sparda-Bank Muenchen eG

Sparda-Bank Hessen eG

Sparda-Bank Hannover eG

Sparda-Bank Hamburg eG

Sparda-Bank Berlin eG

Sparda-Bank Baden-Wuerttemberg eG

Sparda-Bank Augsburg eG

Spar-u.Kredit-Bank eG, Gemuenden

Spar- und Kreditbank eG, Hammah

Spar- und Kreditbank des Bundes Freier evangelischer Gemeinden eG

Spar- und Kreditbank Rheinstetten eG

Spar- und Kreditbank Evangelisch-Freikirchlicher Gemeinden eG

Spar- und Kreditbank Buehlertal eG

Spar- und Darlehnskasse Boerde Lamstedt-Hechthausen eG

Spar- und Darlehnskasse Bockum-Hoewel eG

Schrobenhausener Bank eG

Scharnhauser Bank eG

Rostocker Volks-und Raiffeisenbank eG

Rosbacher Raiffeisenbank eG

Ritterschaftliches Kreditinstitut Stade Aktiengesellschaft

Rheingauer Volksbank eG

Raiffeisenbank im Oberpfaelzer Jura eG

Raiffeisenbank im Oberland eG

Raiffeisenbank im Nuernberger Land eG
Raiffeisenbank im Kreis Calw eG
Raiffeisenbank im Hochtaunus eG, Bad Homburg
Raiffeisenbank im Grabfeld eG
Raiffeisenbank im Fuldaer Land eG
Raiffeisenbank im Donautal eG
Raiffeisenbank im Breisgau eG
Raiffeisenbank im Allgaeuer Land eG
Raiffeisenbank i. Lkrs. Passau-Nord eG
Raiffeisenbank eG, Todenbuettel
Raiffeisenbank eG, Simmerath
Raiffeisenbank eG, Seestermuehe
Raiffeisenbank eG, Rodenbach
Raiffeisenbank eG, Owschlag
Raiffeisenbank eG, Niederwallmenach
Raiffeisenbank eG, Moormerland
Raiffeisenbank eG, Leezen
Raiffeisenbank eG, Lauenburg
Raiffeisenbank eG, Hagenow
Raiffeisenbank eG, Baunatal
Raiffeisenbank eG Unterwesterwald
Raiffeisenbank eG Scharrel
Raiffeisenbank eG Deggendorf-Plattling-Sonnenwald
Raiffeisenbank am Kulm eG
Raiffeisenbank am Dreisessel eG
Raiffeisenbank Zorneding eG
Raiffeisenbank Zeller Land eG
Raiffeisenbank Wyhl eG
Raiffeisenbank Wuestenselbitz eG
Raiffeisenbank Wittelsbacher Land eG
Raiffeisenbank Wimsheim-Moensheim eG
Raiffeisenbank Wiesedermeer-Wiesede-Marcardsmoor eG
Raiffeisenbank Westkreis Fuerstenfeldbruck eG
Raiffeisenbank Westhausen eG
Raiffeisenbank Westeifel eG
Raiffeisenbank Westallgaeu eG
Raiffeisenbank Wesermarsch-Sued eG
Raiffeisenbank Werratal-Landeck eG

Raiffeisenbank Welling eG
Raiffeisenbank Weissenburg-Gunzenhausen eG
Raiffeisenbank Wangen eG
Raiffeisenbank Wallgau-Kruen eG
Raiffeisenbank Waldaschaff-Heigenbruecken eG
Raiffeisenbank Wald-Goerisried eG
Raiffeisenbank Voreifel eG
Raiffeisenbank Volkmarsen eG
Raiffeisenbank Unteres Zusamtal eG
Raiffeisenbank Unteres Vilstal eG
Raiffeisenbank Unteres Inntal eG
Raiffeisenbank Uehlfeld-Dachsbach eG
Raiffeisenbank Tuerkheim eG
Raiffeisenbank Tuengental eG
Raiffeisenbank Thurnauer Land eG
Raiffeisenbank Thannhausen eG
Raiffeisenbank Taufkirchen-Oberneukirchen eG
Raiffeisenbank Sulzbach-Rosenberg eG
Raiffeisenbank Suedstormarn Moelln eG
Raiffeisenbank Suedliches Ostallgaeu eG
Raiffeisenbank Suedhardt eG
Raiffeisenbank Struecklingen-Idafehn eG
Raiffeisenbank Straubing eG
Raiffeisenbank Steinheim eG
Raiffeisenbank Sondelfingen eG
Raiffeisenbank Sinzing eG
Raiffeisenbank Singoldtal eG
Raiffeisenbank Seebachgrund eG
Raiffeisenbank Schwabmuenchen-Stauden eG
Raiffeisenbank Schwaben Mitte eG
Raiffeisenbank Schrozberg-Rot am See eG
Raiffeisenbank Schrobenhausener Land eG
Raiffeisenbank Schaaflheim eG
Raiffeisenbank Rupertiwinkel eG
Raiffeisenbank Rosenstein eG
Raiffeisenbank Ried eG
Raiffeisenbank Reute-Gaisbeuren eG
Raiffeisenbank Rehling eG

Raiffeisenbank Regenstauf eG
Raiffeisenbank Regensburg-Wenzenbach eG
Raiffeisenbank Rattiszell-Konzell eG
Raiffeisenbank Rastede eG
Raiffeisenbank Raisting eG
Raiffeisenbank Plankstetten AG
Raiffeisenbank Pfaffenwinkel eG
Raiffeisenbank Pfaffenhofen a.d. Glonn eG
Raiffeisenbank Pfaffenhausen eG
Raiffeisenbank Parkstetten eG
Raiffeisenbank Ottenbach eG
Raiffeisenbank Ostprignitz-Ruppin eG
Raiffeisenbank Ortenburg-Kirchberg v.W. eG
Raiffeisenbank Oberteuringen-Meckenbeuren eG
Raiffeisenbank Oberpfalz NordWest eG
Raiffeisenbank Obermain Nord eG
Raiffeisenbank Oberland eG
Raiffeisenbank Oberferrieden-Burghann eG
Raiffeisenbank Oberes Gaeu eG
Raiffeisenbank Oberaudorf eG
Raiffeisenbank Nuedlingen eG
Raiffeisenbank Noerdliche Bergstrasse eG
Raiffeisenbank Niedere Alb eG
Raiffeisenbank Neustadt-Vohenstrauss eG
Raiffeisenbank Neustadt eG
Raiffeisenbank Neumarkt-St. Veit-Reischach eG
Raiffeisenbank Neumarkt i.d.OPf. eG
Raiffeisenbank Muenchen-Sued eG
Raiffeisenbank Muenchen-Nord eG
Raiffeisenbank Moselkrampen eG
Raiffeisenbank Moetzingen eG
Raiffeisenbank Mittenwald eG
Raiffeisenbank Mittelschwaben eG
Raiffeisenbank Mehring-Leiwen eG
Raiffeisenbank Mecklenburger Seenplatte eG
Raiffeisenbank Massbach eG
Raiffeisenbank Maitis eG
Raiffeisenbank Main-Spessart eG

Raiffeisenbank Lorup eG

Raiffeisenbank Lechrain eG

Raiffeisenbank Landshuter Land eG

Raiffeisenbank Kueps-Mitwitz-Stockheim eG

Raiffeisenbank Kreis Kelheim eG

Raiffeisenbank Knoblauchland eG

Raiffeisenbank Kirtorf eG

Raiffeisenbank Kirchweihthal eG

Raiffeisenbank Kieselbronn eG

Raiffeisenbank Kempten-Oberallgäu eG

Raiffeisenbank Kastellaun eG

Raiffeisenbank Kalbe-Bismark eG

Raiffeisenbank Kaiserstuhl eG

Raiffeisenbank Kaarst eG

Raiffeisenbank Isar-Loisachtal eG

Raiffeisenbank Ichenhausen eG

Raiffeisenbank Holzkirchen-Otterfing eG

Raiffeisenbank Hohenloher Land eG

Raiffeisenbank Hoechberg eG

Raiffeisenbank Hochfranken West eG

Raiffeisenbank Hirschau eG

Raiffeisenbank Hiltenfingen eG

Raiffeisenbank HessenNord eG

Raiffeisenbank Heroldsbach eG

Raiffeisenbank Hengersberg-Schoellnach eG

Raiffeisenbank Heilsbronn-Windsbach eG

Raiffeisenbank Hardt-Bruhrain eG

Raiffeisenbank Hallertau eG

Raiffeisenbank Haag-Gars-Maitenbeth eG

Raiffeisenbank Gymnich eG

Raiffeisenbank Gruibingen eG

Raiffeisenbank Grimma eG

Raiffeisenbank Griesstaett-Halving eG

Raiffeisenbank Greding-Thalmaessing eG

Raiffeisenbank Grainet eG

Raiffeisenbank Graevenwiesbach eG

Raiffeisenbank Gmund am Tegernsee eG

Raiffeisenbank Gilching eG

Raiffeisenbank Geislingen-Rosenfeld eG
Raiffeisenbank Geiselhoering-Pfaffenberg eG
Raiffeisenbank Gammesfeld eG
Raiffeisenbank Fränkische Schweiz eG
Raiffeisenbank Frankenhardt-Stimpfach eG
Raiffeisenbank Floss eG
Raiffeisenbank Flachsmeer eG
Raiffeisenbank Falkenstein-Woerth eG
Raiffeisenbank Eschlkam-Lam-Lohberg-Neukirchen b. Hl. Blut eG
Raiffeisenbank Ersingen eG
Raiffeisenbank Erlenbach eG
Raiffeisenbank Erkelenz eG
Raiffeisenbank Erding eG
Raiffeisenbank Ems-Vechte eG
Raiffeisenbank Elztal eG
Raiffeisenbank Elsavatal eG
Raiffeisenbank Elbmarsch eG
Raiffeisenbank Eifeltor eG
Raiffeisenbank Eichenbuehl und Umgebung eG
Raiffeisenbank Ehekirchen-Oberhausen eG
Raiffeisenbank Ebrachgrund eG
Raiffeisenbank Donau-Heuberg eG
Raiffeisenbank Dietersheim und Umgebung eG
Raiffeisenbank Denzlingen-Sexau eG
Raiffeisenbank Chiemgau-Nord-Obing eG
Raiffeisenbank Chamer Land eG
Raiffeisenbank Bühlertal eG
Raiffeisenbank Butjadingen-Abbehausen eG
Raiffeisenbank Burgebrach-Stegaurach eG
Raiffeisenbank Buetthard-Gaukoenigshofen eG
Raiffeisenbank Buch-Eching eG
Raiffeisenbank Boellingertal eG
Raiffeisenbank Bobingen eG
Raiffeisenbank Bissingen eG
Raiffeisenbank Bieberggrund-Petersberg eG
Raiffeisenbank Bidingen eG
Raiffeisenbank Bibertgrund eG
Raiffeisenbank Biberach eG

Raiffeisenbank Beuerberg-Eurasburg eG
Raiffeisenbank Berghuelen eG
Raiffeisenbank Beilngries eG
Raiffeisenbank Bechhofen eG
Raiffeisenbank Baisweil-Eggenenthal-Friesenried eG
Raiffeisenbank Baiertal eG
Raiffeisenbank Bad Schussenried - Aulendorf eG
Raiffeisenbank Bad Saulgau eG
Raiffeisenbank Bad Koetzting eG
Raiffeisenbank Augsburgener Land West eG
Raiffeisenbank Auerbach-Freihung eG
Raiffeisenbank Aschberg eG
Raiffeisenbank Aschau-Samerberg eG
Raiffeisenbank Arnstorf eG
Raiffeisenbank Aresing-Gerolsbach eG
Raiffeisenbank Anger eG
Raiffeisenbank Am Goldenen Steig eG
Raiffeisenbank Altschweier eG
Raiffeisenbank Alteglofsheim-Hagelstadt eG
Raiffeisenbank Aitrang-Ruderatshofen eG
Raiffeisenbank Aindling eG
Raiffeisenbank Aidlingen eG
Raiffeisenbank Aichhalden-Hardt-Sulgen eG
Raiffeisenbank "Nahe" eG
Raiffeisen-bank Eschweiler eG
Raiffeisen-Volksbank eG, Aurich
Raiffeisen-Volksbank Wemding eG
Raiffeisen-Volksbank Varel-Nordenham eG
Raiffeisen-Volksbank Tuessling-Unterneukirchen eG
Raiffeisen-Volksbank Ries eG
Raiffeisen-Volksbank Oder-Spree eG
Raiffeisen-Volksbank Neustadt eG
Raiffeisen-Volksbank Hassberge eG
Raiffeisen-Volksbank Fresena eG
Raiffeisen-Volksbank Ebersberg eG
Raiffeisen-Volksbank Donauwoerth eG
Raiffeisen-Volksbank Bad Staffelstein eG
Raiffeisen-Volksbank Aschaffenburg eG

Raiffeisen Spar + Kreditbank eG

Raiffeisen - meine Bank eG

Pommersche Volksbank eG

Pax-Bank eG

PSD Bank Westfalen-Lippe eG

PSD Bank West eG

PSD Bank RheinNeckarSaar eG

PSD Bank Rhein-Ruhr eG

PSD Bank Nuernberg eG

PSD Bank Nord eG

PSD Bank Muenchen eG

PSD Bank Koblenz eG

PSD Bank Kiel eG

PSD Bank Karlsruhe Neustadt eG

PSD Bank Hessen-Thuringen eG

PSD Bank Hannover eG

PSD Bank Braunschweig eG

PSD Bank Berlin-Brandenburg eG

Ostfriesische Volksbank eG

Onstmettinger Bank eG

Oldenburger Volksbank eG

Nordthueringer Volksbank eG

Muensterlaendische Bank Thie & Co. KG

Muenchner Bank eG

Mendener Bank eG

Mainzer Volksbank eG

Maerkische Bank eG

MKB Mittelstandskreditbank AG

Leipziger Volksbank eG

Landbank Horlofftal eG

LIGA Bank eG

Kurhessische Landbank eG

Kieler Volksbank eG

Huettenberger Bank eG

Huemmlinger Volksbank eG

Heidenheimer Volksbank eG

Heidelberger Volksbank eG

Harzer Volksbank eG

Hannoversche Volksbank eG
Hamburger Volksbank eG
Hagnauer Volksbank eG
HAUSBANK MUENCHEN eG Bank fuer Haus- und Grundbesitz
Grafschafter Volksbank eG
Gladbacher Bank AG von 1922
Genossenschaftsbank Weil im Schoenbuch eG
Genossenschaftsbank Unterallgaeu eG
Genobank Mainz eG
GLS Gemeinschaftsbank eG
GENO BANK ESSEN eG
Freisinger Bank eG Volksbank-Raiffeisenbank
Frankfurter Volksbank Rhein-Main eG
Frankenberger Bank, Raiffeisenbank eG
Evenord-Bank eG-KG
Evangelische Bank eG
Emslaendische Volksbank eG
Eckernfoerder Bank eG Volksbank - Raiffeisenbank
Echterdinger Bank eG
EDEKABANK AG
Dortmunder Volksbank eingetragene Genossenschaft
Donau-Iller Bank eG
Dithmarscher Volks- und Raiffeisenbank eG
Deutsche WertpapierService Bank AG
Dettinger Bank eG
DZB Bank GmbH
DKM Darlehnskasse Muenster eG
CB Bank GmbH
Budenheimer Volksbank eG
Bruehler Bank eG
Bremische Volksbank eG
Brandenburger Bank Volksbank-Raiffeisenbank eG
Bopfinger Bank Sechta-Ries eG
Bernhauser Bank eG
Berliner Volksbank eG
Bensberger Bank eG
Bayerische BodenseeBank-Raiffeisen-eG
Bausparkasse Schwaebisch Hall AG

Bankhaus RSA eG

Bank fuer Sozialwirtschaft AG

Bank fuer Kirche und Diakonie eG-KD-Bank

Bank fuer Kirche und Caritas eG

Bank 1 Saar eG

BBBank eG

BANK IM BISTUM ESSEN eG

BAG Bank AG

Alxing-Brucker Genossenschaftsbank eG

Allgaeuer Volksbank eG Kempten-Sonthofen

Abtsgmuender Bank-Raiffeisen-eG

AKTIVBANK AG

Volksbank-Raiffeisenbank Dachau eG

Volksbank-Raiffeisenbank Amberg eG

Volksbank eG Delmenhorst Schierbrok

Volksbank Ulm-Biberach eG

Volksbank Raiffeisenbank Nordoberpfalz eG

Volksbank Kurpfalz eG

Volksbank Kassel Goettingen eG

Volksbank Dresden-Bautzen eG

Volksbank Brenztal eG

Volksbank - Raiffeisenbank Vilshofen eG

VR-Bank Main-Rhoen eG

VR-Bank Erding eG

VR Bank Oberfranken Mitte eG

Rottaler Raiffeisenbank eG

Raiffeisenbank Wegscheid eG

Raiffeisenbank Steingaden eG

Raiffeisenbank Oberpfalz Sued eG

Raiffeisenbank Mainschleife-Steigerwald eG

Raiffeisenbank Estenfeld-Bergtheim eG

Raiffeisenbank Bad Windsheim eG

Raiffeisen-Volksbank Hermsdorfer Kreuz eG

Genossenschaftsbank eG Muenchen

Deutsche Apotheker- und Aertztebank eG

DZ PRIVATBANK S.A.

DZ HYP AG

DZ Bank AG Deutsche Zentral-Genossenschaftsbank Frankfurt am Main

Issuer Credit Rating	A+/Stable/A-1
KRAVAG-LOGISTIC Versicherungs AG	
R+V Versicherung AG	
Issuer Credit Rating	
Local Currency	A+/Stable/--
Financial Strength Rating	
Local Currency	A+/Stable/--
DZ Bank AG Deutsche Zentral-Genossenschaftsbank Frankfurt am Main	
Senior Unsecured	A+
Senior Subordinated	A
Subordinated	A-
Commercial Paper	A+
Commercial Paper	A-1
DZ HYP AG	
Senior Unsecured	A+
Senior Subordinated	A
DZ PRIVATBANK S.A.	
Senior Unsecured	A+
Commercial Paper	A-1
Deutsche Apotheker- und Aerztebank eG	
Senior Unsecured	A+
Senior Subordinated	A
Subordinated	A-
Commercial Paper	A-1

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. A description of each of S&P Global Ratings' rating categories is contained in "S&P Global Ratings Definitions" at https://www.standardandpoors.com/en_US/web/guest/article/-/view/sourceld/504352 Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column. Alternatively, call one of the following S&P Global Ratings numbers: Client Support Europe (44) 20-7176-7176; London Press Office (44) 20-7176-3605; Paris (33) 1-4420-6708; Frankfurt (49) 69-33-999-225; or Stockholm (46) 8-440-5914

Copyright © 2022 by Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Rating-related publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw or suspend such acknowledgment at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com (subscription), and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

STANDARD & POOR'S, S&P and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.