

Covered Bonds follow-up Rating

Erste Group Bank AG

Public Sector Covered Bond Program

Creditreform 
Rating

Rating Object	Rating Information	
Erste Group Bank AG, Public Sector Covered Bond Program	Rating / Outlook : AAA / Stable	Type: Rating Update (unsolicited)
Type of Issuance : Public Sector Covered Bond under Austrian law Issuer : Erste Group Bank AG	Rating Date : 02.12.2021 Rating Renewal until : Withdrawal of the rating Maximum Validity: 01.01.2050 Rating Methodology : CRA „Covered Bond Ratings“	
LT Issuer Rating : A (Erste Group Bank) ST Issuer Rating : L2 Outlook Issuer : Stable		

Program Overview			
Bonds nominal value	EUR 2,986 m.	WAL maturity covered bonds	4.98 Years
Cover pool value	EUR 4,301 m.	WAL maturity cover pool	5.89 Years
Cover pool asset class	Public Sector	Overcollateralization (nominal/committed)	44.05%/ 2.00%
Repayment method	Hard Bullet	Min. overcollateralization	2.00%
Legal framework	HypoBG	Covered bonds coupon type	Fix (2.88%), Floating (97.12%)

Cut-off date Cover Pool information: 30.09.2021.

Rating Action

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Analysts

Phillip Michaelis
Lead Analyst
p.michaelis@creditreform-rating.de
+49 2131 109 2157

Ritank Gupta
Analyst
r.gupta@creditreform-rating.de
+49 2131 109 5242

Neuss, Germany

This follow-up report covers our analysis of the public sector covered bond program issued under Austrian law by Erste Group Bank AG („Erste Group Bank“). The total covered bond issuance at the cut-off date (30.09.2021) had a nominal value of EUR 2,986.11 m., backed by a cover pool with a current value of EUR 4,301.44 m. This corresponds to a nominal overcollateralization of 44.05%. The cover assets mainly include Austrian public sector assets as well as obligations of regional and local authorities in Austria.

Taking into consideration the issuer rating, our analysis of the regulatory framework, liquidity- and refinancing risks, as well as our cover pool assessment and results of the cash flow analysis, Creditreform Rating AG (“Creditreform Rating” or “CRA”) has upgraded the rating of the covered bond program by 1 notch to AAA, due to an upgrade of the issuer rating following an update to the bank rating methodology as well as an improved cover pool rating resulting from an increase in OC level to 44.05% as of 30.09.2021. The AAA rating represents the highest level of credit quality and the lowest investment risk.

Key Rating Findings

- + Covered Bonds are subject to strict legal framework (HypoBG)
- + Current high overcollateralization of 44.05% as of 30.09.2021
- + High capitalisation and liquidity of Erste Group Bank
- +/- High cost of risk depressed earnings of the issuer, however successful cost savings in context of Corona crisis
- +/- Issuer has strong presence in developing markets and high degree of diversification as compared to other European banks. Risk potential in South east Europe

Table1: Overview results

Risk Factor	Result
Issuer rating	A (rating as of 27.08.2021)
+ Legal and regulatory framework	+4 Notches
+ Liquidity and refinancing risk	+1 Notch
= Rating after 1 st uplift	AAA
Cover pool & cash flow analysis	AAA
+ 2 nd rating uplift	+/-0 Notch
= Rating covered bond program	AAA

Issuer Risk

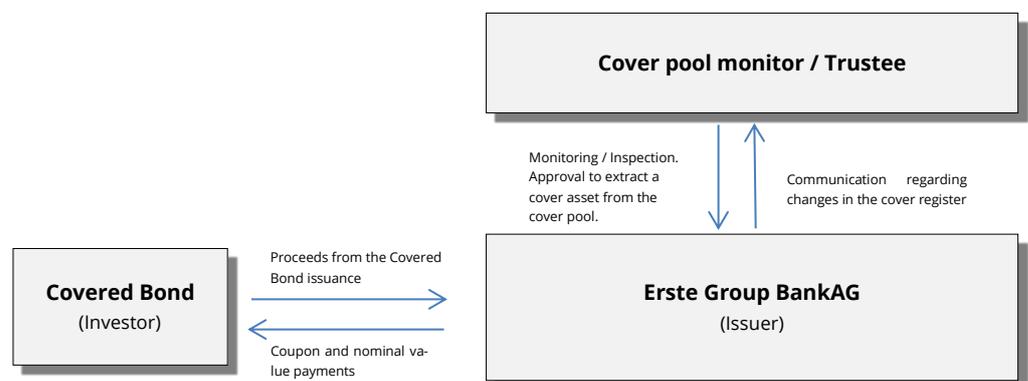
Issuer

Our rating of Erste Group Bank covered bond program is reflected by our issuer rating opinion of Erste Group Bank (Group) due to its group structure. CRA has upgraded the long-term issuer rating of Erste Group Bank by one notch from A- to A in a Rating Update dated 27.08.2021 following an update in the bank rating methodology. Erste Bank Group's role as a strong partner of SMEs, retail and corporate customers in middle and east Europe coupled with the Joint liability agreement between Erste Group and Sparkasse Austria acts as a key driver of the rating of the issuer. CRA does not expect the substantial deteriorations on earnings and risk provisions during the COVID-19 crisis to have any sustainable effect on asset quality and earning capacity of the bank. The expected steep rise in default rates, which was the main driver of the rating downgrade of the issuer in the previous year, has been so far avoided, owing to the generous state support therefore, justifying a rating upgrade. For a more detailed overview of the issuer rating, please refer to the webpage of Creditreform rating AG.

Structural Risk

Transaction structure

Figure1: Overview of Covered Bond emission | Source: CRA



Legal and Regulatory Framework

The legal basis for covered bond issuances in Austria is provided by Pfandbrief Law (Pfandbriefgesetz, „PfandBG“), the Mortgage Banking Act (Hypothekendarlehenbankgesetz, „HypoBG“) and the Covered Bond Act (Gesetz über Fundierte Bankschuldverschreibungen, „CBA“).

The European Commission on November 2019 adopted the legislative package to provide for enhanced harmonisation of the EU covered bond market. Each of the Member States should implement the Covered Bond Directive by 08 July 2021 and the national measures shall be applied at the latest from 08 July 2022.

In Austria, work is currently underway to implement the EU Covered Bond Directive and to create a uniform framework for covered bonds. The new Pfandbrief Act ("PfandBG") aims to create a modern and uniform legal basis for covered bonds by harmonizing the content of the three existing national laws. The government bill for the new "PfandBG" was adopted by the Austrian Cabinet on July 28, 2021¹, and was passed by the National Council on November 19, 2021. The new "PfandBG" will enter into force as of 08 July 2022; at the same time the currently existing three legal bases will expire as of 07 July 2022.

The legal basis of our currently rated covered bond program is "HypoBG". A comprehensive overview of 'HypoBG' with previous amendments can be found in our initial and follow-up rating reports of Erste Group Bank AG Public Sector Covered Bonds.

Under the "HypoBG" (law of 7/13/1899) which was last amended in 2010, any universal credit institution can issue covered bonds, although the issuer needs a special license that postulates additional requirements.

The covered bondholders have direct recourse to the issuer and a preferential claim to the cover pool assets secured by its cover asset class. Eligible cover assets are mainly loans secured by senior mortgages ("Hypothekendarlehenpfandbriefe") and public sector debt ("Öffentliche Pfandbriefe") confined to the EU / EEA countries and Switzerland, while assets from the US, Canada and Japan are not permitted.

A trustee ("Treuhänder"), appointed by the Minister of Finance, monitors the assets in the cover pool and ensure that the cover assets are available at all times and that they are duly recorded in the cover register. If an issuer defaults, the cover assets are managed by a special administrator selected by the bankruptcy court and the FMA authority.

The new draft "PfandBG" stipulates that the issuers are required to setting up their own risk management department, independent of operations, in the function of an internal trustee to monitor the cover pool. The internal trustee must ensure the identification, assessment, management and monitoring of all risks associated with covered bonds.

In general, we consider the structural framework in Austria under the legal framework HypoBG as positive as it provides clear rules to mitigate risks in particular regarding insolvency remoteness, asset segregation, investor's special claim vis-à-vis other creditors, the roll and appointment of a special administrator, among other provisions. Due to those reasons we have set a rating uplift of four (+4) notches for the regulatory and structural framework for Austrian covered bond programs under HypoBG.

¹ <https://www.wko.at/branchen/bank-versicherung/pfandbriefpaket.html#>

Liquidity- and Refinancing Risk

According to HypoBG, the issuer must maintain a minimum overcollateralization (OC) of 2% of the nominal outstanding covered bonds value in the form of liquid funds. Under the current legal frameworks, issuers are not required to hold a time-based liquidity buffer to cover outflows from liabilities (interest and principal) or derivative transactions over a certain future period of time.

However, the draft "PfandBG" provides for a mandatory liquidity buffer for the cover pool. Issuers must ensure that a liquidity buffer for the next 180 days is available to cover the maximum net liquidity outflows and that the timely repayment of liabilities from covered bonds is guaranteed.

There are no regulatory obligations that require issuers to perform specific stress tests on their covered bond programs; however, issuers may conduct voluntary stress tests to monitor the cover pool for interest rate-, currency- and other risks. Derivatives can be an additional measure to hedge interest rate and currency risks.

In the event of issuer's insolvency, the HypoBG stipulates that the special administrator may sell assets of the cover pool or use them as a guarantee for liquidity operations when liquidity shortfalls are foreseeable.

This covered bond program issues covered bonds with hard-bullet maturity structure. However, in the draft "PfandBG", an option for extending the maturity of covered bonds is expected to be implemented in order to reduce potential liquidity risks. Here, the maturity of a covered bond can be postponed by up to 12 months if, the liquidity buffer cannot be maintained, the issuer is in liquidation or insolvency proceedings have been opened. In this context, investors shall receive sufficient information on the objective triggering events, the maximum maturity postponement, interest rate agreements and the effects of the maturity extensions.

In general, under the existing legislation, sufficient structural safeguards in Austria are not established due to the absence of compulsory liquidity buffers and no obligation to conduct stress tests for interest rate and currency risks, and the minimum coverage tests. In addition, refinancing risks cannot be structurally reduced due to the hard bullet repayment structure as well, which can only be cushioned by sufficiently high overcollateralization or by other liquid funds. However, according to the draft law, the covered bonds will be benefited from the mandatory liquidity buffer and the option to defer maturity to mitigate refinancing risks. We assess the overall legal provisions on liquidity management for Austrian covered bond programs under the HypoBG as positive and set a rating uplift of only one (+1) notch.

ESG Criteria

CRA generally takes ESG-relevant factors (environmental, social and governance) into account when assessing Covered Bond ratings. Overall, ESG factors have a significant impact on the current rating of this Covered Bond program. CRA identifies governance factors, in particular, to have a highly significant impact on Covered Bond ratings. Since Covered Bonds are subject to strict legal requirements, regulatory risk plays an important role in assessing the credit rating.

The HypoBG legislation provides clear rules to mitigate risks in particular regarding insolvency remoteness, asset segregation, investor's special claim vis-à-vis other creditors, the roll and appointment of a special administrator, among other provisions. Additionally, Risk management

and internal controls as well as the macroeconomic factors such as hedging strategies, interest rates and yield curve are considered to have a highly significant impact on the assessment of the credit rating. Other individual factors with a potential key rating influence were not identified, and therefore did not affect the final rating.

Credit and Portfolio Risk

Cover pool analysis

The analysis of the cover pool is based on public information which has been made available by the Issuer, in particular the Austrian Transparency Template („ATT“) as per regulatory requirements. This information was sufficient according to CRA´s rating methodology “Covered Bond Ratings”.

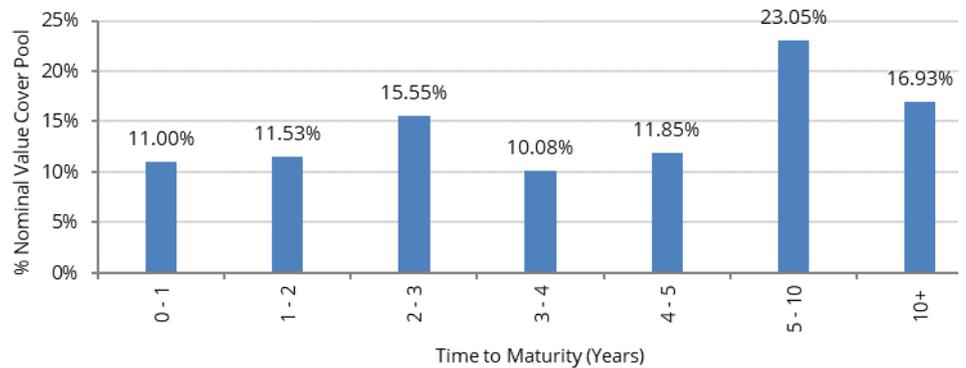
At the cut-off-date 30.09.2021, the pool of cover assets consisted of 9,966 debt receivables from 5,571 debtors, of which 99.20% are domiciled in Austria. The total cover pool volume amounted to EUR 4,301.44 m in bonds (0.00%), loans (100.00%) and others (0.00%) which have been lent to the central government, regional authorities and entities, and other debtors. The ten largest debtors of the portfolio total to 21.67%. Table 2 displays additional characteristics of the cover pool:

Table 2: Cover pool characteristics | Source: Erste Group Bank

Characteristics	Value
Cover assets	EUR 4,301 m.
Covered bonds outstanding	EUR 2,986 m.
Substitute assets	EUR 92.40 m.
Cover pool composition	
<i>Public Sector</i>	97.85%
<i>Substitute assets</i>	2.15%
<i>Other / Derivative</i>	0.00%
Number of debtors	5,571
<i>Bonds</i>	0.00%
<i>Loans</i>	100.00%
<i>Other</i>	0.00%
Average asset value	EUR 422.34 k.
Non-performing loans	0.00%
10 biggest debtors	21.67%
WA seasoning	NR
WA maturity cover pool (WAL)	5.89 Years
WA maturity covered bonds (WAL)	4.98 Years

We have listed an extended view of the composition of the cover pool in the appendix section “Cover pool details”. The following chart displays the maturity profile of the cover assets at the cut-off date 30.09.2021 (see figure 2):

Figure 2: Distribution by remaining time to maturity | Source: Erste Group Bank



Maturity profile

The following charts present the cash flow profile of the Issuer (see figure 3 and figure 4):

Figure 3: Cover asset congruence | Source: Erste Group Bank

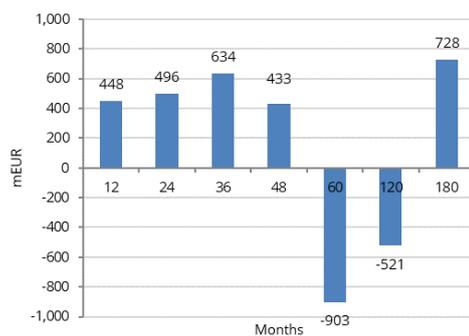
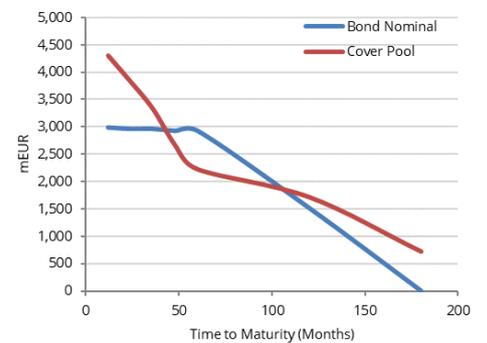


Figure 4: Amortization profile | Source: Erste Group Bank



During its cash flow modelling, CRA has taken into consideration the maturity structure of cover assets and liabilities. This structure was an integral part of the cash flow analysis.

Interest rate and currency risk

The legal framework provides for weekly stress tests to be conducted on interest rate- and currency risks. Therefore, interest rate risk could be mitigated by the 2% OC requirement. Currency risk, on the other hand, is also limited for this program as 99.84% of the cover pool assets and 100.00% of the cover bonds are denominated mainly in Euros. Nevertheless, we have applied interest rate and foreign exchange stresses on the cash flows for each rating level according to our methodology.

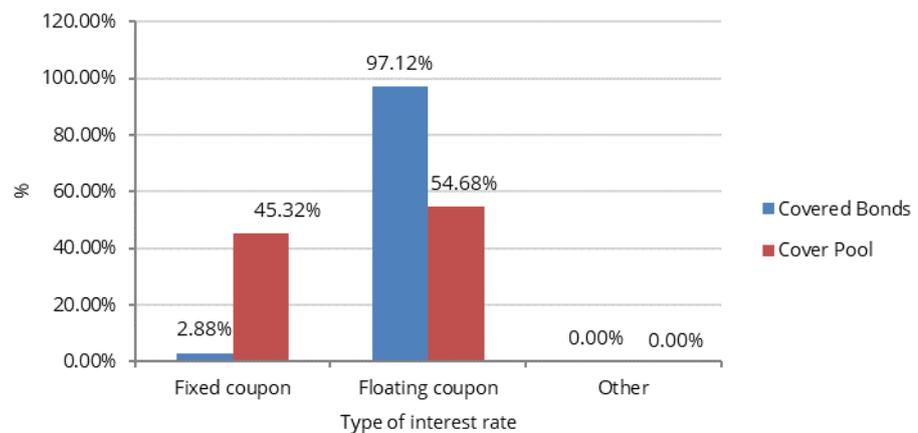
Table 3: Program distribution by currency | Source: Erste Group Bank

Currency	Volume	Share (%)
Cover Pool		
EUR	4,295 m.	99.84%

CHF	7 m.	0.16%
Covered Bond		
EUR	2,986 m.	100.00%

Figure 5 shows the types of interest rate used in this program.

Figure 5: Type of interest rate | Source: Erste Group Bank



Credit Risk

In Covered Bond Public Sector programs, CRA assesses the credit risk of the cover assets primarily through an assessment of the creditworthiness of the obligors and their future ability to meet all payment obligations. In order to derive a base case assumption for credit risk, CRA uses the CRA Sovereign Ratings of all obligors in the portfolio, which will be taken into account pro-rata. The rating reports of relevant sovereigns can be accessed at www.creditreform-rating.de. Using all portfolio information available (number of debtors, sovereign – sub-sovereign, maturity profile, regional diversification etc.), CRA has modelled the cover asset portfolio and, using Monte Carlo simulations, derived a distribution of defaults which can be used to elicit rating-level dependent default assumptions.

Recovery and loss-severity assumptions have been determined in accordance with CRA rating methodology. This includes a differentiation of sovereign- and sub-sovereign credits in terms of loss severities, which is included using the current portfolio composition to determine a weighted average recovery rate.

Using both rating-level dependent default and recovery assumptions, the following loss assumptions have been derived for the current cover pool (see Table 4):

Table 4: Cover Pool Base case assumptions | Source: CRA

Rating	Default Rate (%)	Recoveries (%)	Expected Loss (%)
AAA	14.90%	34.65%	9.74%
AA+	12.99%	37.15%	8.17%
AA	11.59%	39.65%	7.00%
AA-	9.71%	41.31%	5.70%
A+	8.85%	42.98%	5.04%
A	8.31%	44.65%	4.60%
A-	7.41%	46.31%	3.98%

Cash-Flow Analysis

Model Assumptions

Based on public information and using the base case loss assumptions, we implement a scenario-based cash flow model. This model aims to test the ability of the structure to service all covered bonds according to their payment profile in diverse stress scenarios. The CRA cash flow analysis assumes that the Issuer has defaulted, i.e. all obligations will be met using cash flows from the cover pool assets only. We also assume that no additional assets will be added to the cover pool during the wind-down phase.

The cash-flow analysis considers, among other factors, asset value haircuts (“asset-sale discount”), and the possible positive yield spread between covered assets and covered bonds (“yield spreads”). To derive the asset-sale discount, CRA assumes, based on secondary market data, a rating level haircut on the asset value. Furthermore, CRA, using available public information (i.e. issuer’s annual accounts), has derived estimations for yield spreads (see table 5):

Table 5: Cash-Flow Model assumptions | Source: CRA

Rating level	Asset-Sale Discount	Yield Spread
AAA	13.88%	1.59%
AA+	12.59%	1.64%
AA	11.76%	1.68%
AA-	10.97%	1.71%
A+	10.36%	1.73%
A	9.86%	1.75%
A-	9.20%	1.78%

Rating Scenarios

In our cash flow model rating scenarios have been tested considering several central input parameters, such as:

- Portfolio composition (diversification, concentration, granularity)
- Probability of default of cover assets
- Correlations of cover assets and systematic risk factors
- Recoveries

- Maturity profile of covered bonds and cover assets (ALM)

Within a AAA rating scenario, the cash flow model showed that obligations can be paid fully and in a timely manner. Overall, the cash flow analysis revealed that the portfolio, given all available information as of 30.09.2021, may ensure the repayment of bonds' nominal capital notwithstanding the occurrence of the presented stressed scenarios.

Overcollateralization Break-Even Analysis

CRA also performed a break-even OC analysis taking into considerations the following drivers: ALM, Loss level, Interest rate spreads, foreign currency mismatches and Recoveries. Performing the break-even OC analysis, we took rating-level specific stressed outcomes into account. Based on these analyses, the maximum OC required for each relevant rating level during the whole period has been presented in table 6.

Table 6: Breakeven Analysis | Source: CRA

Rating Level	Break-Even OC
AAA	30.42%
AA+	26.52%
AA	22.59%
AA-	18.79%
A+	16.97%
A	16.21%
A-	14.68%

Sensitivity Analysis

CRA also evaluates the sensitivity of the structure and program with respect to important input parameters. In particular, the following factors have been varied:

- Credit quality of cover assets
- Recoveries

The following table presents the rating impact of a decline in recoveries and an increase in the credit risk of single debtors (sovereigns). Starting from the best-case, which is represented by our base case assumptions, the analysis reveals low sensitivity of the rating with respect to recovery rates and credit risk. The worst-case scenario, in which we reduce recoveries by 50% and increase credit risk by 50%, no impact on the implied rating scenario can be observed. (see Table 7):

Table 7: Covered Bond Program Sensitivity: Credit Quality und Recovery Rates | Source: CRA

Recovery Defaults	Base Case	-25%	-50%
Base Case	AAA	AAA	AAA
+25%	AAA	AAA	AAA
+50%	AAA	AAA	AAA

In general, based on the presented cash flow analysis results, the rating of the cover pool within our covered bond program rating has been set at AAA, which means that the rating has a buffer of 3 additional notches.

However, it is worth mentioning that, the ongoing Covid-19 crisis could have a potential impact on the cover pool. It remains to be seen how serious the effects of the lockdown, among other things, will be. Should there be any changes to the cover pool and the issuer rating in the future, we will include them during our monitoring process.

Counterparty Risk

Derivatives

No derivatives in use at present.

Commingling

In the event of issuer's bankruptcy, in order to avoid commingling of funds, the HypoBG stipulates that the cover assets should be isolated from the general bankruptcy estate (insolvency-free assets) and a special cover pool administrator will be appointed to manage the cover pool. Under that mandate the cover pool administrator will have first priority on the up-coming cash flows from the cover pool assets, which in turn should be used to cover interest and principal payments of the covered bond holders in event of the Issuer's insolvency.

Appendix

Rating History

Event	Rating Date	Publication Date	Result
Initial Rating	11.01.2019	18.01.2019	AAA / Stable
Rating Update	27.01.2020	30.01.2020	AAA / Stable
Monitoring	24.03.2020	28.03.2020	AAA / Watch negative
Rating Update	15.12.2020	18.12.2020	AA+ / Stable
Monitoring	05.07.2021	06.07.2021	AA+ / Watch Unknown
Rating Update	02.12.2021	08.12.2021	AAA / Stable

Details Cover Pool

Table 8: Characteristics of Cover Pool | Source: Erste Group Bank

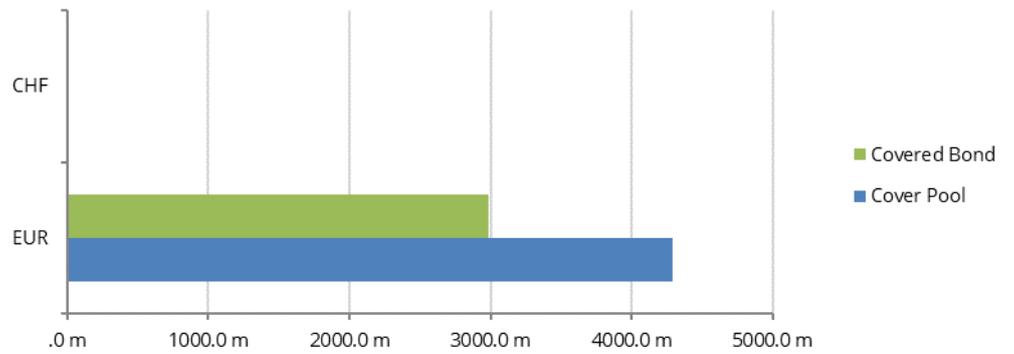
Characteristics	Value
Cover Pool Volume	EUR 4,301 m
Covered Bonds Outstanding	EUR 2,986 m
Substitute Assets	EUR 92 m
Share Derivatives	0.00%
Share Other	100.00%
Substitute Assets breakdown by asset type	
Cash	100.00%
Guaranteed by Supranational/Sovereign agency	0.00%
Central bank	0.00%
Credit institutions	0.00%
Other	0.00%
Substitute Assets breakdown by country	
Issuers country	100.00%
Eurozone	0.00%
Rest European Union	0.00%
European Economic Area	0.00%
Switzerland	0.00%
Australia	0.00%
Brazil	0.00%
Canada	0.00%
Japan	0.00%
Korea	0.00%
New Zealand	0.00%
Singapore	0.00%
US	0.00%

Other	0.00%
Cover Pool Composition	
Public Sector	97.85%
Total Substitute Assets	2.15%
Other / Derivatives	0.00%
Number of Debtors	5,571
Distribution by debtor type	
Central Government	20.84%
Regional authorities	34.02%
Municipal authorities	38.59%
Other	6.55%
Distribution by asset type	
Loans	100.00%
Bonds	0.00%
Other	0.00%
Average asset value	EUR 422 k.
Share of Non-Performing Loans	0.00%
Share of 10 biggest debtors	21.67%
WA Maturity (months)	NR
WAL (months)	70.66
Distribution by Country (%)	
Austria	99.19
Denmark	0.24
Hungary	0.58
Distribution by Region (%)	
Vienna	20.30
Lower Austria	29.28
Upper Austria	11.77
Salzburg	8.93
Tyrol	14.12
Styria	9.57
Carinthia	1.62
Burgenland	0.99
Vorarlberg	3.42

Table 9: Participant counterparties | Source: Erste Group Bank

Role	Name	Legal Entity Identifier
Issuer	Erste Group Bank	PQOH26KWDF7CG10L6792

Figure 6: Program currency mismatches | Source: Erste Group Bank



Key Source of Information

Documents (Date: 30.09.2021)

Issuer

- Audited consolidated annual reports of Erste Group Bank AG (Group) 2017-2020
- Final Rating report as of 27.08.2021
- Miscellaneous Investor Relations Information and Press releases
- Data from CRA/ eValueRate databank

Covered Bond and Cover Pool

- ATT Reporting from Erste Group Bank as of 30.09.2021
- Market data Public Sector Covered Bond Program

Regulatory and Legal Disclosures

Creditreform Rating AG was neither commissioned by the rating object nor by any other third parties for the rating. The analysis took place on a voluntary basis by Creditreform Rating AG and is to be described in the regulatory sense as an unsolicited rating. The rating was conducted on the basis of Creditreform Rating´s [“Covered Bond Ratings” methodology \(v1.0, July 2017\)](#) and [“Technical Documentation Portfolio Loss Distributions” \(v.1.0, July 2018\)](#) in conjunction with Creditreform´s basic document [“Rating Criteria and Definitions” \(v1.3, January 2018\)](#). On the subject of ESG (environment, social and governance), Creditreform Rating AG has published the basic document [“The Impact of ESG Factors on Credit Ratings” \(March 2020\)](#).

Unsolicited Credit Rating

With Rated Entity or Related Third Party Participation	NO
With Access to Internal Documents	NO
With Access to Management	NO

The rating is based on publicly available information and internal evaluation methods for the rated bank and program. The issuer's quantitative analysis is based mainly on the latest annual accounts, interim reports, and other information of the bank pertaining to investor relations. The cover pool's quantitative analysis for the rated Covered Bond Program was based on the “Austrian Transparency Template” (ATT) published by the Erste Group Bank.

Information on the meaning of a rating category, definition of default and sensitivity analysis of relevant key rating assumptions can be found at “Creditreform Rating AG, Rating Criteria and Definitions”:

<https://www.creditreform-rating.de/en/about-us/regulatory-requirements.html>

This rating was carried out by analysts Philip Michaelis (Senior Analyst) und Ritank Gupta (Analyst) both based in Neuss/Germany. On 02.12.2021, the rating was presented to the rating committee by the analysts and adopted in a resolution. The function of Person Approving Credit Ratings (PAC) was performed by Christian Konieczny (Senior Analyst).

On 02 December 2021, the rating result was communicated to Erste Group Bank, and the preliminary rating report was made available. The Issuer and all relevant parties examined the rating report prior to publication and were given at least one full working day to appeal the rating committee decision and provide additional information. The rating decision was not amended following this examination.

The rating is subject to one-year monitoring from the creation date (see cover sheet). Within this period, the rating can be updated. After one year at the latest, a follow-up is required to maintain the validity of the rating.

In 2011 Creditreform Rating AG was registered within the European Union according to EU Regulation 1060/2009 (CRA-Regulation). Based on the registration Creditreform Rating AG (CRA) is permitted to issue credit ratings within the EU and is bound to comply with the provisions of the CRA-Regulation.

Endorsement

Creditreform Rating did not endorse the rating according Article 4 (3), CRA-Regulation.

Conflict of Interests

No conflicts of interest were identified during the rating process that might influence the analyses and judgements of the rating analysts involved or any other natural person whose services are placed at the disposal or under the control of Creditreform Rating AG and who are directly involved in credit rating activities or approving credit ratings and rating outlooks.

In the event of provision of ancillary services to the rated entity, CRA will disclose all ancillary services in the credit rating report.

Rules on the Presentation of Credit Ratings and Rating Outlooks

The approval of credit ratings and rating outlooks follows our internal policies and procedures. In line with our policy "Rating Committee," all credit ratings and rating outlooks are approved by a rating committee based on the principle of unanimity.

To prepare this credit rating, CRA has used following substantially material sources:

1. Transaction structure and participants
2. Transaction documents
3. Issuing documents
4. Other rating relevant documentation

There are no other attributes and limitations of the credit rating or rating outlook other than displayed on the CRA website. Furthermore, CRA considers satisfactory the quality and extent of information available on the rated entity. In regard to the rated entity, Creditreform Rating AG regarded available historical data as sufficient.

Between the disclosure of the credit rating to the rated entity and the public disclosure no amendments were made to the credit rating.

The rating report and/or the press release indicate the principal methodology or version of methodology that was used in determining the rating, with a reference to its comprehensive description.

In cases where the credit rating is based on more than one methodology, or where reference only to the principal methodology might cause investors to overlook other important aspects of the credit rating, including any significant adjustments and deviations, Creditreform Rating AG explains this fact in the credit rating and indicates how the different methodologies and other

aspects are taken into account in the credit rating. This information is integrated in the credit rating report.

The meaning of each rating category, the definition of default or recovery, and any appropriate risk warning, including a sensitivity analysis of the relevant key rating assumptions, such as mathematical or correlation assumptions, accompanied by worst-case scenario credit ratings as well as best-case scenario credit ratings, are explained.

The date at which the credit rating was released for distribution for the first time and when it was last updated including any rating outlooks, is indicated clearly and prominently in the rating report and/or the press release as a "Rating action"; first release is indicated as "initial rating", other updates are indicated as an "update", "upgrade or downgrade", "not rated", "confirmed", "selective default" or "default".

In the case of a rating outlook, the time horizon is provided during which a change in the credit rating is expected. This information is available within the rating report and/or the press release.

In accordance to Article 11 (2) EU-Regulation (EC) No 1060/2009 registered or certified credit rating agency shall make available in a central repository established by ESMA information on its historical performance data, including the ratings transition frequency, and information about credit ratings issued in the past and on their changes. Requested data are available at the ESMA website: <https://cerep.esma.europa.eu/cerep-web/statistics/defaults.xhtml>.

An explanatory statement of the meaning of Creditreform`s default rates are available in the credit rating methodologies disclosed on the website.

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Creditreform Rating AG

Contacts

Creditreform Rating AG

Europadamm 2-6
D - 41460 Neuss

Fon +49 (0) 2131 / 109-626
Fax +49 (0) 2131 / 109-627
E-Mail info@creditreform-rating.de
Internet www.creditreform-rating.de

CEO:
Dr. Michael Munsch
Chairman of the board:
Michael Bruns

HRB 10522, Amtsgericht Neuss