

Creditreform Covered Bond Rating

KBC Bank, N.V.

Mortgage Covered Bond Program

Creditreform Rating

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Rating Object	Rating Information	
KBC Bank N.V., Mortgage Covered Bond Program Type of Issuance : Mortgage Covered Bond under the Belgian law Issuer : KBC Bank LT Issuer Rating: A (KBC Bank) ST Issuer Rating: L2 Outlook Issuer: Stable	Rating / Outlook :	Type: Initial Rating (unsolicited)
	Rating Date : 20.02.2019 Rating Renewal : Withdrawal of the rating Rating Methodology : CRA „Covered Bond Ratings”	

Program Overview			
Nominal value	EUR 7.560 m.	WAL maturity covered bonds	4,45 (Years)
Cover pool value	EUR 11.083 m.	WAL maturity cover pool	7,88 (Years)
Cover pool asset class	Mortgages	Overcollateralization (nominal/committed)	46,60%/ 10,00%
Repayment method	Soft Bullet	Min. overcollateralization	5,00%
Legal framework	Belgium Covered Bonds	Covered bonds coupon type	Fix (98,15%), Floating (1,85%)

Cut-off date Cover Pool information: 30.09.2018.

Summary

This rating report covers our analysis of the mortgages covered bond (“Belgian Pandbrieven”) program issued under the Belgian law by KBC Bank („KBC Bank“). The total covered bond issuance at the cut-off date (31.01.2019) had a nominal value of EUR 7.560,00 m, backed by a cover pool with a current value of EUR 11.083,32 m. This corresponds to a nominal overcollateralization of 46,60%. The cover assets mainly include Belgium mortgages obligations.

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 assigned the covered bond program a AAA rating. 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 requirements
- + Covered bonds are backed by the appropriate cover asset class
- + Covered bond holders have recourse to the issuer
- Relative high NPL ratio.

Table1: Overview results

Risk Factor	Result
Issuer rating	A (rating as of 04.12.2018)
+ 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	+3
= Rating covered bond program	AAA

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Issuer Risk

Issuer

Our rating of KBC Bank NV is reflected by our rating opinion of KBC Group NV (Group) due to its group structure. Therefore we refer to our rating report of KBC Group NV (Group).

KBC Group NV (hereinafter: KBC) is an integrated bank insurance group created in 1998 by the merger of two Belgian banks (Kredietbank and CERA Bank) and a Belgian insurance company (ABB Insurance) with headquarters in Brussels. The Group is a non-operating holding company of its insurance and banking activities and is the single point of entry in a resolution scenario for the Group. KBC's most significant asset is its bank KBC Bank NV (EUR 256 bn assets). With 37.130 employees (average of 2017 - full-time equivalents), KBC serves approximately 11 million customers and had total assets of EUR 292 bn in 2017. In 2015 KBC completed the repayment of state aid in the total amount of EUR 7 bn from the Belgian Federal and Flemish Regional governments received in 2008 and 2009 to strengthen its capital base. Moreover, KBC met all structural requirements made by the European Commission (EC), including a restructuring/divesting program to reduce the Groups risk profile, which means that the behavioral measures of the EC no longer apply.

KBC acts as a bank insurance group in its core markets Belgium, Bulgaria, the Czech Republic, Hungary, Ireland and Slovakia. In addition, KBC is represented to a limited extent in several other countries in order to support its corporate clients. The focus of the Group is the retail and private banking business, as well as business activities with small and medium sized enterprises and mid-cap clients.

KBC recorded considerable growth and showed convincing performance in the fiscal year 2017; however, the Group's asset quality remains unsatisfactory despite the improvements in recent years, as KBC still faces its legacy issues in its loan portfolio. The growth in 2017 was driven by its acquisitions on one hand, but on the other by solid growth in its core markets. Despite the low interest environment in Europe, KBC recorded strong earnings figures in 2017, as well as in recent years in general. Moreover, the Group benefits from its stable and diversified funding base. The Group complies with all regulatory capital requirements and is on average above the peer group in its capital ratios. In addition, the repaid state aid sets funds free to continuously improve KBC's regulatory capital ratios in the upcoming year. Furthermore, the liquidity situation of the Group is satisfactory.

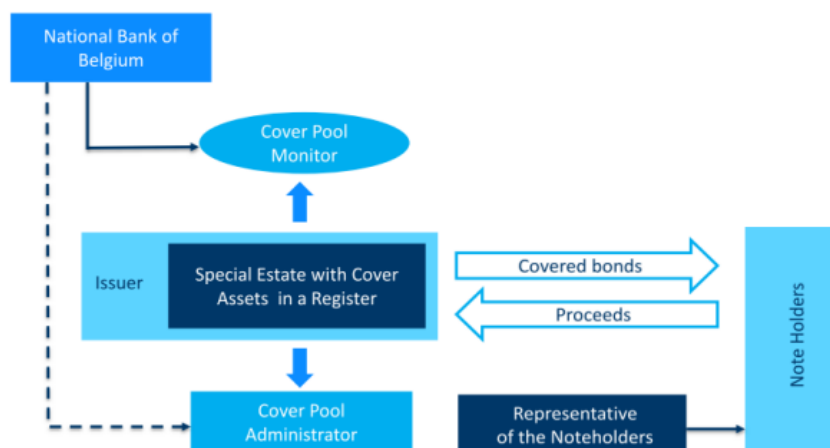
Structural Risk

Transaction structure

Table 2: Overview of all transaction's parties | Source: CRA

Role	Name
Issuer	KBC Bank, N.V., Belgium
Cover pool monitor	KPMG Bedrijfsrevisoren
Cover pool administrator	Appointed by the NBB in case of issuer insolvency

Figure1: Overview of Covered Bond emission | Source: KBC Group



Legal and regulatory framework

On 8/3/2012, Belgium introduced the legal framework on covered bonds and their issuance by credit institutions to foster the mobilisation of claims in the financial sector ('Mobilisation Law'), which was later incorporated in the Belgian 'Banking law' of 25/4/2014 on the status and supervision of credit institutions. The legal framework stipulates that any universal credit institution licensed by the National Bank of Belgium (NBB) is permitted to issue covered bonds, however these institutions need approval from the NBB as covered bond issuers and the covered bond program must be endorsed by the NBB as well. The NBB is responsible for the regulatory monitoring of Belgian covered bond programs, i.e. the common supervision, licensing and regulation. The NBB has to control the eligibility and valuation of cover assets and its documentation. Moreover, the NBB has to examine the reports submitted by the cover pool monitor and verify the fulfillment of coverage- and liquidity tests. In case of any breach of regulations, the NBB is allowed to disbar the issuer from issuing and managing covered bonds.

The Belgian framework discriminates between Article 129 CRR compliant covered bonds –'Belgian pandbrieven' – and non-compliant covered bonds – 'Belgian covered bonds', though only 'Belgian pandbrieven' are currently outstanding, i.e. in practice the Belgian credit institutions are only able to issue Article 129 CRR-compliant covered bonds. The Belgian legal framework accords with the claims of the UCITS Directive 52(4) and with Article 129 CRR, which administers the risk-weighting of covered bonds. They are eligible in repo transactions with the NBB, while issuers are permitted to retain own issued covered bonds.

Regarding the implementation of the BRRD, which features resolution authorities with several particular resolution tools and deals with the failure of financial institutions, Belgium has translated the directive - including the so-called "bail-in tool". - into national law with the Banking Law of 4/25/2014 and different royal decrees amending the Banking Law.

Insolvency remoteness and asset segregation

In Belgium, cover assets remain on the issuer's balance sheet, while they form the issuer's segregated estate after being registered in a special cover register. In case of issuer default, the cover assets are excluded from the general bankruptcy estate and reserved for the claims of covered bond holders and other counterparties with a preferential right to guarantee their duly payment.

Cash flows from eligible cover assets that incur before the date of insolvency belong to the segregated estate and are secured by the right of 'revindication', i.e. if the amounts of these cash flows cannot be identified in the general estate, the covered bond holders will have a preferential claim over other unencumbered assets in the general estate of the same value and chosen on the basis of the features determined in the covered bonds' issue terms. Cash flows from cover assets that incur after the date of insolvency will also be separated from the general bankruptcy estate, which again mitigates commingling risk. If the segregated estate is more than sufficient to wipe off any claims with respect to the covered bond program, the remainder of cover assets will be transferred to the general bankruptcy estate.

In case of an issuer default, no automatic acceleration of the covered bond takes place. Covered bonds will continue to exist and they will be reimbursed at the time of their original contractual maturity. Belgium issues soft-bullet covered bonds, i.e. in case of non-payment the maturity will be extended automatically by up to 12 months to pay back principal and interest payments of covered bonds. Nevertheless, covered bond holders can decide for acceleration of the covered bonds. Moreover, if it is conceivable that the claims of the covered bond holders cannot be satisfied, the special cover pool administrator can opt for acceleration after obtaining approval from the NBB and in agreement with the covered bond holders' representative.

Cover Pool Monitor

The Belgian legal framework stipulates that for any covered bond program an external statutory cover pool monitor has to be nominated by the issuer after being accepted by the NBB. The cover pool monitor must dispose of special expertise and the necessary know-how and has to be listed on the official list of auditors authorized by the NBB, while he or she must not be the issuer's statutory auditor. Prior to the issuance the cover pool monitor has to supervise the accuracy of the transactions, the eligibility of the cover assets, the fulfillment of respective limits (i.e. overcollateralization test and 85% core assets coverage test) and the adherence with the law. He or she has to inform the NBB about the credit institution's organizational ability to issue and administer covered bond programs. In case of any violation of the law, the cover pool monitor has to inform the NBB. After the issuance, the auditor conducts audits of the cover pool and controls the retention of the coverage tests, the liquidity test and the maintenance of the cover register each month, verifies them and reports the results of the tests to the NBB each quarter.

Special administrator

In case of issuer default or any other crisis with respect to covered bonds, the ongoing management of the cover pool is guaranteed by a special cover pool administrator that is approved by the NBB. He or she is empowered with all necessary powers to manage the cover pool and the governance of the covered bond program. He or she is reliable for the timely payment of the covered bond holders' claims and any other obligations of the program.

Eligibility criteria

All assets that are registered in the cover pool register are part of the cover pool and belong to the segregated estate. Eligible cover assets are first-ranking residential mortgage loans, first-ranking commercial mortgage loans, public sector loans, notes issued by securitization vehicles, exposures on third party credit institutions and hedging instruments. Residential and commercial mortgage assets need to be located in the EEA, and these properties are confined to a limit of 15% of all cover assets, if they constitute real estate under construction or other properties in building phase. Public sector exposures must either be claims against or warranted by or insured by central banks, central, regional or local government agencies, multilateral development banks or international organizations that are compliant with article 117 CRR and with a 0% risk weight. Senior RMBS, senior CMBS and senior public ABS are legitimate cover assets, if at least 90% of the underlying assets are eligible and if the originator and the covered bond issuer are affiliate institutions, while the securities must be assessed with credit quality step 1 and Article 129 CRR compliant and the SPV must be located in the EU. Notwithstanding the asset categories, delinquent assets may not be included to the cover pool.

Primary asset classes in the cover pool are residential mortgages and senior RMBS, commercial mortgages and senior CMBS and public sector loans and senior public ABS, while at least 85% of the nominal amount of covered bonds outstanding must be composed of either asset class. The remaining cover pool can include assets of the other two types and exposures to third party credit institutions and derivatives up to a maximum of 15% of the issued bonds. Thus, mixed asset cover pools are possible but restricted by regulatory limits with respect to the composition.

While there is no LTV cap in place that makes the entire loan ineligible or induces the elimination of the loan from the cover pool, soft LTV limits exist restricting the fraction of loans that can be considered for the valuation of the cover assets and specifying the issuance volume of covered bonds. The maximum LTVs are 80% for residential mortgage loans and 60% for commercial mortgage loans based on the market value.

With respect to public sector exposures the value of the cover assets is the book value if the entity is located in the EU and if it is located in non-EU countries the credit quality step must be 1 or 2 provided that the exposure is below 20% of the nominal amount of the issued covered bond, otherwise it will be zero. Considering exposures on third party credit institutions, the value of the cover assets is the book value if the institution is assessed with credit quality 1 provided that the maturity is below one year or with 2 provided that the maturity is below 100 days.

If the period of delay in payment is beyond 30 days and below 89 days, the corresponding loan is cut back by 50%, while if it is beyond 90 days the asset will be removed from the cover pool. An independent expert has to document the property valuation and the market value pursuant to the NBB Covered Bonds Regulation. If the property value exceeds EUR 3 million or 2% of the volume of the covered bond, a special valuation report is demanded, while with respect to cheaper properties, the sale price can be applied or in case of buildings under construction the value assigned by the architect can be applied.

Considering revaluation procedures, the issuer has to check the property value on a regular basis. Residential properties have to be controlled every three years and commercial properties every year in accordance with Article 208(3) of the CRR, while under a shifting market environment the monitoring should be conducted more often.

Systemic relevance and external support

Belgian institutions firstly issued covered bonds in 2012 after the legal framework regarding covered bonds was implemented. During the past years covered bonds outstanding have increased significantly. While the overall amount was EUR 2.6bn in 2012, it reached EUR 19bn in 2016¹. This increase is mainly reflected in mortgage covered bonds outstanding, which were firstly issued in 2012 and increased by a factor of six from EUR 2.6bn in 2012 to EUR 16.7bn in 2016. By the year 2017 the volume dropped to EUR 17.6 bn.

With a market share of approx. 49% outstanding covered bonds in the mortgage covered bonds segment as of 2017, KBC Bank is one of the largest covered bonds issuer in Belgium. Likewise, the KBC Group being one of the systemically important financial institutions in Belgium is also classified as relevant.

Summary Structural Risk

In general, the Belgian legal framework defines clear rules to mitigate risks in particular regarding: insolvency remoteness, investor's special claim vis-à-vis other creditors, among other provisions. Furthermore, it foresees clear defined asset eligibility criteria with soft LTV limits. On the other hand, the Belgian legal framework does stipulate a special cover pool monitor independent from the issuer.

¹ Source: EMF-ECBC (2018), ECBC: European Covered Bond Fact Book 2018, EMF-ECBC

We assess the structural framework in Belgium as positive, accomplishing an adequate set of rules for Belgian covered bonds. Furthermore, we contemplate the importance of the KBC bank in the Belgian covered market in our analysis. Due to those reasons the rating uplift has assessed set at four (+4) notches.

Liquidity- and Refinancing Risk

Minimum overcollateralization

The overcollateralization test requires a mandatory 5% minimum overcollateralization ratio on a nominal basis at any time, which has to bear up against sudden unforeseen interest rate and currency changes and prevent interest rate and currency mismatching. All tests have to be executed and fulfilled on a daily basis, while regular public reporting on market and liquidity risk is not requested.

Short-term liquidity coverage

A liquidity test demands a six month liquidity requirement, i.e. any liquidity needs within the next six months have to be covered by liquid cover assets. In order to achieve the liquidity needs the issuer can use amounts under a liquidity facility provided that the creditor is a credit institution in an EEA country, assessed with credit quality step 1 and does not be a member of the same consolidated group as the issuer. To be comprised in the liquidity test, liquid assets must be eligible cover assets and be assessed as liquid assets under the Regulation of the Banking Finance and Insurance Commission of 7/27/2010 and in agreement with regulations of the overcollateralization test. In case of violation of the liquidity test, the issuer has to try everything possible to comply with the requirements of the test within the next 14 days, while no new covered bond can be issued during this time.

Stress tests and matching

The amortization test has to make sure that the cash flows from the cover assets suffice to wipe off any claims of covered bond holders and other involved counterparties, i.e. natural matching is used to mitigate market risk. Furthermore, the issuer has to pay attention to the covered bond's interest and currency risk and has to guarantee that the covered bond program resists heavy and unexpected interest or currency changes by the use of daily static stress tests.

The legal framework moderates interest rate and currency risk by simulating that the coverage tests and liquidity test sustain sudden and unforeseen interest rate and currency changes, which are ascertained at 2% and 8% respectively, except the issuer conducts its own in-house stress tests. Although the legal framework does stipulate to do stress tests on an ongoing basis, the types of stress tests do not fully comply with the stress tests specified by EBA. Overall, EBA's guidelines are merely partially satisfied.

Asset-Liability Mismatch

Asset-liability mismatches ("ALM") arise with different maturities of cover assets and covered bonds. Natural matching - i.e. the congruence of present values – forms the essential approach to reduce ALM risk. In addition, the statutory liquidity coverage requirement for 180 days is a safeguard mechanism to ensure the servicing of pending principal and interest payments.

Repayment method

Belgium issues soft-bullet covered bonds, i.e. in case of non-payment an extension period will grant additional time to pay back principal and interest payments of covered bonds. This helps to partially mitigate maturity mismatches between cover assets and liabilities.

Refinancing costs

In the event of the issuer's insolvency, the Belgian legal framework stipulates that the special administrator can sell assets of the cover pool or use them as a guarantee for liquidity operations if liquidity shortfalls are foreseeable.

CRA's analysis assumes that refinancing gaps due to ALM will be closed by a sale of assets from the cover pool. In doing so, we take into account related costs in the form of a discount to the nominal value. The quantification of this discount is adjusted following an analysis of relevant market data and will be used in our cash flow analysis.

Other liquidity risks

Issuing banks are only allowed to use derivative instruments to hedge interest rate and currency risk of underlying cover assets provided that the derivative counterparty is located in the OECD and is assessed with credit quality step 1 or 2. In case of non-payment or issuer default, derivative contracts in the cover pool cannot be cancelled upon the issuer's bankruptcy and continue to exist, which needs to be retained in the contract. Derivative instruments, which are allowed in the cover pool, rank *pari passu* to covered bond holders. The treatment of derivatives fully conforms to EBA's Best Practice, as the legal framework requires that derivative instruments are permitted in the covered bond program solely for risk hedging purposes, while contracts in the cover pool cannot be cancelled upon the issuer's bankruptcy.

All required tests have to be executed and fulfilled on a daily basis, while regular public reporting on market and liquidity risk is not requested.

Summary Liquidity and Refinancing Risk

Compared to other jurisdictions, the Belgian Covered Bond Act and the stipulated risk management processes for liquidity risks constitute a comparatively adequate framework by which they can be effectively reduced. Features as the liquidity coverage for the next 180 days, may temper underlying liquidity risk. Furthermore, Refinancing risks, cannot be structurally complete reduced under soft bullet repayment structures, which in turn can only be cushioned by sufficiently high overcollateralization, short-term cash availability, or other liquid funds to bridge the asset-liability mismatches in the portfolio. It is our understanding that the main attenuator for such risk is the high overcollateralization level.

Nevertheless, we assess the overall legal provisions on liquidity management for covered bonds programs issued in Belgium and set a rating uplift of only one (+1) notch.

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 Harmonised Transparency Template („HTT“) as per regulatory requirements. This information was sufficient according to CRA's rating methodology "Covered Bond Ratings".

At the cut-off-date 30.09.2018, the pool of cover assets consisted of 136.406,00 debt receivables of which 100% are domiciled in Belgium. The total cover pool volume amounted to EUR 11.083,32 m in residential (100,00%), commercial (0,00%) and others (0,00%). The ten largest debtors of the portfolio total 0,0004%. Table 3 displays additional characteristics of the cover pool:

Creditreform Covered Bond Rating

KBC Bank, N.V.

Mortgage Covered Bond Program

Creditreform Rating

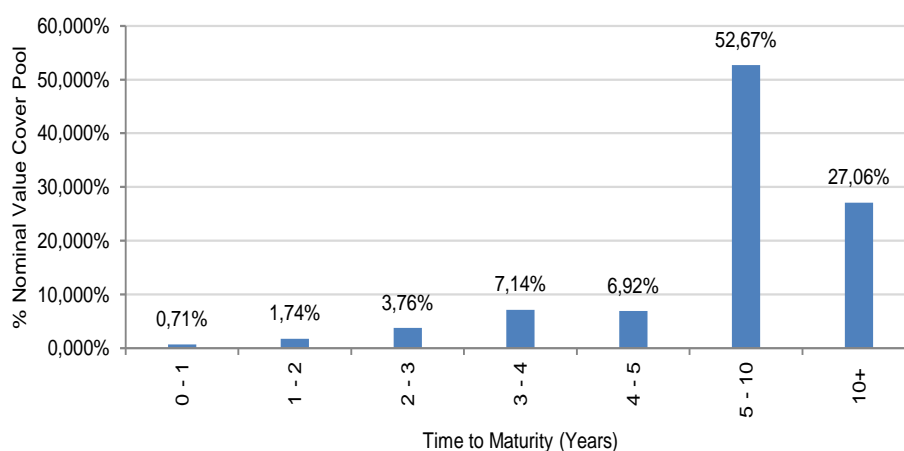
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Table 3: Cover pool characteristics | Source: KBC Bank

Characteristics	Value
Cover assets	EUR 11.083 m.
Covered bonds outstanding	EUR 7.560 m.
Substitute assets	EUR 777,29 m.
Cover pool composition	
<i>Mortgages</i>	92,63%
<i>Public Sector</i>	0,36%
<i>Substitute assets</i>	7,01%
<i>Other / Derivative</i>	0,00%
Number of debtors	N/A
Mortgages Composition	
<i>Residential</i>	100,00%
<i>Commercial</i>	0,00%
<i>Other</i>	0,00%
Average asset value (Residential)	EUR 107.274 k.
Average asset value (Commercial)	EUR 0,00 k.
Non-performing loans	0,11%
10 biggest debtors	0,0004%
WA seasoning	60 Months
WA maturity cover pool (WAL)	7,88 Years
WA maturity covered bonds (WAL)	4,45 Years

We have listed an extended view of the composition of the cover pool in the appendix section "Cover pool details", with, for example, a detailed regional distribution. The following chart displays the maturity profile of the cover assets at the cut-off date 30.09.2018 (see figure 2):

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

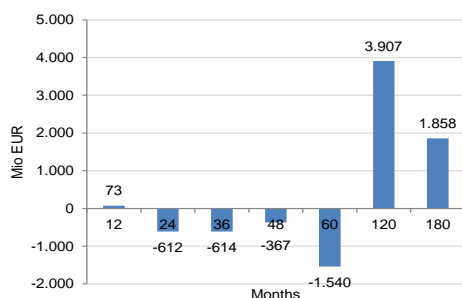
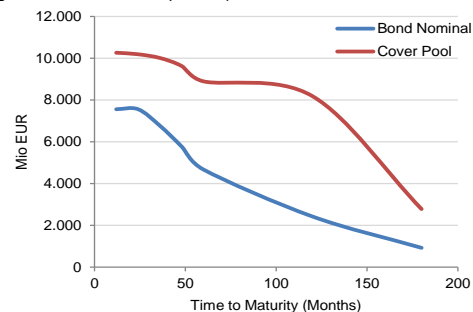


Figure 4: Amortization profile | Source: KBC Bank



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

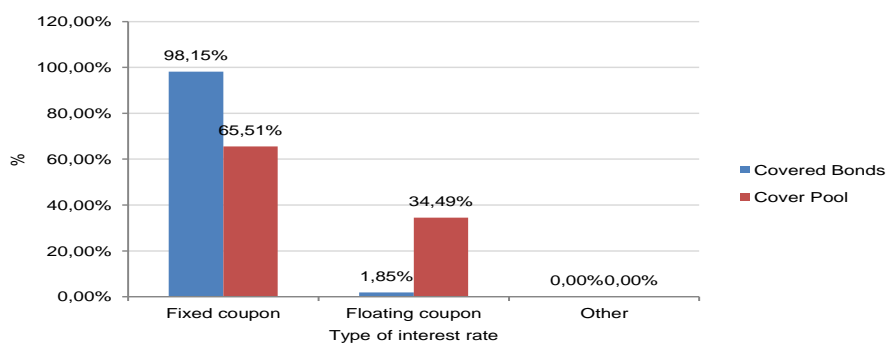
In order to reduce the exposure to the interest rate and currency risks, derivative contracts can be used to hedge these risks. Furthermore, the Belgian Covered Bond Law stipulates that any liquidity needs within the next six months have to be covered by liquid cover assets. Currency risk, regardless that, is limited for this program as 100,00% of the cover pool assets and 100,00% of the cover bonds are denominated in euro. In spite of that, we have applied interest rate stresses on the cash flows for each rating level according to our methodology. The overall rating impact of interest rate and currency mismatches was negligible for this program, which has been presented in our 'Over-collateralization Break-Even Analysis' segment.

Table 4: Program distribution by currency | Source: KBC Bank

Currency	Volume	Share (%)
<i>Cover Pool</i>		
EUR	11.083 Mio	100,00%
<i>Covered Bond</i>		
EUR	7.560 Mio	100,00%

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

Figure 5: Type of interest rate | Source: KBC Bank



Credit Risk

The credit risk assessment for Mortgage Covered Bond have been determined in accordance with CRA rating methodology for Covered Bonds by means of historical data and particular parameters from the Covered Bonds.

Due to the high granularity of mortgage pools we have characterized these portfolios as big enough and with a homogeneous composition i.e. ("Large Homogeneous Portfolio", LHP). Furthermore under that premise we have assumed that it is possible to derive a loss distribution. CRA has used the historical issuer's NPL ratio to derivate a conservative default rate proxy for the approximation through the LHP distribution. On the other hand, for the assessment in public sector assets, due to insufficient information, CRA has assumed that such assets are in default i.e. approx. 0,36% of the covered pools value. Summarizing, it has been assumed for the KBC Bank a combined expected default rate of 3,26% for the LHP. Furthermore CRA has considered a 15,00% correlation to define the LHP distribution. Table 5 disclosed the expected default rate for each relevant rating level.

In order to derive recovery and loss-severity base case assumption CRA has used historical data from mortgage price indexes. To determine loan-level recovery assumptions the resulting stressed recoveries assumptions were compared with the portfolio's existing loan-to-value ratios (LTVs).

Based on the default rates and taking into account the recovery assumptions, the following loss assumptions were determined for the current cover pool (see Table 5)

Table 5: Cover Pool Base case assumptions | Source: CRA

Rating	Default Rate (%)	Recoveries (%)	Expected Loss (%)
AAA	54,38%	80,00%	10,88%
AA+	51,24%	81,40%	9,53%
AA	46,11%	83,68%	7,53%
AA-	41,59%	85,30%	6,12%
A+	39,73%	85,98%	5,57%
A	39,69%	86,00%	5,56%
A-	38,44%	86,46%	5,21%

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.

This program issues covered bonds with soft bullet maturity structure, i.e. a 12 months maturity extension upon the final legal maturity. This characteristic of the covered bonds has been taken into account during our cash-flow analysis.

Asset-Sale Discount

In our model, short-term liquidity needs and liquidity needs due to asset-liability mismatches will be met with a sale of cover assets available for monetization. Based on secondary market data, CRA assumes a rating-level haircut on the asset value („Asset-Sale Discount“) which represents additional costs of disposal and market risks during the sale of cover assets. (see Table 6).

Yield Spread

Since cover assets often have a positive yield spread against the covered bonds issued, CRA uses available public information (i.e. issuers' annual accounts) to size this assumed spread („Yield Spread“) (see table 6):

Table 6: Cash-Flow Model assumptions | Source: CRA

Rating level	Asset-Sale Discount	Yield Spread
AAA	69,06%	1,17%
AA+	63,51%	1,19%
AA	59,93%	1,21%
AA-	56,52%	1,23%
A+	53,90%	1,24%
A	51,75%	1,25%
A-	48,95%	1,26%

Rating Scenarios

Scenarios that have been tested in our cash flow model rely on the variation of 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. In total, the cash flow analysis revealed that the portfolio, given all information available as of 30.09.2018, could be sufficient to repay bond nominal capital notwithstanding the occurrence of extraordinary events. On this basis, the rating of the cover pool within our covered bond program rating has been set at AAA.

Overcollateralization Break-Even Analysis

CRA also performed a break-even OC analysis. Such OC levels should bear the corresponding losses for a given rating scenario. Main drivers of the analysis are:

- ALM
- Loss level
- Interest rate spreads
- Foreign currency mismatches
- 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 7.

Table 7: Breakeven Analysis | Source: CRA

Rating Level	Break-Even OC
AAA	34,58%
AA+	30,64%
AA	26,78%
AA-	23,77%
A+	22,09%
A	21,21%
A-	19,67%

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. Starting from the best-case, which is represented by our base case assumptions, the analysis reveals the 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%, the impact can be seen by a change in the implied rating. Based on the base case, there is a high sensitivity of rating in terms of decreased recovery (rating reduced up to 6 notches). In the worst-case scenario, i.e. a 50% decrease in the base case assumptions leads to a reduction in the base-case rating of 11 notches (see Table 8):

Table 8: Covered Bond Program Sensitivity: Credit Quality und Recovery Rates | Source: CRA

Default \ Recovery	Base Case	-25%	-50%
Base Case	AAA	AA-	BBB
+25%	AA+	A-	BB+
+50%	AA	BBB	BB

Summary Cash-Flow Analysis

Based on public information and using the base case loss assumptions, the analysis showed that obligations can be paid in full and in a timely manner. Overall, the cash flow analysis revealed that the portfolio, given the used information, may ensure the repayment of bonds' nominal capital notwithstanding the occurrence of the presented stressed scenarios. Therefore, the rating of the cover pool within our covered bond program rating has been set at AAA. This ensures a maximum possible rating uplift of three (+3) notches for this program, however, the secondary rating uplift has been set at zero (0) notch as the maximum rating for this program has already been achieved

Counterparty Risk

Transaction parties

Table 9: Participant counterparties | Source: KBC Bank

Role	Name	Legal Entity Identifier
Issuer	KBC Bank	6B2PBRV1FCJDMR45RZ53
Servicer	KBC Bank	6B2PBRV1FCJDMR45RZ53
Account Bank	KBC Bank	6B2PBRV1FCJDMR45RZ53
Sponsor	N/A	N/A

Derivatives

No derivatives in use at present.

Commingling

Incoming cash flows generated from the cover pool will normally be transferred to the Issuer and will be forwarded to the covered bond holders according to the payment terms and conditions. Should the issuer become bankrupt, there is a risk ("commingling risk") that funds may not be re-

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turned and commingled with the insolvency estate of the issuer. In order to avoid such risk, the Belgian Covered Bond Law 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 assets. These cash flows in turn should be used to cover interest and principal payments of the covered bond holders in event of the Issuer's insolvency.

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KBC Bank, N.V.

Mortgage Covered Bond Program

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Appendix

Rating History

Event	Initial Rating
Result	AAA
Rating Date	20.02.2019
Publication Date	28.02.2019

Details Cover Pool

Table 10: Characteristics of Cover Pool | Source: KBC Bank

Characteristic	Value
Cover Pool Volume	EUR 11.083 mm
Covered Bond Outstanding	EUR 7.560 mm
Substitute Assets	EUR 777 mm
<i>Share Derivatives</i>	0,00%
<i>Share Other</i>	0,00%
Substitute Assets breakdown by asset type	
<i>Cash</i>	95,11%
<i>Guaranteed by Supranational/Sovereign agency</i>	4,89%
<i>Central bank</i>	0,00%
<i>Credit institutions</i>	0,00%
<i>Other</i>	0,00%
Substitute Assets breakdown by country	
<i>Issuer country</i>	95,11%
<i>Eurozone</i>	4,89%
<i>Rest European Union</i>	0,00%
<i>European Economic Area</i>	0,00%
<i>Switzerland</i>	0,00%
<i>Australia</i>	0,00%
<i>Brazil</i>	0,00%
<i>Canada</i>	0,00%
<i>Japan</i>	0,00%
<i>Korea</i>	0,00%
<i>New Zealand</i>	0,00%
<i>Singapore</i>	0,00%
<i>US</i>	0,00%
<i>Other</i>	0,00%

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Cover Pools' Composition	
<i>Mortgages</i>	92,63%
<i>Public Sector</i>	0,36%
<i>Total Substitution Assets</i>	7,01%
<i>Other / Derivatives</i>	0,00%
Amount of Debtors	N/A
Distribution by property use	
<i>Residential</i>	100,00%
<i>Commercial</i>	0,00%
<i>Other</i>	0,00%
Distribution by Residential type	
<i>Occupied (main home)</i>	77,73%
<i>Second home</i>	0,00%
<i>Non-owner occupied</i>	5,70%
<i>Agricultural</i>	16,57%
<i>Multi family</i>	0,00%
<i>Other</i>	0,00%
Distribution by Commercial type	
<i>Retail</i>	0,00%
<i>Office</i>	0,00%
<i>Hotel</i>	0,00%
<i>Shopping center</i>	0,00%
<i>Industry</i>	0,00%
<i>Land</i>	0,00%
<i>Other</i>	100,00%
Average asset value (Residential)	EUR 107.274 k
Average asset value (Commercial)	EUR 0 k
Share Non-Performing Loans	0,11%
Share 10 biggest debtor	0,00%
WA Maturity (months)	176
WAL (months)	94,56
Distribution by Country (%)	
<i>Belgium</i>	100
Distribution by Region (%)	
<i>Unknown</i>	0,18
<i>Brussel-Capital Region</i>	4,63
<i>Walloon Brabant</i>	0,87
<i>Flemish Brabant</i>	17,75

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<i>Antwerp</i>	28,82
<i>Limburg</i>	12,72
<i>Liege</i>	1,52
<i>Namur</i>	0,13
<i>Hainaut</i>	0,69
<i>Luxembourg</i>	0,15
<i>West Flanders</i>	14,62
<i>East Flanders</i>	17,94

Figure 6: Arrears Distribution | Source: KBC Bank

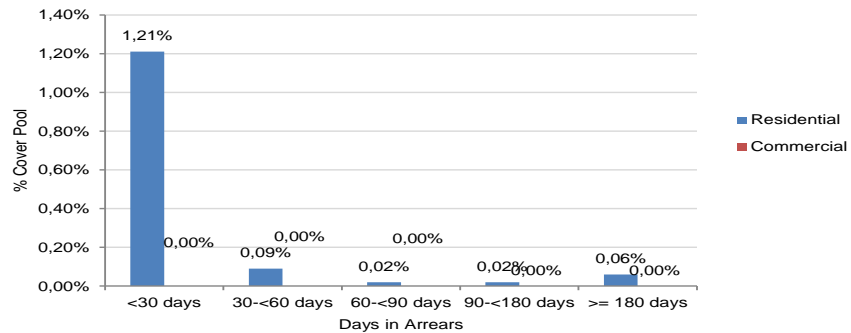


Figure 7: Program currency mismatches | Source: KBC Bank

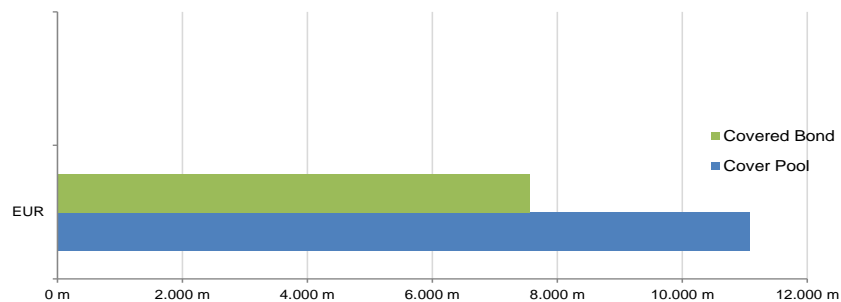
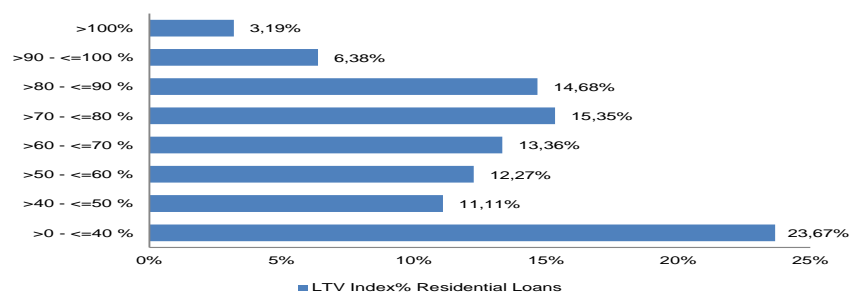


Figure 8: Unindexed LTV breakdown - residential pool | Source: KBC Bank



Key Source of Information

Documents (Date: 31.01.2019)

Issuer

- Audited consolidated annual reports of the parent company KBC N.V. (Group) 2014-2017
- Final Rating report as of 04.12.2018
- Rating file 2018
- Miscellaneous Investor Relations Information and Press releases
- Peergroup-Data and other data from the S&P Global Market Intelligence Database

Covered Bond and Cover Pool

- HTT Reporting from KBC Bank (08.10.2018)
- Market data Mortgage Cover Bond Program.

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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 in conjunction with Creditreform's basic document "Rating Criteria and Definitions".

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, other information of the bank pertaining to investor relations, and key figures calculated by S&P Global Market Intelligence subject to a peer group analysis of 40 competing institutes. The cover pool's quantitative analysis for the rated Covered Bond Program was based on the "Harmonised Transparency Template" (HTT) published by the KBC Bank

A complete description of Creditreform Rating's rating methodologies and Creditreform's basic document "Rating Criteria and Definitions" is published on the following internet page:

www.creditreform-rating.de/en/regulatory-requirements/

This rating was carried out by analysts Edsson Rodriguez und AFM Kamruzzaman both based in Neuss/Germany. On 20.02.2019, the rating was presented to the rating committee by the analysts and adopted in a resolution.

The rating result was communicated to KBC 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.

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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 "Basic data" card 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".

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