MOODY'S INVESTORS SERVICE

CREDIT OPINION
29 May 2019

New Issue

Rate this Research

Closing date

27 May 2019

TABLE OF CONTENTS

Contacts

Martin Lenhard +49.69.70730.743
VP-Sr Credit Officer
martin.lenhard@moodys.com

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

mBank Hipoteczny S.A. - Mortgage Covered Bonds

New Issue – Polish covered bonds

Ratings

Exhibit 1

Cover Pool (PLN)	Ordinary Cover Pool Assets	Covered Bonds (PLN)	Rating
9,736,041,552	Residential & Commercial Mortgage Loans	7,271,614,970	Aa3

Source: Moody's Investors Service

Summary

The covered bonds (CBs) issued by mBank Hipoteczny S.A. under the mortgage CB programme are full recourse to the issuer and are secured by a cover pool of assets consisting of residential (55.2%) and commercial mortgage loans (43.5%) secured by properties in Poland as well as substitute assets (1.3%).

Credit strengths include the full recourse of the CBs to the issuer and support provided by the Polish legal framework for CBs (*Hipoteczne Listy Zastawne*), which provides for the issuer's regulation and supervision.

Credit challenges include the high level of dependency on the issuer. As with most CBs in Europe, there are few restrictions on the future composition of the cover pool. The cover pool also has geographical and single-obligor concentration risks.

Our credit analysis takes into account the cover pool's credit quality, which is reflected in the collateral score of 22.0% and the current over-collateralisation (OC) of 33.9% as of 31 March 2019.

At the current Aa3 rating level, the CB ratings are restricted by the Polish local and foreign-currency bond ceilings.

Credit strengths

» ***Recourse to the issuer***: The CBs are full recourse to mBank Hipoteczny (A3(cr)). (See "Covered bond analysis")

» ***Support provided by the Polish legal framework***: The CBs are governed by the Polish legal framework for CBs, which provides for the issuer's regulation and supervision and sets certain minimum requirements for the CBs and the cover pool. The issuer is a specialised mortgage bank (*bank hipoteczny*), licenced and supervised by the Polish Financial Supervision Authority (*Komisja Nadzoru Finansowego* or KNF). (See "Moody's related publications: Covered Bond Legal Frameworks")

» ***High credit quality of the cover pool***: The CBs are supported by a cover pool of high-quality assets. The assets are mortgage loans backed by properties in Poland. The collateral quality is reflected in the collateral score, which is currently 22.0%. (See "Cover pool analysis")

» ***Refinancing risk*:** A CB anchor event occurs when the issuer ceases to service the payments on the CBs. Following a CB anchor event. Under the Polish legal framework, if an issuer is declared bankrupt, the maturities of its covered bonds will be extended by 12 months. Thereafter, if key cover tests are not satisfied, the maturities will be extended to three years after the latest-maturing asset in the cover pool, and the covered bonds will repay principal on a pass-through and pro-rata basis. This feature materially reduces refinancing risk.

» ***Provisions for a cover pool administrator***: Following an issuer default, the court will appoint a bankruptcy receiver. The receiver will manage the issuer's general insolvency estate as well as the separate bankruptcy estate related to the CBs. The bankruptcy law regulates the transfer and sale of the cover pool and mitigates fire-sale risk by providing for the extension of covered bond maturities as described above. The court will also appoint a trustee (*kurator*) who will represent the holders of the covered bonds in the bankruptcy proceedings. (See "Covered bond analysis")

Credit challenges

» ***High level of dependency on the issuer:*** As with most CBs, before the insolvency of the issuer, the issuer can materially change the nature of the programme. For example, the issuer can add new assets to the cover pool, issue new CBs with varying payment promises and enter into new hedging arrangements. Also similar to most CBs in Europe, this programme has few restrictions on the future composition of the cover pool. These changes could affect the credit quality of the cover pool as well as the overall refinancing and market risks. Further, if the quality of the collateral deteriorates below a certain threshold, the issuer would have the ability, but not the obligation, to increase the OC in the cover pool. (See "Covered bond analysis")

» ***Market risks:*** Interest rate risk and currency risk arise from the mismatch between the assets and the liabilities. Currently, the amount of euro-denominated commercial real estate loans roughly matches the amount of euro-denominated CBs outstanding. We expect the portion of residential mortgage loans in the cover pool to increase and at the same time we expect mBank Hipoteczny to issue more euro-denominated CBs. This will increase the currency mismatch. We expect mBank Hipoteczny to hedge most of this risk via swaps, which will cover the expected term of the CBs but no maturity extensions. This would expose the CBs to significant exchange rate risk in case the maturity should be extended. Following a CB anchor event, covered bondholders, to achieve timely principal payment, might vote for the sale of cover pool assets. The market value of these assets may be subject to high volatility after a CB anchor event. (See "Covered bond analysis")

» ***Cover pool concentration****:* The cover pool has the following concentrations: (1) geographical concentration, with 38.7% of the residential mortgage loans backed by properties in the Mazowieckie region (Warsaw and surrounding region); and (2) obligor concentration, with the 10 largest commercial real estate obligors accounting for 21.7% of the commercial mortgage loans. (See "Cover pool analysis")

» ***Market risks***: Following a CB anchor event, covered bondholders, to achieve timely principal payment, might need to rely on proceeds raised through the sale of, or borrowing against, the cover pool assets. The market value of these assets may be subject to high volatility after a CB anchor event. In addition, covered bondholders might have exposure to interest rate and currency risks. (See "Covered bond analysis")

» ***Time subordination****:* After a CB anchor event, later-maturing CBs are subject to time subordination. Principal cash collections may be used on a first-come, first-served basis, paying earlier-maturing CBs before later-maturing CBs. This subordination could lead to the erosion of OC before any payments are made to later-paying CBs. (See "Covered bond analysis")

» ***Lack of liquidity facility*:** The programme would not benefit from any designated source of liquidity if cash flow collections are interrupted. Liquidity is provided by the statutory requirement to cover six months of interest payments due on the covered bonds by liquid assets registered in the cover pool. (See "Covered bond analysis")

Key characteristics

Exhibit 2
Covered bond characteristics

Moody's Programme Number.	**463**
Issuer:	mBank Hipoteczny S.A.
Covered Bond Type:	Mortgage
Issued under Covered Bonds Law:	Yes
Applicable Covered Bond Law:	Polish Covered Bond framework (Hipoteczne Listy Zastawne)
Entity used in Moody's EL and TPI analysis	mBank Hipoteczny S.A.
CR Assessment:	A3(cr)
CB Anchor:	CR assessment +1 notch
Issuer rating:	Baa2
Total Covered Bonds Outstanding:	PLN 7,271,614,970
Main Currency of Covered Bonds:	PLN (57.0%)
Extended Refinance Period:	Yes
Principal Payment Type:	Conditional Pass Through
Interest Rate Type:	Fixed rate covered bonds (36.2%), floating rate covered bonds (63.8%)
Committed Over-Collateralisation:	10%
Current Over-Collateralisation:	33.9% (nominal value)
Intra-group Swap Provider:	n/a
Monitoring of Cover Pool:	Trustee
Timely Payment Indicator:	Probable
TPI Leeway:	3 notches

Source: Moody's Investors Service

Exhibit 3
Cover pool characteristics

Size of Cover Pool:	**PLN 9,736,041,552**
Main Collateral Type in Cover Pool:	Residential (55.2%), Commercial (43.5%)
Main Asset Location of Ordinary Cover Assets:	Poland (100%)
Main Currency:	PLN (66.0%)
Loans Count:	Residential: 21,083; Commercial: 308
Number of Borrowers:	Residential: n/a; Commercial: 231
WA unindexed LTV:	Residential: 77.5%; Commercial: 67.5%
WA indexed LTV:	-
WA Seasoning:	Residential: 34 months; Commercial: 49 months
WA Remaining Term:	Residential: 284 months; Commercial: 100 months
Interest Rate Type:	floating rate assets (100%)
Collateral Score:	22.0%
Cover Pool Losses:	27.9%
Further Cover Pool Details:	See "Cover pool description"
Pool Cut-off Date:	31 March 2019

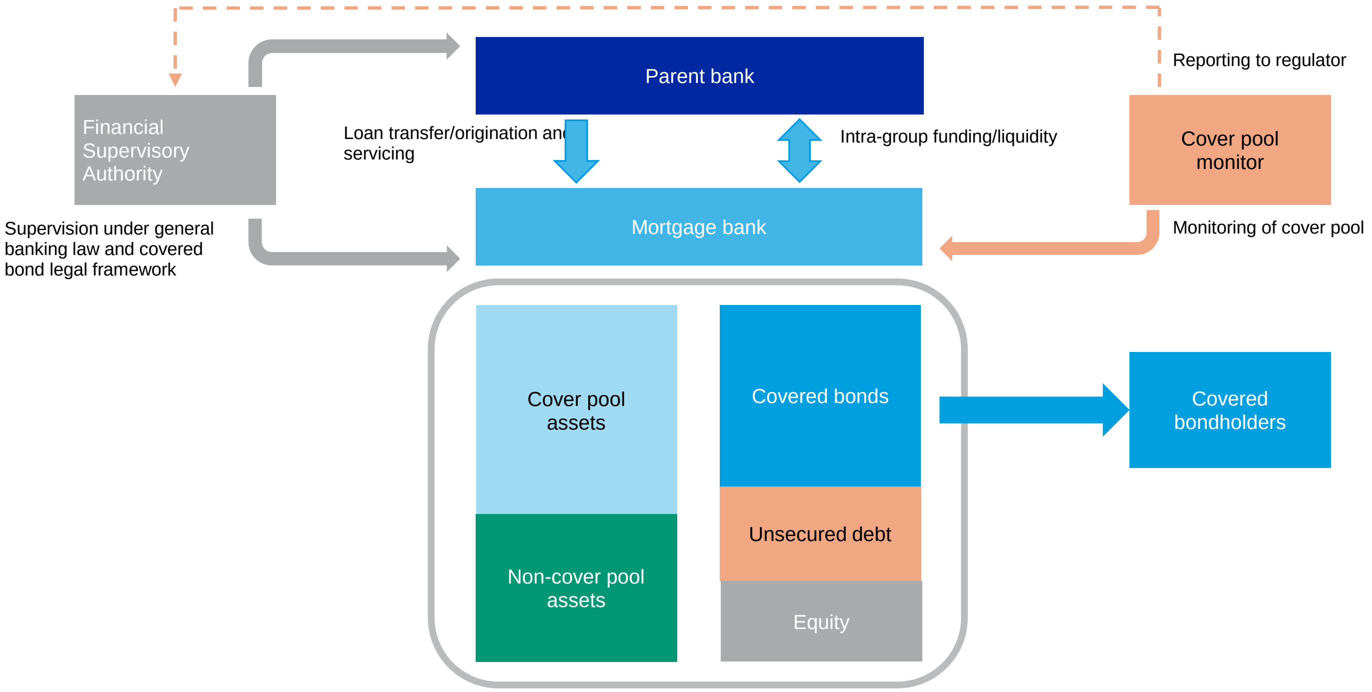
Source: Moody's Investors Service

Covered bond description

The CBs issued under the mortgage CB programme of mBank Hipoteczny are full recourse to the issuer. Upon a CB anchor event, covered bondholders would have access to a cover pool of commercial and residential mortgage loan receivables.

Structural diagram

Exhibit 4



Source: Moody's Investors Service

Structure description

The bonds

All outstanding CBs have a bullet repayment at maturity, with a mandatory one-year extension in case of issuer insolvency. In case the mandatory test indicate that the CBs cannot be repaid at the extended maturity date, the maturities will be extended to three years after the latest-maturing asset in the cover pool, with the covered bonds repaying principal on a pass-through and pro-rata basis.

Issuer recourse

The CBs are full recourse to the issuer. Therefore, the issuer is obliged to repay principal and pay interest on the CBs.

Recourse to cover pool and over-collateralisation

If the issuer became insolvent, the covered bondholders would have priority claims over a pool of assets (cover pool). (See "Cover pool description" for the cover pool characteristics and "Cover pool analysis" for our analysis of the pool.)

As of 31 March 2019, the level of OC in the programme was 33.9% on a nominal-value basis.

The current CB rating relies on an OC within the minimum legal requirements of the Polish CB legal framework. The framework requires that the nominal amount of the cover pool assets exceeds the principal balance of the outstanding CBs by 10%. Based on data as of 31 March 2019, 0% of OC is sufficient to maintain the current CB rating. This shows that our analysis currently does not rely on OC that is not in committed form.

Although the issuer has the ability to increase the OC in the cover pool if collateral quality deteriorates below a certain threshold, the issuer does not have any obligation to do so. Failure to increase OC following a deterioration of the collateral could lead to a negative rating action.

Legal framework

The CBs are governed by the Polish legal framework for CBs. There are a number of strengths in this legislation, including certain minimum requirements for the CBs and the cover pool, and a conditional pass-through structure that reduces refinancing risk. No specific structural features beyond the statutory requirements are implemented for mBank Hipoteczny's mortgage CB programme. (See Covered Bonds: Poland - legal framework for covered bonds, September 2018, for a description of the Polish legal framework)

Covered bond analysis

Our credit analysis of the CBs primarily focuses on the issuer's credit quality, refinancing risk, interest rate risk and currency risk, as well as the probability that payments on the CBs would be made in a timely fashion following a CB anchor event, which we measure using the Timely Payment Indicator. (See "Timely Payment Indicator")

Primary analysis

Issuer analysis - Credit quality of the issuer

The issuer's Counterparty Risk (CR) Assessment is A3(cr).

The reference point for the issuer's credit strength in our analysis is the CB Anchor, which for covered bond programmes under the Polish legal framework is the CR Assessment plus one notch, reflecting our expectation that the covered bonds will remain with a going-concern entity if the issuer enters resolution proceedings.

Issuer analysis - Dependency on the issuer's credit quality

The credit quality of the CBs depends primarily on the credit quality of the issuer. If the issuer's credit strength were to deteriorate, there would be a greater risk that a CB anchor event would occur, leading to refinancing risk for the CBs. Consequently, the credit quality of the CBs would deteriorate unless other credit risks were to decrease.

In the event that the CB anchor deteriorates, the issuer would have the ability, but not the obligation, to increase the OC in the cover pool. Failure to increase the level of OC under these circumstances could lead to a negative rating action.

Reasons for the high level of dependency of the CBs on the issuer also include exposure to decisions made by the issuer in its discretion as manager of the CB programme. For example, before a CB anchor event, the issuer may add new assets to the cover pool and remove assets from the cover pool, issue further bonds and enter into new hedging arrangements. Such actions could reduce the value of the cover pool.

As with most CBs in Europe, there are few contractual restrictions on the future composition of the cover pool, which creates substitution risk. Nevertheless, cover pool quality over time will be protected by, among other things, the requirements of the Polish legal framework for CBs, which specifies what types of assets are eligible. (See "Moody's related publications: Covered Bonds Legal Frameworks")

Refinancing risk

Following a CB anchor event, the natural amortisation of the cover pool assets alone cannot be relied on to repay the principal at the initial maturity date. While the Polish legal framework provides for a conditional pass-through structure which would reduce refinancing risk, it is also possible that the covered bondholders opt for the acceleration of the covered bonds by voting, with a two-thirds majority, to sell the assets in the cover pool.

After a CB anchor event, the market value of the cover pool assets may be subject to volatility. Examples of the stressed refinancing margins we use for different types of prime-quality assets are published in our Rating Methodology (see "Moody's related publications - Moody's Approach to Rating Covered Bonds").

The refinancing-positive factors outweigh the negative ones. The refinancing-positive aspects of this CB programme include:

» *The legal framework*: A conditional pass-through (CPT) structure reduces refinancing risk. If an issuer is declared bankrupt, the maturities of its covered bonds will be extended by 12 months. Thereafter, if key cover tests are not satisfied, the maturities will be extended to three years after the latest-maturing asset in the cover pool, and the covered bonds will repay principal on a pass-through and pro-rata basis. The powers of the bankruptcy receiver that takes control of the cover pool following an issuer default are defined by the bankruptcy act, which has specific provisions on the management of the cover pool following the issuer's bankruptcy. The main duty of a receiver is to liquidate the bankruptcy estate and distribute the proceeds among the bankrupt entity's creditors. However, the provisions of the bankruptcy law that are specific to mortgage banks regulate the transfer and sale of the cover pool and mitigate fire-sale risk by providing for the extension of covered bond maturities. In particular, the law anticipates that the receiver should try to transfer the cover pool assets and liabilities to another mortgage bank.

» The assets are standard residential and commercial mortgage loans with predominantly floating interest rates, which should reduce the impact on the market price of the assets in case the assets need to be sold in a rising interest rate environment.

The refinancing-negative aspects of this CB programme include the fact that we expect the currency mismatch between the assets and the CBs to increase over time and the currency swaps to only cover the expected maturity of the CBs but not any maturity extensions.

Interest rate and currency risk

As with most European CBs, there is potential for interest rate and currency risks, which could arise from the different payment promises and durations made on the cover pool and the CBs.

Compared with other CB programmes, but similar to other Polish CB programmes that issue EUR-denominated CB, there exists a distinct source of potential currency risk for mBank Hipoteczny's CBs.

As of 31 March 2019, the amount of euro-denominated commercial real estate loans (EUR756.0million; 33.8% of the total cover pool) roughly matched the notional amount of euro-denominated CBs (EUR726.9million; 43.0% of CB outstanding). In our opinion, this does not necessarily mean that there is a natural hedge against exchange rate risk even if the expected repayment profile of the EUR-denominated assets currently matches the expected repayment profile of the EUR-denominated covered bonds. In general, commercial real estate loans have a shorter loan term than residential loans. If the issuer was to default and the covered bonds' maturities were extended, in the short- and medium term, there might be more euro-denominated assets maturing than liabilities, while in the longer term, the amount of euro-denominated CBs might exceed the amount of euro-denominated (principal) collections from the cover pool.

Based on the issuer's future plans in respect of the cover pool composition and the CB issuance, we expect the currency mismatch to increase over time because the portion of residential mortgage loans (denominated in PLN) is likely to grow, while we expect this growth to a large extend be funded by the issuance of euro-denominated CBs.

We expect mBank Hipoteczny to hedge most, if not all, of the currency risk related to the future issuance of euro-denominated CBs. Nevertheless, we expect mBank Hipoteczny to hedge the currency risk only until the expected maturity of the respective euro-denominated CBs. As a result, if the conditional pass-through feature is activated, covered bondholders would be exposed to significant unhedged exchange rate risk. Besides the risk of the issuer's default, we consider this risk to be the most significant risk in this programme.

The Polish legal framework for CBs does not explicitly mention how swaps will be treated in case the maturity of the CBs is extended. It is our understanding that in case the principal amounts under the swap are not fully exchanged at the maturity date of the swap, the swap will terminate and the termination payment will either be received by the cover pool (if the market value is in favour of the cover pool) or will form an additional liability (if the market value is in favour of the swap counterparty) that will rank pari passu and pro rata with the then-outstanding CBs.

In case euro-denominated CBs should remain outstanding after the termination date of the respective currency swap, the euro amounts that are needed to make payments on these bonds would need to be generated by exchanging PLN-denominated collections from the cover pool assets at the then-current spot rate. Alternatively, the administrator could enter into new swaps to hedge the currency risk between assets and liabilities.

Exhibit 5

Overview of assets and liabilities

	WAL Assets (Years)	WAL Liabilities (Years)	Assets (%)	Liabilities (%)
Fixed rate	-	5.3	0.0%	36.2%
Variable rate	10.0	3.3	100.0%	63.8%

WAL = weighted average life.
NB: Fixed rate loans which reset within the next 12 months are treated as variable rate in this table.
n/a = not applicable.
Sources: Moody's Investors Service, issuer data

Aspects of this CB programme that are market-risk positive include:

» Maturity extension option. The legal framework allows for maturity extension of the CBs in case the available liquidity is not sufficient to repay the CBs at their initial maturity date. This feature removes the need for forced asset sales.

» A very large portion of the cover pool assets carries floating rate interest. This should limit the negative impact of rising interest rates on the market value of the cover pool assets in case the assets need to be sold after issuer default.

Aspects of this CB programme that are market-risk negative include:

» There is a significant potential exposure to exchange rate risk in case the CBs' maturity dates should be extended.

Timely Payment Indicator

Our Timely Payment Indicator (TPI) assesses the likelihood that timely payments would be made to covered bondholders following a CB anchor event, and thus determines the maximum rating a CB programme can achieve with its current structure. We have assigned a TPI of Probable to these CBs, in line with other mortgage CBs with similar features issued by other Polish banks.

Based on the current TPI of Probable, the TPI leeway for this programme is three notches. This three-notch leeway implies that we might downgrade the CBs' rating because of a TPI cap if we were to lower the CB anchor by more than three notches, all other variables being equal.

The TPI-positive aspects of this CB programme include:

» The refinancing-positive factors discussed in the “Refinancing risk” section

» The strength of the Polish legal framework for CB, including:

  – The bankruptcy receiver of the mortgage bank would also take over the management of the cover pool. The receiver has wide powers regarding the management of the programme, including the authority to sell parts or all of the cover pool assets and to enter into new hedging agreements.

  – In addition to the bankruptcy receiver, a trustee (*kurator*) would be appointed and represent the covered bondholders in the bankruptcy proceedings.

  – Set-off: We understand that the legal framework excludes set-off claims against loans registered in the cover pool.

The TPI-negative aspects of this CB programme include:

» The potential exposure to exchange rate risk described in section “Interest rate and currency risk”.

Additional analysis

Liquidity

The legal framework requires issuers to hold liquidity that is sufficient to pay interest on the outstanding CBs for the next six months.

Time subordination

After a CB anchor event, later-maturing CBs would be subject to time subordination. Principal cash collections may be used on a first-come, first-served basis, paying earlier-maturing CBs before later-maturing CBs. Such payments could result in the erosion of OC before any payments are made to later-paying CBs.

Cover pool description

Pool description as of 31 March 2019

As of 31 March 2019, the cover pool consisted of residential mortgage loans (55.2%), commercial real estate mortgage loans (43.5%) and substitute assets (1.3%). All mortgage loans are backed by properties in Poland as required by the legal framework.

On a nominal-value basis, the cover pool assets total an equivalent of PLN9.7 billion and back an equivalent of PLN7.3 billion in CBs, resulting in an OC level of 33.9% on a nominal-value basis.

The weighted average loan-to-value (LTV) ratio of the residential mortgage loans is 77.5% and the weighted average LTV of the commercial loans is 67.5%. These LTV ratios are calculated based on the respective properties' mortgage lending value. The Polish legal framework for CBs requires the use of the mortgage lending value, which is aimed at providing a reliable property value that can be achieved through the property market cycle. For mBank Hipoteczny's current pool, the mortgage lending value is on average 7%-8% below the market value. The legal framework's LTV thresholds (60% for commercial mortgages and 80% for residential mortgages) are based on these mortgage lending values.

Residential mortgage loans

Residential mortgage loans account for 55.2% of the total cover pool and are all secured by properties located in Poland.

As Exhibit 7 shows, the properties backing the residential mortgages are concentrated in the Mazowieckie region, which is the region of Warsaw and the surrounding area. All of the residential mortgage loans are denominated in PLN and yield a floating interest rate.

Exhibit 6
Cover pool summary

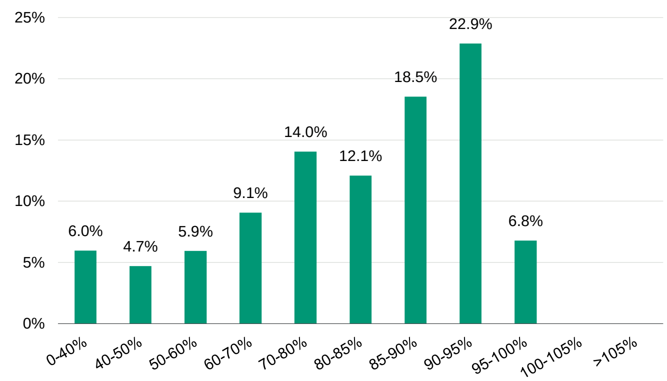
Overview	
Asset type:	Residential
Asset balance:	5,370,682,442
Average loan balance:	254,740
Number of loans:	21,083
Number of borrowers:	n/d
Number of properties:	24,593
WA remaining term (in months):	284
WA seasoning (in months):	34
Performance	
Loans in arrears (≥ 2months - < 6months):	0.1%
Loans in arrears (≥ 6months - < 12months):	0.0%
Loans in arrears (≥ 12months):	0.0%
Loans in a foreclosure procedure:	0.0%

Specific Loan and Borrower characteristics	
Loans with an external guarantee in addition to a mortgage:	n/a
Interest only Loans	0.0%
Loans for second homes / Vacation:	0.0%
Buy to let loans / Non owner occupied properties:	0.0%
Limited income verified:	0.0%
Adverse credit characteristics (**)	0.0%
Details on LTV	
WA unindexed LTV (*)	77.5%
WA Indexed LTV:	n/d
Valuation type:	Lending
LTV threshold:	80.0%
Junior ranks:	n/d
Prior ranks:	0.0%

(*) Based on original property value.
(**) Typically borrowers with a previous personal bankruptcy or borrowers with record of court claims against them at time of origination.
n/d: information not disclosed by issuer.
Sources: Moody's Investors Service, issuer data

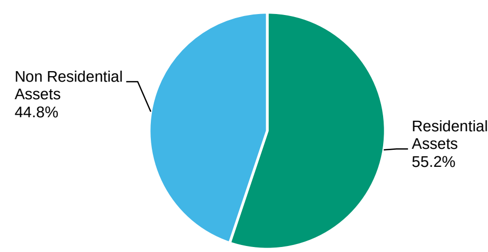
Exhibit 7
Cover pool characteristics

Exhibit A
Balance per LTV band



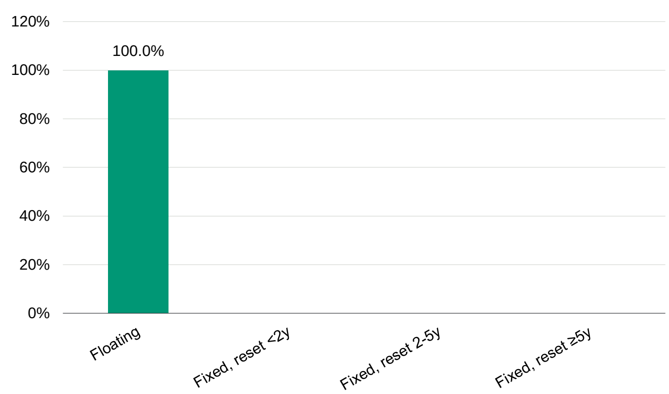
Source: mBank Hipoteczny, Moody's Investors Service

Exhibit B
Percentage of commercial assets



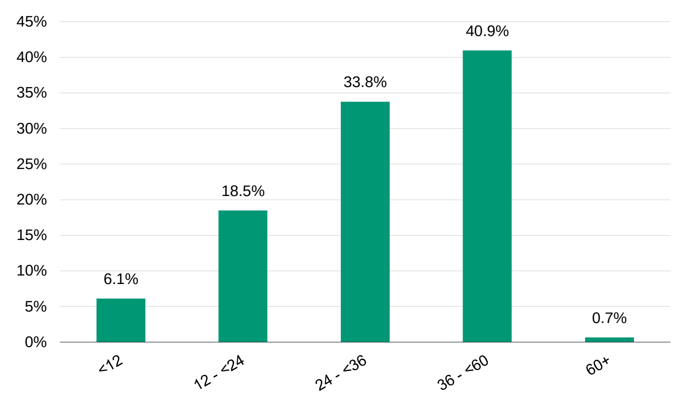
Source: mBank Hipoteczny, Moody's

Exhibit C
Interest rate type



Source: mBank Hipoteczny, Moody's Investors Service

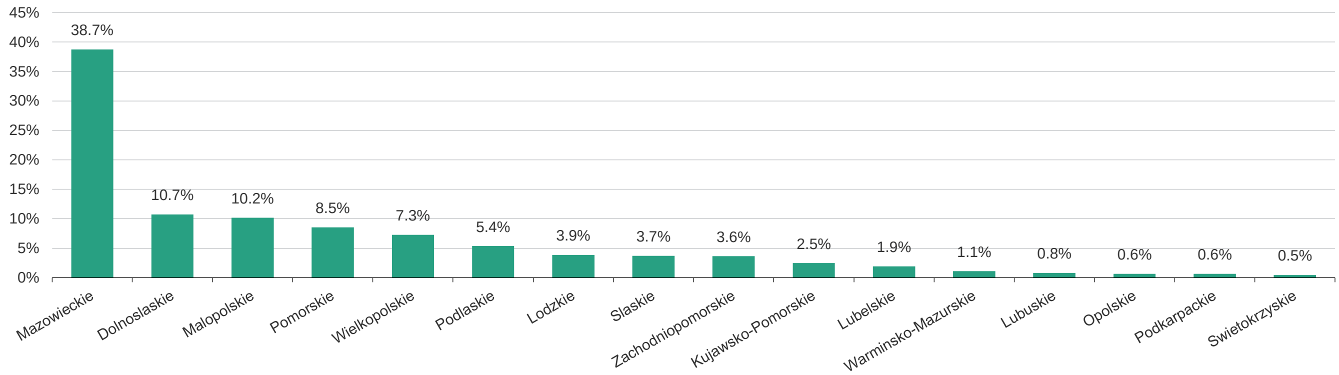
Exhibit D
Seasoning (months)



Source: mBank Hipoteczny, Moody's Investors Service

Exhibit E

Main country regional distribution



Source: mBank Hipoteczny, Moody's Investors Service

Commercial mortgage loans

As Exhibits 8 and 9 show, mortgage loans backed by commercial properties amount to an equivalent of PLN4.2billion and represent 43.5% of the total cover pool assets. 76.8% of these loans are denominated in Euro and 0.4% are denominated in USD.

Exhibit 8

Cover pool summary

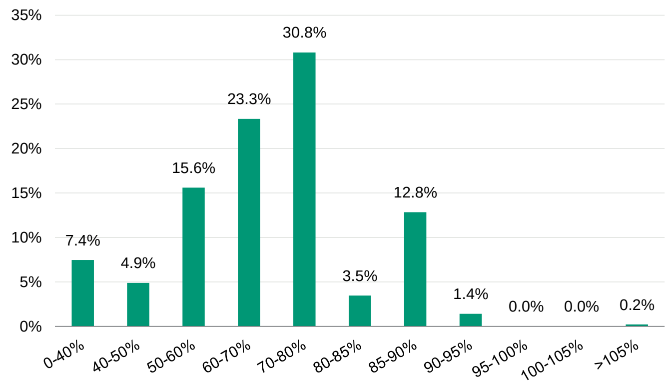
Overview	
Asset type:	Commercial
Asset balance:	4,236,389,332
Average loan balance:	13,754,511
Number of loans:	308
Number of borrowers:	231
Number of properties:	468
Largest 10 loans:	21.7%
WA remaining term (in months):	100
WA seasoning (in months):	49
Main countries:	Poland (100%)

Specific Loan and Borrower characteristics	
Bullet loans:	0.0%
Loans in non-domestic currency:	76.8%
Percentage of fixed rate loans:	0.0%
Performance	
Loans in arrears ≥ 2 months:	0.0%
Loans in a foreclosure procedure:	0.0%
Details on LTV	
WA current LTV(*):	67.5%
WA indexed LTV:	n/d
Valuation type:	Lending Value
LTV Threshold:	60%
Junior ranks:	n/d

(*) Based on original property value.
n/d: information not disclosed by issuer.
Sources: Moody's Investors Service, issuer data

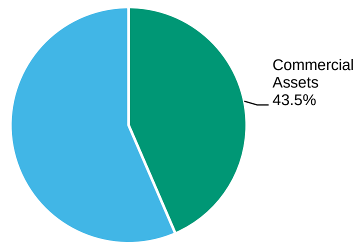
Exhibit 9
Cover pool characteristics

Exhibit A
Balance per LTV band



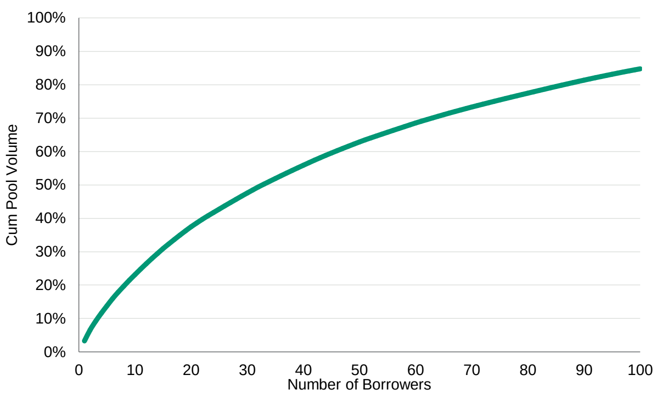
Source: mBank Hipoteczny, Moody's Investors Service

Exhibit B
Percentage of commercial assets



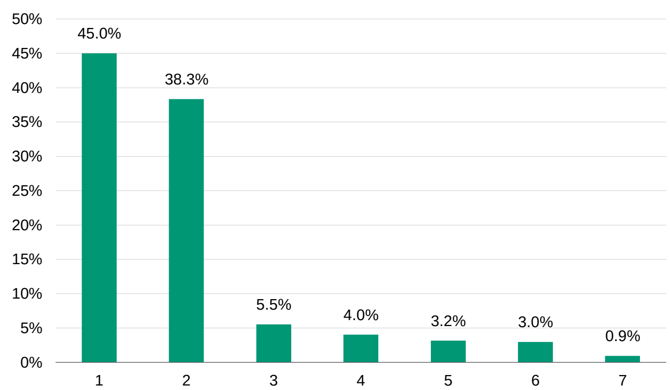
Source: mBank Hipoteczny, Moody's

Exhibit C
Borrower concentration



Source: mBank Hipoteczny, Moody's Investors Service

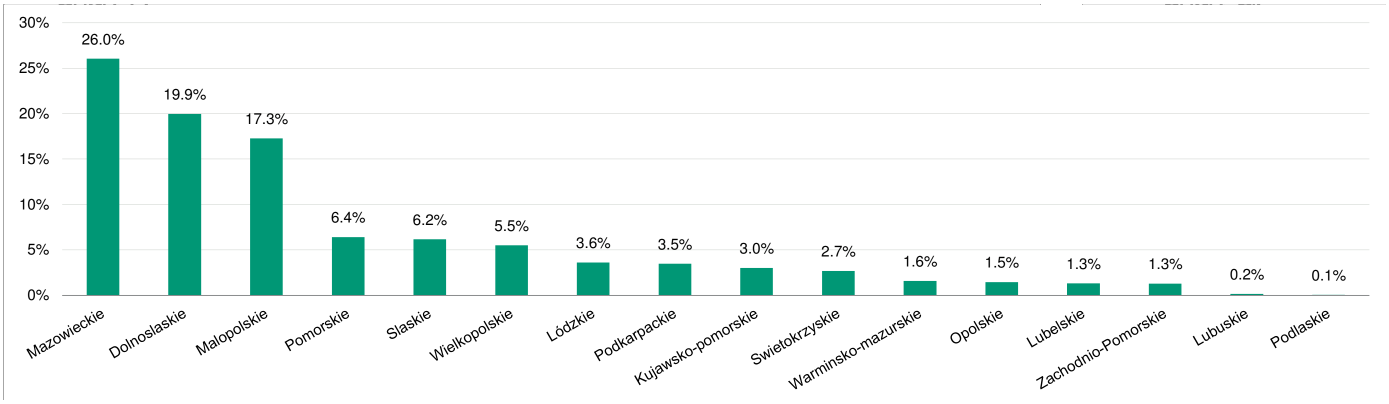
Exhibit D
Property type



Source:mBank Hipoteczny, Moody's Investors Service

Exhibit E

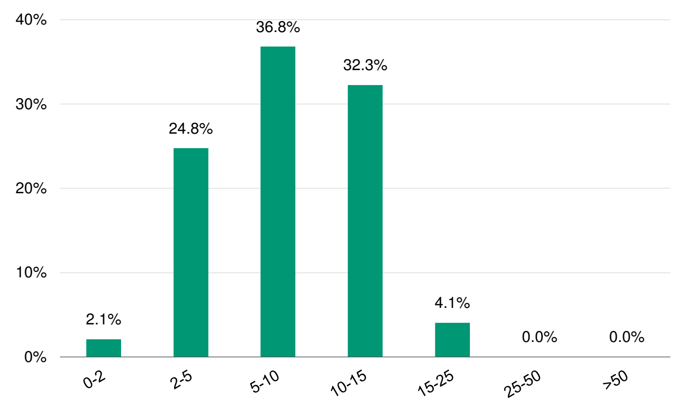
Regional distribution of main country



Source: mBank Hipoteczny, Moody's Investors Service

Exhibit F

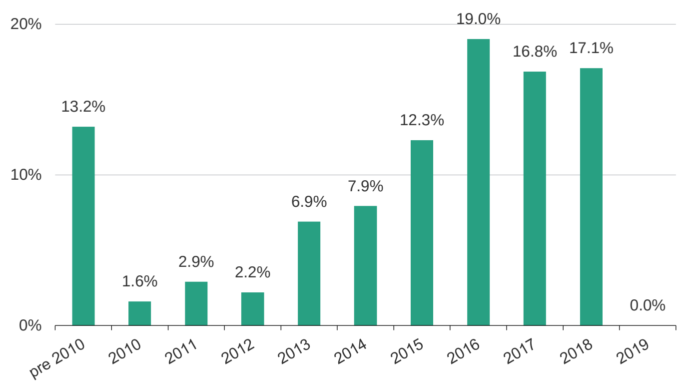
Remaining term (in years)



Source: mBank Hipoteczny, Moody's Investors Service

Exhibit G

Year of loan origination



Source: mBank Hipoteczny, Moody's Investors Service

Substitute assets

In addition to the regular cover assets, PLN129 million (1.3%) are substitute assets. The substitute assets currently consist of Polish government bonds.

Cover pool monitor

Pursuant to the legal framework, the regulator (KNF) has appointed a cover pool monitor. (See "Moody's related publications: Covered Bond Legal Frameworks")

Cover pool analysis

Our credit analysis of the pool takes into account specific characteristics of the pool, as well as legal risks.

Primary cover pool analysis

We calculate the collateral score for the commercial mortgages using a multifactor model that is created through a Monte Carlo simulation. Our analysis takes into account, among other factors, the impact of concentration at the borrower, regional and country levels, as well as the credit quality of the individual borrowers.

For this programme, the collateral score of the current pool is 22.0%. (For details, see "Moody's related publications - Sector update")

The following factors support the credit quality of the pool: (1) all cover pool assets are performing, and (2) the affordability calculation for residential mortgages has been conducted in line with the regulatory requirements which, in particular, require (i) stressed interest rates for floating-rate loans, and (ii) limit the maximum LTV of the standard loans (without additional insurance coverage) to 80%.

The residential mortgage loans in the pool are particularly concentrated in the Mazowieckie region around Warsaw. The commercial mortgage sub-pool exhibits large single-borrower concentrations, which are in line with other commercial mortgage pools of similar size. Both characteristics drive our collateral score result for the cover pool.

Comparables

We rate covered bonds of two Polish issuers, mBank Hipoteczny and PKO Bank Hipoteczny.

Exhibit 10

PROGRAMME NAME	mBank Hipoteczny S.A. - Mortgage Covered Bonds	PKO Bank Hipoteczny S.A. - Mortgage Covered Bonds
Overview		
Programme is under the law	Poland	Poland
Main country in which collateral is based	Poland	Poland
Country in which issuer is based	Poland	Poland
Total outstanding liabilities	€ 7,271,614,970	€ 12,535,240,600
Total assets in the Cover Pool	€ 9,736,041,552	€ 15,967,510,908
Issuer name	mBank Hipoteczny S.A.	PKO Bank Hipoteczny S.A.
Issuer CR assessment	A3(cr)	A3(cr)
Group or parent name	mBank S.A.	PKO Bank Polski S.A.
Group or parent CR assessment	A2(cr)	A2(cr)
Main collateral type	Residential	Residential
Collateral types	Residential 55%, Commercial 44%, Public Sector 0%, Other/Supplementary assets 1%	Residential 98%, Commercial 0%, Public Sector 0%, Other/Supplementary assets 2%
Ratings		
Covered bonds rating	Aa3	Aa3
Entity used in Moody's EL & TPI analysis	mBank Hipoteczny S.A.	PKO Bank Hipoteczny S.A.
CB anchor	CR Assessment + 1 notch	CR Assessment + 1 notch
CR Assessment	A3(cr)	A3(cr)
SUR / LT Deposit	n/a	n/a
Unsecured claim used for Moody's EL analysis	Yes	Yes
Value of Cover Pool		
Collateral Score	22.0%	7.2%
Collateral Score excl. systemic risk	n/a	n/a
Collateral Risk (Collateral Score post-haircut)	14.7%	4.8%
Market Risk	13.2%	22.0%
Over-Collateralisation Levels		
Committed OC*	10.0%	10.0%
Current OC	33.9%	27.4%
OC consistent with current rating	0.0%	0.0%
Surplus OC	33.9%	27.4%
Timely Payment Indicator & TPI Leeway		
TPI	Probable	Probable
TPI Leeway	3	3
Reporting date	31 March 2019	30 September 2018

Source: Moody's Investors Service

Methodology and monitoring

The primary methodology we use in rating the issuer's CBs is "Moody's Approach to Rating Covered Bonds", published in February 2019. Other methodologies and factors that may have been considered in the rating process can also be found on http://www.moodys.com. In addition, we publish a weekly summary of structured finance credit, ratings and methodologies, available to all registered users of our website, at www.moodys.com/SFQuickCheck.

We expect the issuer to deliver certain performance data to us on an ongoing basis. In the event that this data is not made available to us, our ability to monitor the ratings may be impaired. This lack of data availability could negatively affect the ratings or, in some cases, our ability to continue to rate the CBs.

Appendix: Income underwriting and valuation

Exhibit 11

A. Residential Income Underwriting	
1 Is income always checked?	Yes.
2 Does this check ever rely on income stated by borrower (“limited income verification”) ?	Income is always confirmed with the employer.
3 Percentage of loans in Cover Pool that have limited income verification	None. Income is always verified.
4 If limited income verification loans are in the Cover Pool, describe what requirements lender has in place for these loans.	N/A
5 Does income in all cases constrain the amount lent (for example through some form of Income Sufficiency Test (“IST”)?	The income level affects the maximum amount of the loan by the maximum acceptable Debt to Income (DtI) level.
6 If not, what percentage of cases are exceptions.	No exceptions.
For the purpose of any IST:	
7 Is it confirmed that income after tax is sufficient to cover both interest and principal?	Yes.
8 If so over what period is it assumed principal will be paid (typically on an annuity basis)? Any exceptions?	Bank is aligned with Polish Financial Supervisory Authority Recommendation S aims at a maximum maturity of 35 years.
9 Does the age of the borrower constrain the period over which principal can be amortised?	Yes. Applicants are accepted if the age of the borrower + the remaining loan period meeting certain age criteria, which means loan have to be repaid before the borrower reaches a certain age.
10 Are any stresses made to interest rates when carrying out the IST? If so when and for what type of products?	Yes. Interest rate stresses are always taken into account while calculating borrower’s income sufficiency.
11 Are all other debts of the borrower taken into account at the point the loan is made?	Yes. The information on other debts is collected from the borrower and cross-checked against the credit bureau (BIK) data. BIK captures data from the vast majority of financial institutions operating on the Polish market.
12 How are living expenses of the borrower calculated? And what is the stated maximum percentage of income (or income multiple if relevant) that will be relied on to cover debt payments. (specify if income is pre or post tax)	Living expenses are calculated as the maximum amount of (1) expenses declared in the loan application and (2) the minimum subsistence level + insurance costs for the given size of property + household expenditures, depending on the size of the household.
Other comments	-

B. Residential Valuation	
1 Are valuations based on market or lending values?	There are both the current market value and the mortgage lending value (MLV). In accordance with the Covered Bonds and Mortgage Banks Act as well as the Polish Financial Supervision Authority - Recommendation F, MLV is a tool for assessment of mortgage collateral value stability in the long term.
2 Are all or the majority of valuations carried out by external valuers (with no direct ownership link to any company in the Sponsor Bank group)?	The process of establishing and verifying MLV is conducted exclusively by internal qualified banking experts based on the their expertise, brought realized by external companies operating in the real estate valuation market.
3 How are valuations carried out where an external valuer not used?	External valuation is always used.
4 What qualifications are external valuers required to have?	External valuers are obliged to have a real estate valuation license and completed graduated trainings organised by internal banking experts responsible for determining MLV.
5 What qualifications are internal valuers required to have?	Internal valuers are Bank's employees having documented qualifications and professional experience, recognised by the Bank.
6 Do all external valuations include an internal inspection of a property?	Internal inspections of the property are mandatory for new mortgage loans.
7 What exceptions?	In the underwriting process, both external and internal inspections of real estate are always mandatory. In case when the Bank acquires mortgage loans from another financial institution (the pooling model), the expertise may be prepared by taking into account only external inspections.
8 Do all internal valuations include an internal inspection of a property?	See above.
9 What exceptions?	See above.
Other comments	

Source: mBank Hipoteczny

Exhibit 12

Commercial Lending

1. Business Focus	
1.1 What kind of CRE loans will form part of the cover pool?	Loans are granted for 5-10 years. Amortizing with a balloon payment.
1.2 What CRE property types do you finance?	EOY 2018 - CRE accounts for 43.71% of cover pool which consists of: Offices - 39.75%; Shopping malls - 37.2%; Business establishment - 8.62%; Warehouses - 5.84%; Hotels - 3.34%; Other commercial use - 5.25%.
1.3 What kind of restrictions do you have in terms of property location and quality	Offices - Warsaw and 6 biggest Polish urban agglomerations; Shopping centres - cities having more than 50,000 inhabitants; Warehouses - close to biggest Polish cities, highways and other main communication routes. Quality: generally new or refurbished properties in good technical shape; if older than 10 years, technical due diligence is required before the decision on underwriting.
1.4 Does the cover-pool only contain self-originated loans or loan participations (e.g. syndicated loans, mezzanine loans)?	In accordance with the Polish mortgage bank/covered bonds law, a cover pool can only consist of first-rank secured mortgage loans.
2. Loan underwriting policy	
2.1 Do you accept loans with refinancing risk? If yes, do you have a maximum Exit-LTV limit at loan maturity?	Yes. In case when the maturity of the loan is shorter then amortisation period, DSCR is calculated based on full amortisation period.
2.2 Do you have a maximum LTV ratio that is covenanted in the loan agreement? Do max. LTV ratio vary by property type? Please specify.	Maximum loan to mortgage lending value is 90% - majority of cases. Up to 95% loan to mortgage lending value might be accepted in case by case approach.
2.3 Do you have a minimum DSCR ratio that is covenanted in the loan agreement? Do min. DSCR ratio vary by property type? Please specify.	During construction phase: DSCR min 0.75, ICR min 1.00. During repayment phase: DSCR min 1.2.
2.4 Do you always require full hedging in terms of interest rate and currency risk? If not, which stresses are used to calculate the DSCR ratios?	Interest rate hedging is usually required. We use DSCR stress tests of increase interest rate by 50bp, 100bp, 150bp, and 400bp plus simultaneously different decrease of vacancy ratio.
2.5 Do you require a minimum exit debt yield? Please specify	No.
2.6 Do you allow exceptions to and what reasons would justify exceptions?	No.
3. Cash flow analysis	
3.1 Is a cash-flow assessment always carried out?	Yes.
3.2 Do you consider in the DSCR calculation (cash-flow assessment) possible reduction in property cash flow (e.g. due to lease roll-over, changing market rents, capex requirements)?	For future reduction of property cash-flows we take into account i.a.: - rental rates drop (especially when rental levels for the property as "over-rented"); - increase in vacancy rates; - operating & CAPEX costs (especially for properties which need constant CAPEX investments to keep them in good shape).
3.3 Do you rely in the DSCR calculation (cash-flow assessment) on possible increases in property cash flow (e.g. due to expected reduction in property vacancy, rent increase, property disposal income, or sponsor support)?	For future increase of property cash-flows we take into account i.a.: - possible increase of rental rents - when the property owner might sign lease agreements in the future or after refurbishment, renovations, commercialization or re-commercialization. We don't assume that sponsor support will be the constant source of cash flow (sponsor's financial strength is rather considered the back-up for emergency cash flow support).
3.4 Do you consider in the cash flow assessment the quality (tenant) and diversity of cash flows? How do you assess tenant quality?	Yes.
3.5 How often is the property cash flow and loan DSCR assessment updated?	In the yearly monitoring process of properties the cash flow assessment is updated (rent-roll is updated quarterly).
4. Borrower	
4.1 Do you accept SPV as a borrower?	SPV is generally required as a borrower.
4.2 Do you always require direct recourse to the borrower and sponsor (natural person) holding the equity stake? If not, please provide details/limits on non-recourse business.	Yes, direct recourse to the borrower is always required, very limited to the sponsor. Generally, sponsor guarantees to put additional money on debt service reserve account (usually 3 monthly loan instalments).
4.3 Do you have minimum requirements as for the borrower's quality? Please detail.	Borrower's / Sponsor's quality is evaluated based on i.a. DSCR level. Total DSCR minimum level is 1.25. In case the tenant is somehow linked to the Borrower minimum level DSCR is 1.05.
4.4 How do you assess borrower's quality?	During the underlying process, when the loan agreement is subject to amendment. Monitoring: rating update, full monitoring check, at least on a yearly basis, rent-roll updated quarterly,
4.5 Do you allow exceptions to 4.3?	None.
What reasons would justify exceptions?	N/A

Commercial Valuation	
1 Are valuations based on market or lending values?	There are both the current market value and the mortgage lending value (MLV). In accordance with the Covered Bonds and Mortgage Banks Act as well as the Polish Financial Supervision Authority - Recommendation F, MLV is a tool for assessment of mortgage collateral value stability in the long term.
2 Do you consider vacant possession values for single-tenanted properties?	Case by case approach, which takes into account the quality of the tenant, the quality of the lease, the quality of the property and its attractiveness for other potential tenants.
3 Do valuations always comply with standards of the RICS Red Book?	N/A. In Poland valuation process in mortgage banks is strictly regulated by the law. Entire process is subject to the internal valuation procedure which is approved by KNF (financial supervision committee).
4 Do you always require that valuations include a review of the lease contracts, a technical report and environment report?	Yes, always when this is required by the law. In the case when internal valuer requires this to be done.
5 Do you always require that valuations provide reference to comparable recent property transactions?	When indicating the land value we refer to the market transactions. When indicating the rental levels we refer to the rental levels in comparable locations and properties.
6 Could the value of a property portfolio exceed the value of the individual properties?	We always value individual property even when the portfolio is subject of financing.
7 How often is the property value updated and how often is checked that the LTV covenant is not breached? (annually, ad-hoc, depending on general market movement)?	LTV ratios are subject to check quarterly in the monitoring process. Current value is updated annually and in the extraordinary circumstances like: Default event, Watch list event, main tenant leaving the property etc.
Other comments	

Source: mBank Hipoteczny

Moody's related publications

Rating Methodology:

» Moody's Approach to Rating Covered Bonds, February 2019 (1154442)

Special Comment:

» Poland - legal framework for covered bonds, September 2018

Sector Profile:

» Covered Bonds: Sector update - Q1 2019: EU covered bond law supports credit standards; first covered bonds from Romania, May 2019

Webpages:

» Covered Bonds: www.moodys.com/coveredbonds

» Covered Bond Legal Frameworks: www.moodys.com/Pages/CoveredBondLegalFrameworks.aspx

To access any of these reports or webpages, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

REPORT NUMBER 1163125

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454