Covered Bonds Investor Presentation

Successful track record since 1999



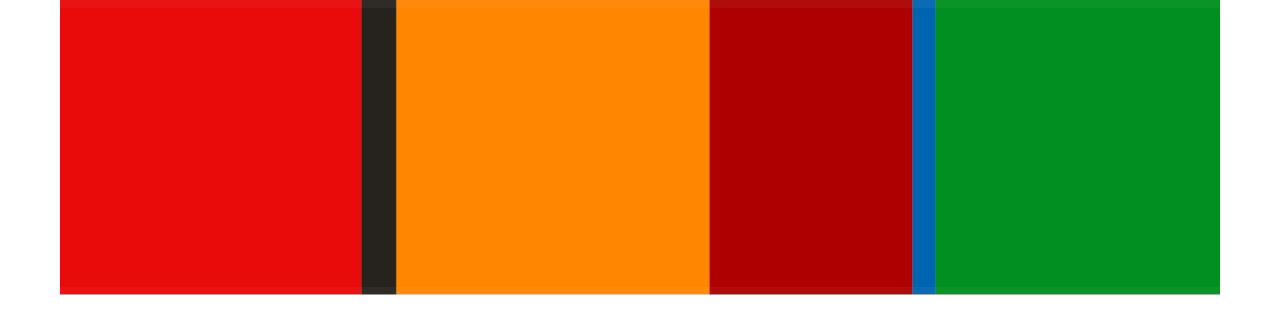
Investment Highlights

mBank Group & mBank Hipoteczny

- mBank Group 5th largest banking group in Poland in terms of assets. Well capitalized & liquid universal bank, recognized domestically and internationally as a mobile banking icon
- mBank Hipoteczny longest (23 years) track record of covered bond issuance in the Polish capital market with the equivalent of ca. EUR 1.3 bn of covered bonds already outstanding placed on local and international market
- Mortgage covered bonds rated Aa1 by Moody's Investors Service: equal to the Polish sovereign rating & 6 notches above the issuer rating
- Covered bonds as a part of mBank Group Green Bonds Framework refinancing tool for green residential mortgages

Polish economy & real estate market

- The inflationary turmoil in Poland is increasingly turning into stagflation
- The real estate market in Poland experienced a sharp decline in the last year
- Strong covered bond legal framework updated in July 2022 with the implementation of the Covered Bonds Directive into Polish law
- Growing covered bond market, offering European investors diversification and access to attractive exposures



mBank Group overview

- Key performance
- mBank Hipoteczny role in mBank Group Strategy

mBank Group in a snapshot

General description

- Set up in 1986, mBank is Poland's fifth largest universal banking group in terms of total assets and it keeps the fifth position by net loans and deposits at the end of June 2022.
- Servicing 4.55 million retail clients and 32.7 thousand corporate clients in Poland and more than 1.04 million retail clients in Czech Republic and Slovakia.
- The offer includes retail, SME, corporate and investment banking as well as other financial services such as leasing, factoring, commercial real estate financing, brokerage, wealth management, distribution of insurance, corporate finance and advisory in the scope of capital markets.
- Profitable and efficient business model, operating with C/I ratio at 43.0% in H1 2022. Well-capitalized bank with a strong funding profile and balanced business mix between retail and corporate segments. Attractive client base supporting market share development.
- Rated 'BBB' by Standard & Poor's and 'BBB-' by Fitch.
- Listed on the Warsaw Stock Exchange since 1992, a member of WIG20, WIG30, WIG, WIG-Banki, WIG-ESG, WIG-Poland index.
- A strategic shareholder, Germany's Commerzbank, owns 69.21% of mBank's shares.
- In line with its ESG strategy, mBank Group intends to conduct the business in accordance with the principles of sustainable development (we want to educate, take care of the climate and the environment and promote prosperity).
- Sustainalytics ESG Risk Rating "BBB"

Key financial mBank Group data (PLN mn)

	2018	2019	2020	2021	2021 H1	2022 H1
Total Assets	145,781	158,353	178,872	199,539	198,471	204,397
Net loans	94,766	104,980	108,567	118,055	116,241	126,257
Deposits	102,009	116,661	137,699	159,935	156,584	164,014
Equity	15,171	16,153	16,675	13,718	16,694	13,378
Total income	5,080	5,524	5,867	6,111	2,982	4,333
Net profit	1,303	1,010	104	(1,179)	426	742
Cost/Income ratio	42.6%	42.2%	41.1%	40,2%	41,8%	43.0%
Cost of risk	0.78%	0.79%	1.19%	0,76%	0,70%	0.76%
Return on Equity (ROE) (net)	9.4%	6.6%	0.6%	(7.2%)	5.1%	10.9%
Tier 1 ratio	17.5%	16.5%	17.0%	14.2%	15.2%	13.9%
Total Capital Ratio	20.7%	19.5%	19.9%	16.6%	17.6%	16.4%
NPL ratio	4.8%	4.5%	4.8%	3.9%	4.4%	3.8%
NPL coverage ratio	62.5%	60.7%	58.3%	53.1%	58.3%	54.6%

Main product lines

RETAIL BANKING

Modern financial services for:

- · Mass market,
- Affluent
- Private banking clients
- Entrepreneurs

Poland

Czech Republic and Slovakia

Clients 5,586 k

CORPORATE AND FINANCIAL MARKETS

Fully fledged offering:

- Corporate banking
- Transactional banking
- Investment banking
- Brokerage
- Leasing
- Factoring

Clients 32.7 k

From a specialized corporate bank to a large universal bank

Brief history

1986

Founding of **B**ank **R**ozwoju **E**ksportu (Export Development Bank) as a joint-stock company

1992

Debut on the Warsaw Stock Exchange

An agreement on strategic partnership singed with Commerzbank AG

1994

The bank launches its **Private Banking** 1995

2000

Bank starts operations in the retail banking segment, launching, in just 100 days. mBank - the first Internet bank in Poland

2001

Bank launches its second retail arm, MultiBank, brick-andmortar bank aimed at servicing demanding and affluent clients

2007

Foreign expansion of bank's retail operations, first outlets established in the Czech Republic and Slovakia

2013

Launch of new mBank transactional platform; rebranding of the Group under *mBank* name

2017

Establishment of mAccelerator – a fund aimed at investing in FinTech start-ups

2018

Strategic partnership with the Great Orchestra of Christ-mas Charity (WOŚP); e-commerce services via mElements

Adjustment of processes and offer innovations during the Covid-

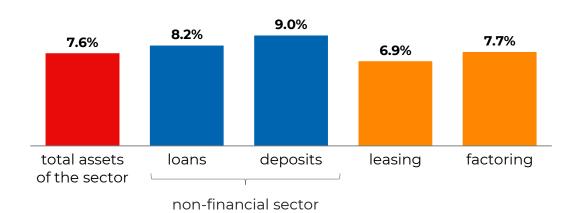
19 pandemic; systematic increase of Renewable Energy Sources

2020

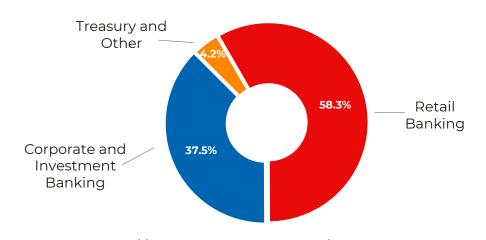
2021

mBank Group adopted new strategy for 2021-2025 titled "From an icon of mobility to an icon of possibility"

mBank Group's market shares in Poland



Composition of total income of mBank Group



Total income: PLN 4,333.4 mn in H1 2022

(RES) financing

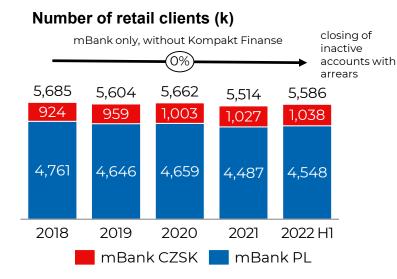
Client base and market position of retail and corporate banking



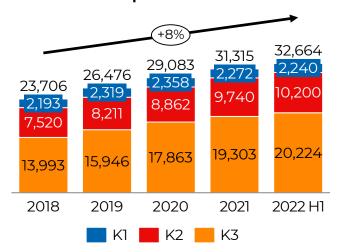
RETAIL BANKING



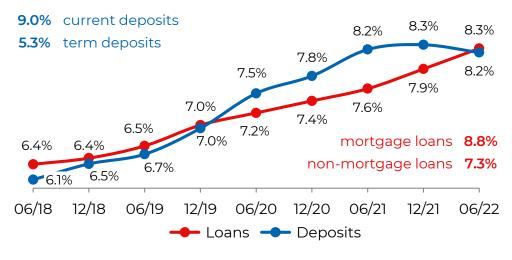
CORPORATE BANKING



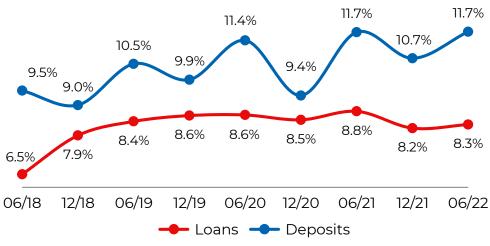
Number of corporate clients



Market shares - Households



Market shares - Enterprises



Note: Corporate clients split: K1 – annual sales over PLN 1 B and non-banking financial institutions; K2 – annual sales of PLN 50 M to PLN 1 B; K3 – annual sales below 50 M and full accounting.

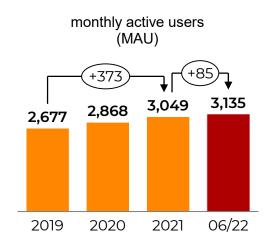
mBank remains a front-runner in mobile banking adoption

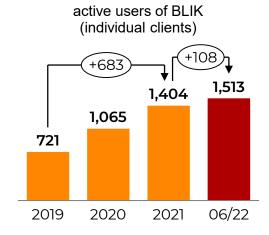


by the share of mobile users in total active customer base

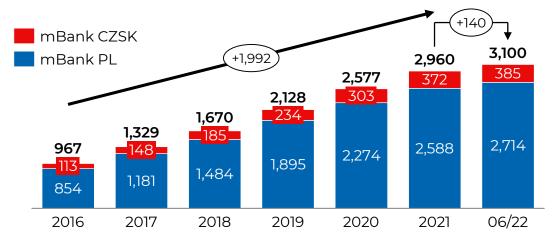
#2 by the number of mobile app users among Polish banks

Number of active users of mBank's services in Poland (k)

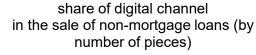


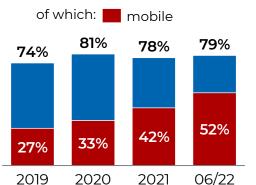


Number of active users of mBank's mobile application (k)

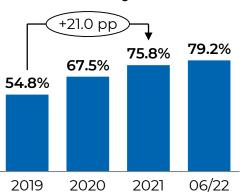


Growing importance of digital channel in daily banking





share of processes in retail banking area initiated by the clients in digital channels



7

Note: Active user is a client who in a given month performed at least one of the following actions: logging in to the mobile application, internet banking or trusted profile (ePUAP), initiated a transfer or card transaction.

Covered Bonds Investor Presentation

Development of best digital banking services for corporate clients

First-class digital banking offer for companies

entirely digital onboarding process, with no in-person contact and printouts required

advanced **mBank CompanyNet** transactional system, allowing for high level of personalization

remote access and constant control via enhanced mBank
CompanyMobile application

Administrator Centre for self-managing user permissions and authorisation schemes

electronic sending of documents, signing of agreements

mAuto.pl online platform with an offer of new and used cars, financed by leasing or long-term rental





mBank was named "World's Best Corporate/Institutional Digital Bank in CEE 2020" by Global Finance magazine

Development of complete solutions for e-commerce segment

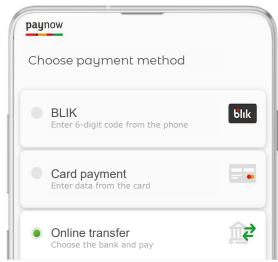
paynow

- online payment processing solution (BLIK, pay-by-link, card)
- and a core of mBank's offering for e-commerce merchants (SME and corporate clients)

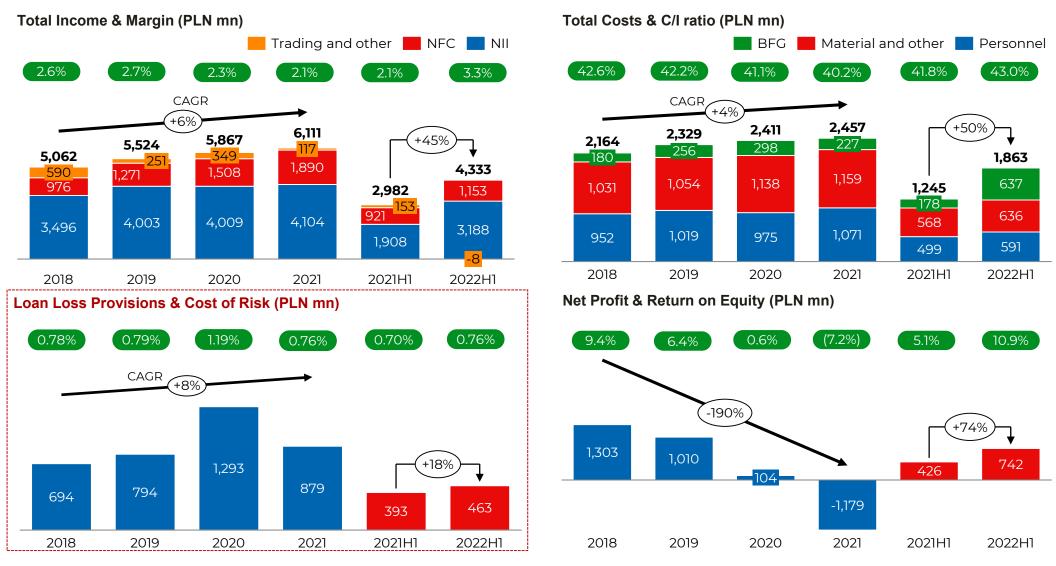


Developed to provide a delightful digital shopping experience for the customer and the merchant

- quick and easy integration with merchant's online shop
- high processing capacity, especially for peaks in payment volumes (up to 200 transactions per second)
- convenient management through mBank's transactional service or panel adapted to mobile devices
- extended for new services, e.g. recent Mass Collect for corporate clients



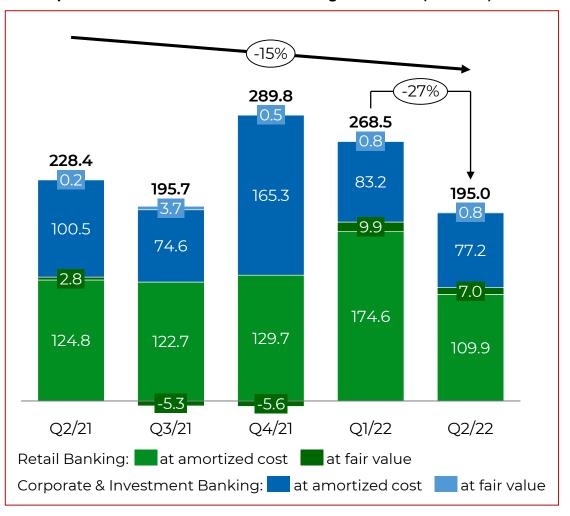
mBank Group's historical performance: Profit and Loss Account



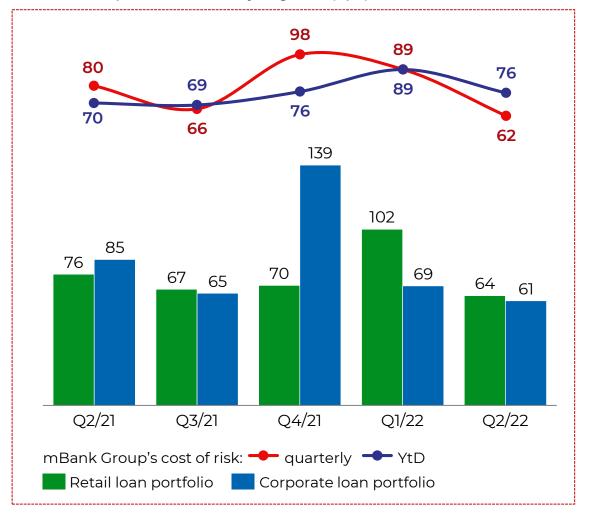
Note: A drop of net profit in 2020 and 2021 caused by the provisions for legal risk related to the FX mortgage loans.

Results of mBank Group: Loan loss provisions and cost of risk

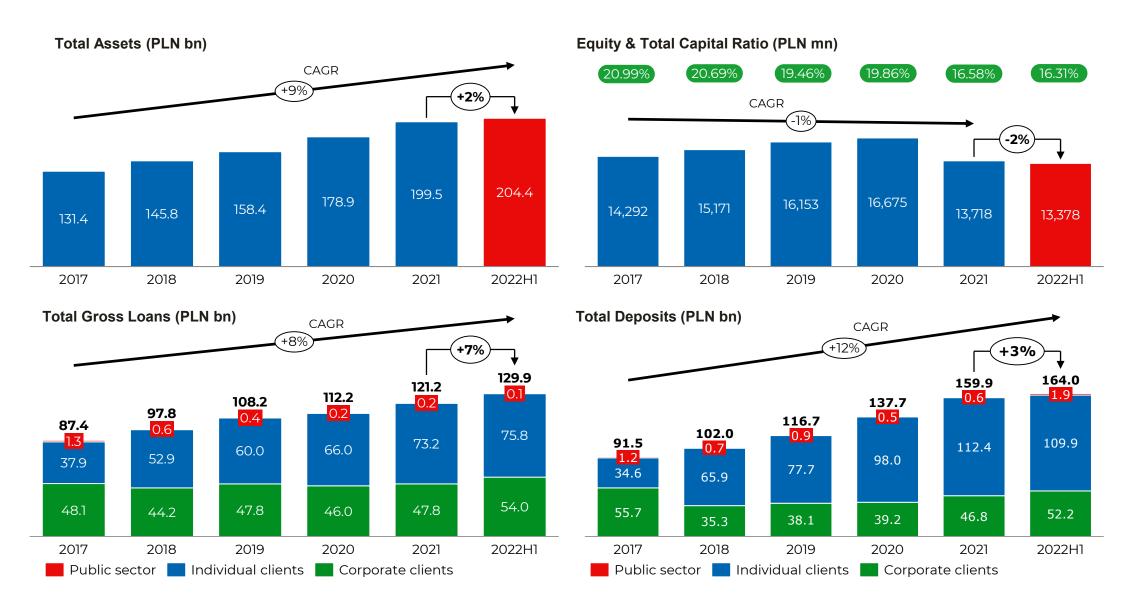
Net impairment losses and fair value change on loans (PLN mn)



mBank Group's cost of risk, by segment (bps)

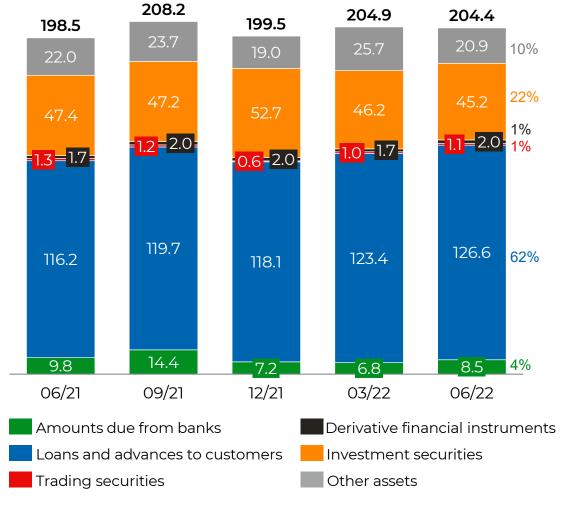


mBank Group's historical performance: Balance Sheet

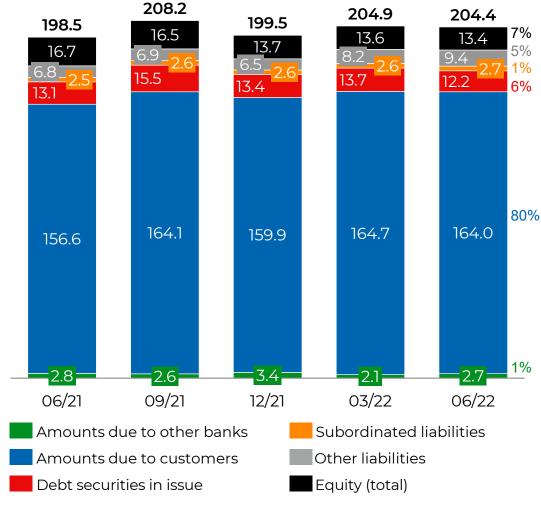


mBank Group's historical performance: Balance Sheet

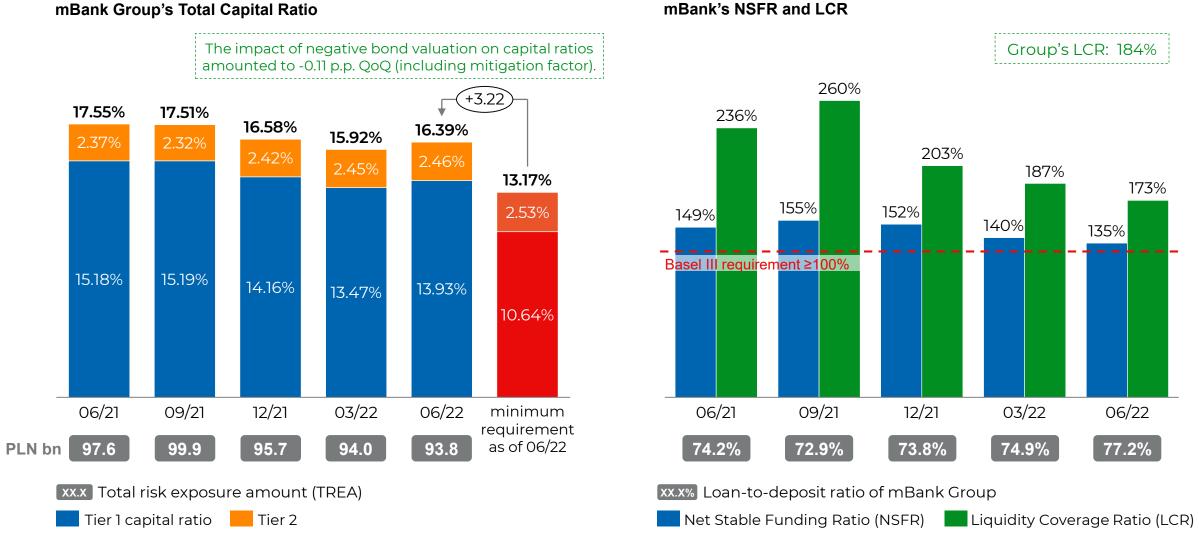
Structure of mBank Group's total assets (PLN bn)



Structure of mBank Group's liabilities and equity (PLN bn)



Results of mBank Group: Capital ratio and liquidity position



ESG is well embedded in mBank Group's strategy

Responsibility for climate



By 2050 we will become a fully climate-neutral bank. By 2030 we will reach climate neutrality in scope 1 and 2.

Our goal is to reduce own environmental footprint of mBank Group and to be a leading bank supporting energy transition of our clients by:

- using clean energy, developing data aggregation system for direct emissions, replacing mBank's fleet with lowemission vehicles, eliminating paper
- providing PLN 10 bn of funds for RES segment, granting PLN 25 bn of eco-mortgage loans in Poland, promoting ESG-compliant investment products

Responsibility for being an organization in line with ESG values



We walk the talk. We first accomplish and then communicate. We build corporate culture based on values and incorporate ESG into our daily life.

Our goal is to introduce ESG factors into business and employee processes by:

- setting 10% of top managers' objectives related to ESG
- preserving a gender diversity in the recruitment
- implementing Taxonomy in processes; cooperating with partners and suppliers fulfilling ESG standards

Responsibility for financial health of our clients



We support customers in safe and convenient banking as well as making conscious financial decisions.

Our goal is to **take care of good financial standing and future of our clients** by:

- developing the personal finance management (PFM) functionalities to give clients the control over their budgets and support in preparation for life events
- continuing educational campaigns on cybersecurity
- conducting responsible sale, transparently presenting the risks associated with specific financial products

Responsibility for society



We will contribute to social well-being. We will be a responsible corporate citizen. We will take care of our employees and their families.

Our goal is to **act for the financial and non-financial benefit of the society** by:

- supporting mathematical education in Poland
- cooperating with the Great Orchestra of Christmas Charity (WOŚP) and being its sponsor
- creating a collection of paintings by young artists



As the first Polish bank, mBank has independently signed the Principles for Responsible Banking.

ESG Risk Rating by Sustainalytics

14.8 (low risk)

as of 02.05.2022

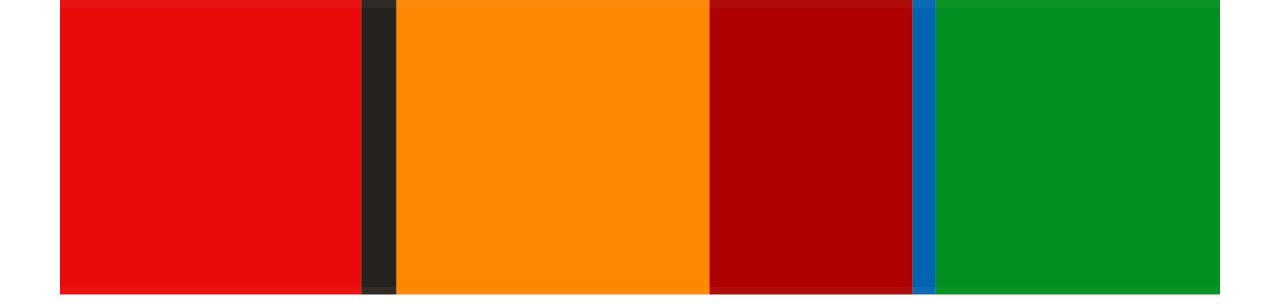
MSCI ESG Rating 1

as of February 2022

Bloomberg GEIGender-Equality Index

WIG-ESG index on WSE in Poland

¹ please see the webpage for disclaimer statement



mBank Hipoteczny overview

- Key performance
- The impact of economic turmoil

mBank Hipoteczny overview and role in Group strategy

mBank Hipoteczny is a specialised credit institution (mortgage bank) authorised to issue covered bonds under Polish law.

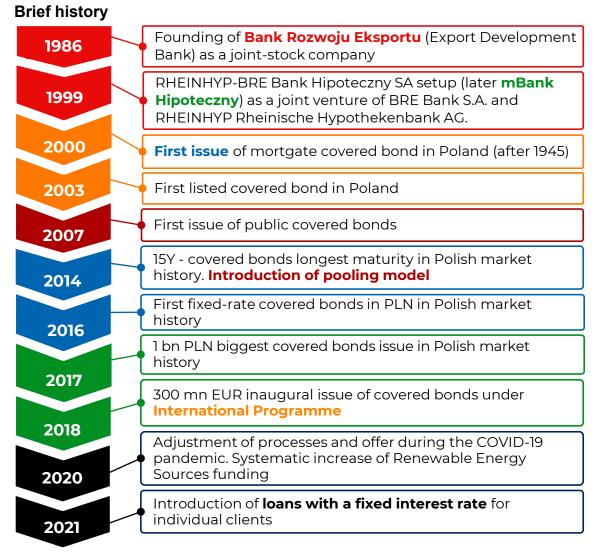


mBank Hipoteczny has been issuing covered bonds since 2000, when it was the first bank to introduce mortgage covered bonds to the post-war Polish capital market, restoring their importance and place after 50 years of absence. Outstanding publicly traded covered bonds issued by the Bank as of 2022 H1 are PLN 6.06 bn, represent 33.1% market share in the covered bond market in Poland.

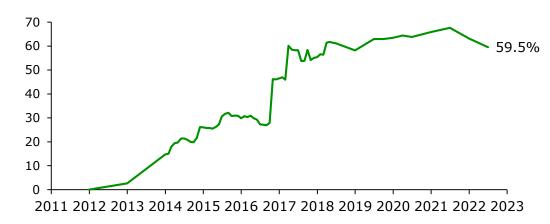
mBH strategic objectives for 2019–2022 are the following:



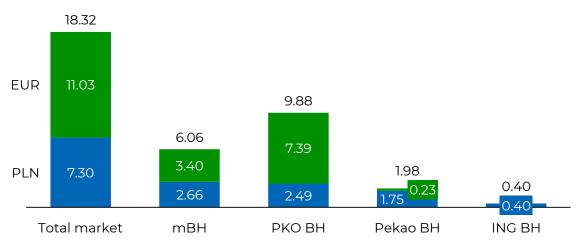
mBank Hipoteczny - specialised credit institution



Increasing share of EUR Polish Covered Bond issuess (all Polish issuers)



Outstanding Polish mortgage covered bonds currency (PLN mn)



Data based on NBP fx rate as of 30.06.2022 Data source: Financial statements of ING Bank Hipoteczny, mBank Hipoteczny, Pekao Bank Hipoteczny, PKO Bank Hipoteczny 2022 H1

mBank Hipoteczny: Key financials

Summary of Key Financials: Profit and Loss Accounts (PLN mn)

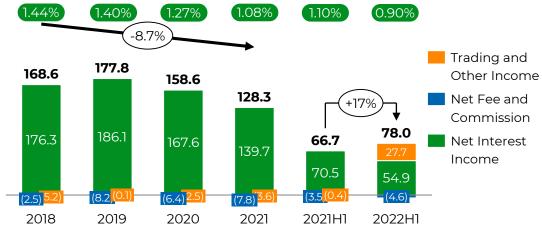
in PLN M	2018	2019	2020	2021	2021H1	2022H1	Decrease in the net interest income	
NII - Net Interest Income	176.3	186.1	167.6	139.7	70.5	54.9	compared to the first half of 2021 by 22.13%	
NFC - Net Fee & Commission Income	(2.5)	(8.2)	(6.4)	(7.8)	(3.5)	(4.6)		
NFC - Trading and other income	(5.2)	(0.1)	(2.5)	(3.6)	(0.4)	27.7		
Total income ¹⁾	168.6	177.8	158.6	128.3	66.7	78.0		
Total costs ²⁾	(63.6)	(66.5)	(62.6)	(64.7)	(36.5)	(39.1)	Impairment provisions provide	
LLP - Loan Loss Provisions	(16.71)	(20.00)	(42.32)	(2.40)	(0.54)	(12.21)	adequate security against potential losses resulting from credit risk	
Operating result	88.3	91.3	53.7	61.2	29.6	26.6		
Taxes on the balance sheet	(27.6)	(32.2)	(31.3)	(31.1)	(15.3)	(15.7)		
Profit before income tax	60.7	59.1	22.4	30.2	14.3	10.9	The financial result was greatly influenced by decrease in commercial	
Net profit	41.2	37.1	4.9	18.8	7.8	5.4	portfolio and increased prepayments in the retail portfolio	
Cost/Income Ratio	36.78%	36.81%	38.94%	50.76%	55.42%	49.18%	Despite a significant increase in public	
Net Interest Margin (NIM)	1.44%	1.40%	1.27%	1.08%	1.10%	0.90%	burdens, the cost to income ratio slightly decreased compared to the first half of 202	
TCR	16.25%	18.23%	19.22%	18.73%	18.63%	18.68%		
Cost of Risk LLP	0.19%	0.19%	0.38%	0.17%	0.17%	0.38%		
ROE - Return on Equity (gross)	5.85%	4.95%	1.77%	2.37%	2.26%	1.71%		

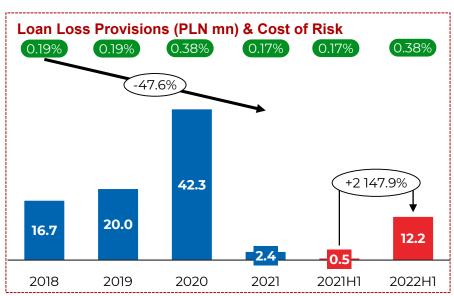
¹⁾ total income (defined as net interest income + net fee and commission income + net trading income + other operating income - other operating expenses)

²⁾ total cost (overhead costs + amortisation and depreciation)

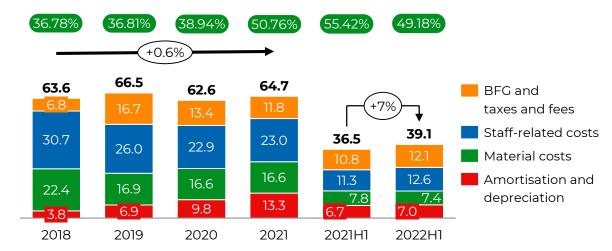
mBank Hipoteczny performance: Profit and Loss Account

Development of Total Income (PLN mn) & Net Interest Margin

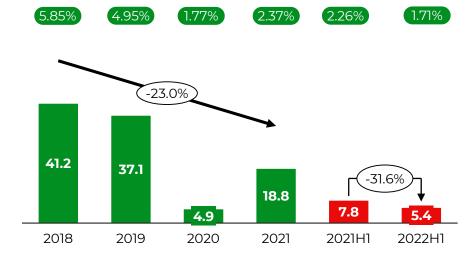




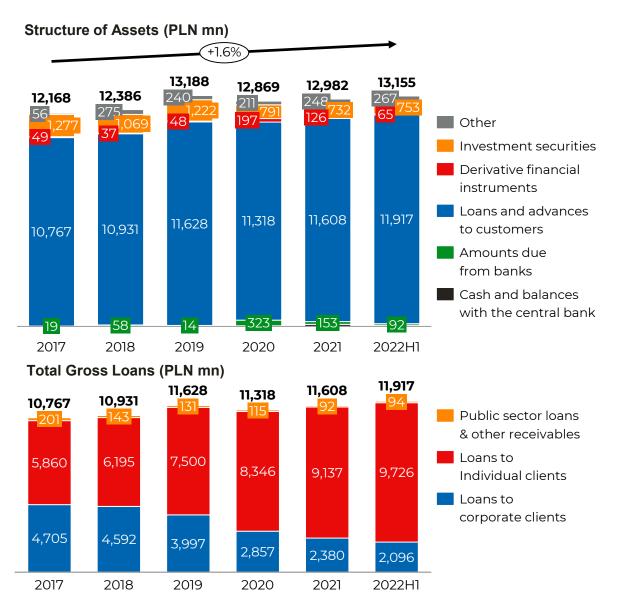
Development of Total Costs (PLN mn) & C/I ratio



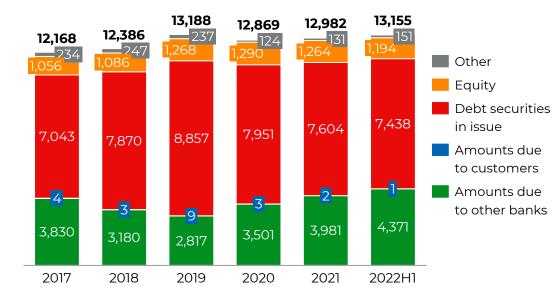
Net Profit (PLN mn) & Return on Equity



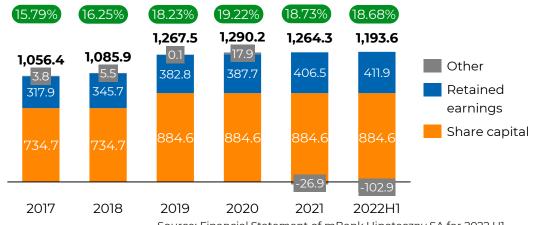
mBank Hipoteczny performance: Assets & Liabilities



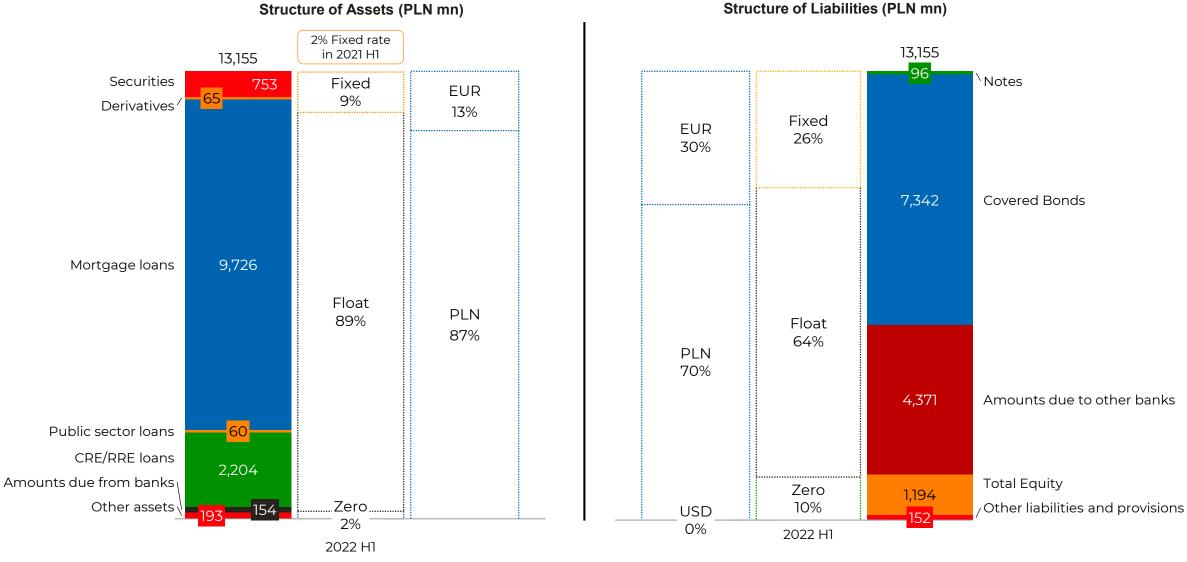
Structure of Liabilities (PLN mn)



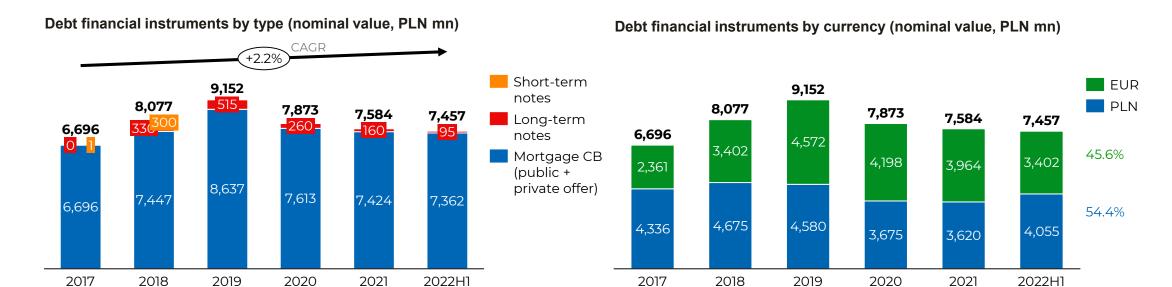
Equity (PLN mn) and TCR



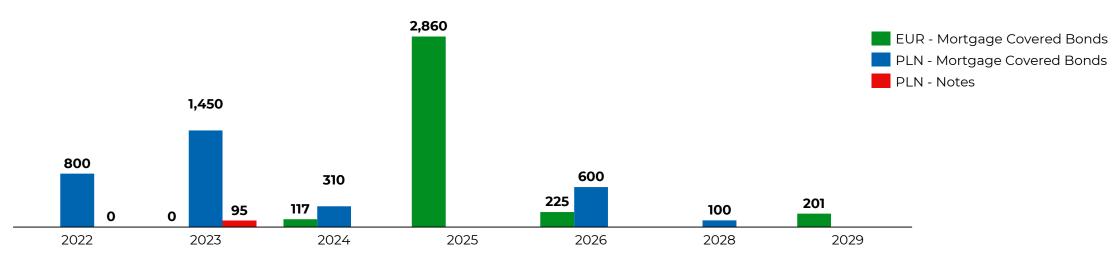
Well diversified and stable balance sheet

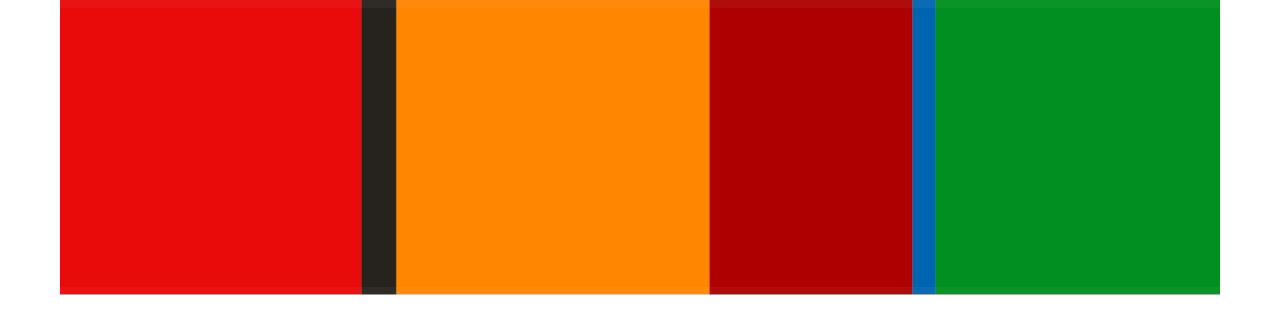


Debt securities issued



Maturity of debt financial instruments by type (nominal value, PLN mn)

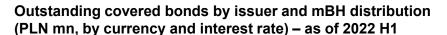


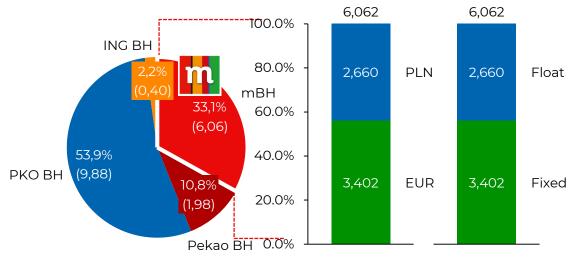


Covered bonds

- mBank Hipoteczny issuances track record
- Ratings

mBank Hipoteczny on Covered Bond Market

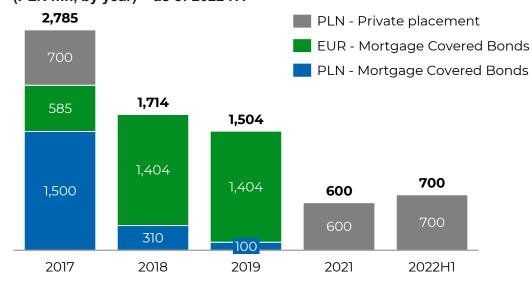




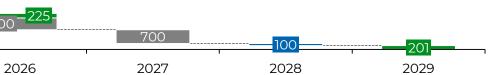
mBH covered bonds maturity profile (PLN mn, by currency)



mBH issuance of private and public covered bonds 2017 – 2022 (PLN mn, by year) – as of 2022 H1







mBank Hipoteczny on International Covered Bond Market

General Programme Terms and Conditions				
Security Type	PLN and EUR mortgage loans			
Issue Type	Soft Bullet / Conditional Pass-Through			
Distribution	Private / public placement			
Interest rate	Fixed / Floating			
Currency	Multi currency			
Coupon	Annual, Act/Act ICMA			
Maturity	Up to 30 years			
Programme size	Up to EUR 3.0 bn			
Rating	Aa2 (Moody's Investors Service)			
Base Prospectus approval	Commission de Surveillance du Secteur Financier, Luxembourg (CSSF)			
Investors	Financial Institutions			
Clearing	Euroclear / Clearstream			
Listing	Luxembourg Stock Exchange			
Listing Agent	Deutsche Bank Luxembourg S.A.			
Fiscal & Paying Agent	Deutsche Bank Aktiengesellschaft			
Governing law	Polish Law			

26 April 2018 - inaugural covered bond sub-benchmark transaction with a EUR 300 mn

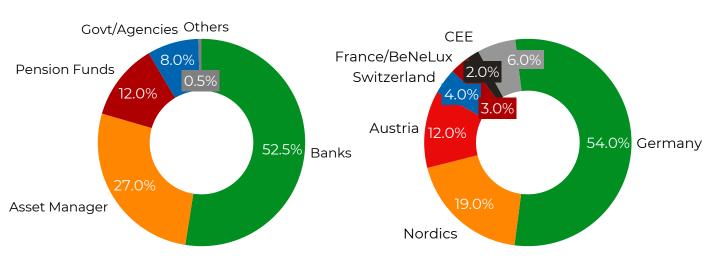
- 7 years tenor
- Fixed (1.073%) MS + 42bps
- pricing implies new issue premium
- 2.7 oversubscribed book
- 60 real money investors participating

12 November 2019 - successfully returned to the syndicated covered market again with a EUR 300 mn

- 5 years tenor
- Fixed (0.242%) MS + 43bps
- pricing implies new issue concession
- 3.4 oversubscribed book
- 70 real money investors participating

Allocation by Region (all issues)

Allocation by Investor Type (all issues)



Issuance Activity

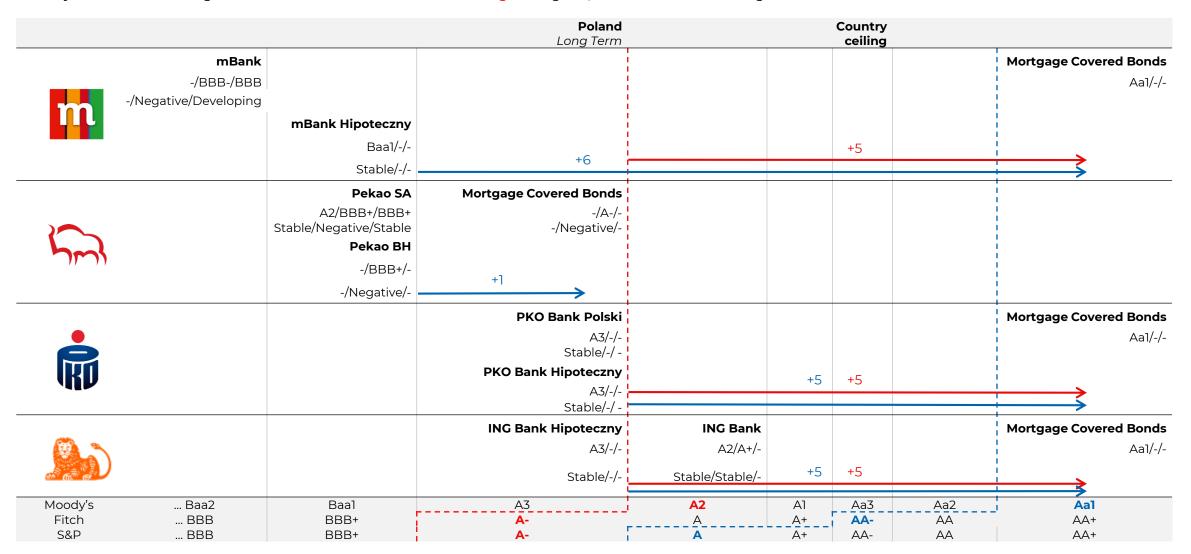
Summary of Mortgage Covered Bonds public issued in 2015-2022. Data as of 2022 H1.

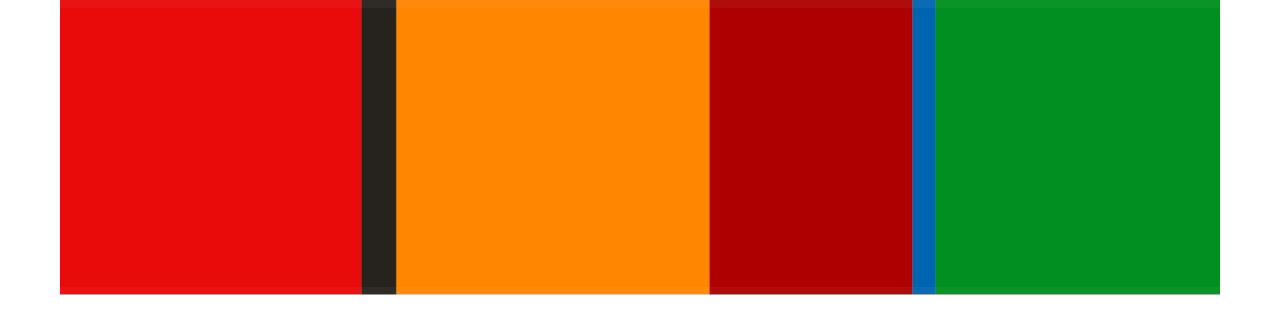
Amount (mn)	Currency	Issue date	Maturity date	Tenor (yr)	Coupon
200.0	PLN	2015-02-20	2022-04-28	7.2	WIBOR 6M + 78bps
20.0	EUR	2015-02-25	2022-02-25	7.0	Fixed (1.135%) MS + 5bps
250.0	PLN	2015-04-15	2023-10-16	8.5	WIBOR 6M + 87bps
11.0	EUR	2015-04-24	2025-04-24	10.0	Fixed (1.285%) MS + 85bps
50.0	EUR	2015-06-24	2020-06-24	5.0	EURIBOR 3M + 69bps
500.0	PLN	2015-09-17	2020-09-10	5.0	WIBOR 3M + 110bps
255.0	PLN	2015-12-02	2021-09-20	5.8	WIBOR 3M + 115bps
300.0	PLN	2016-03-09	2021-03-09	5.0	WIBOR 3M + 120bps
50.0	EUR	2016-03-23	2021-06-21	5.2	EURIBOR 3M + 87bps
50.0	PLN	2016-04-28	2020-04-28	4.0	Fixed (2.91%) MS + 112bps
100.0	PLN	2016-05-11	2020-04-28	4.0	Fixed (2.91%) MS + 112bps
13.0	EUR	2016-09-28	2026-09-20	10.0	Fixed (1.18%) MS + 90bps
35.0	EUR	2016-10-26	2026-09-20	9.9	Fixed (1.183%) MS + 80bps
24.9	EUR	2017-02-01	2024-02-01	7.0	Fixed (0.94%) MS + 46bps
500.0	PLN	2017-09-29	2022-09-10	5.0	WIBOR 3M + 75bps
1,000.0	PLN	2017-10-11	2023-09-15	5.9	WIBOR 3M + 82bps
100.0	EUR	2017-10-30	2022-06-22	4.6	Fixed (0.612%) MS + 40bps
300.0	EUR	2018-04-26	2025-03-05	6.9	Fixed (1.073%) MS + 42bps
300.0	PLN	2018-06-22	2024-06-10	6.0	WIBOR 3M + 58bps
10.0	PLN	2018-10-11	2024-06-10	5.7	WIBOR 3M + 58bps
100.0	PLN	2019-02-22	2028-12-20	9.8	WIBOR 3M + 80bps
300.0	EUR	2019-11-12	2025-09-15	5.9	Fixed (0.242%) MS + 43bps

Note: Additional issues: Private placement 2016: EUR 70 mn and PLN 400 mn; 2017: PLN 300 mn and PLN 400 mn; Private placement 2021: PLN 100 mn and PLN 500 mn; 2022: PLN 500 mn and PLN 200 mn

Covered Bonds rating among Polish issuers

Moody's / Fitch / S&P Ratings as of 30.08.2022 → relation to sovereign rating → relation to issuer rating



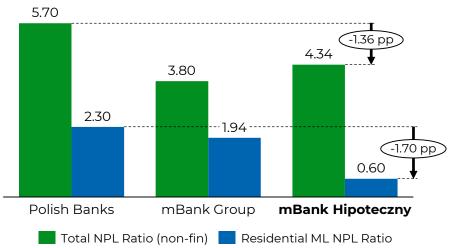


Cover pool

- General loan portfolio overview
- Retail and commercial real estate in cover pool

mBank Hipoteczny quality of the loan portfolio

mBank Hipoteczny NPL ratio significantly below the market level (%)



mBank Hipoteczny NPL by business lines (%)



Characteristics of the retail portfolio eligible for pooling

- Financing the purchase of real estate located in Poland
- LtV at the transfer date does not exceed 100%
- First rank joint contractual ordinary mortgage on all property pledged as collateral
- The remaining term of the loan over 3 years
- Suitable internal rating
- PLN denominated loans
- No delays and defaults

mBank Hipoteczny Cost of Risk LLP by business lines (bps)

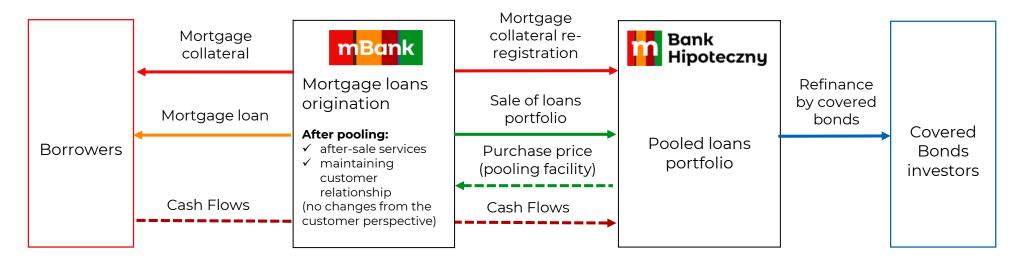


mBank Hipoteczny assets origination – retail mortgages

Pooling model

Transfer of existing residential mortgage loan portfolio from mBank for its refinancing with mortgage Covered Bonds. Based on framework agreement on acquiring portfolios of mortgage loans, introduced in 2014 as pioneer transaction of the mortgage transfer on the Polish market.

Transfer is based on comprehensive model of cooperation between mBH and mBank:



The target level of the newly originated portfolio of residential assets at mBank S.A. meeting the pooling criteria is to amount to over 90%. The inclusion of both primary and secondary market transactions in the transfer process with its cyclical nature is aimed at a systematic increase in the value of the mortgage loan portfolio of mBH.

The process of transferring mortgage loans assumes transfer of assets to mBH on regular basis.

mBank Hipoteczny assets origination - commercial real estate

Origination

Origination model assumes of mBank Hipoteczny participate in **syndicate model** commercial real estate loans organised by mBank or by purchasing loan assets from mBank - **commercial pooling model**.

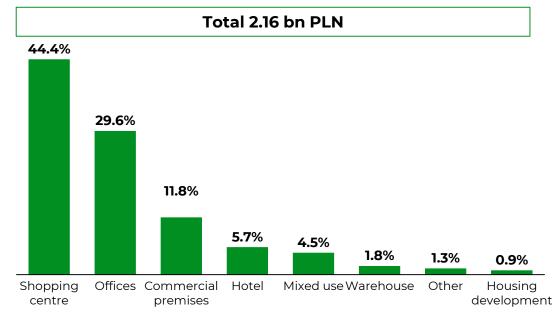
Cover pool eligibility

mBank Hipoteczny acquires via commercial pooling and syndicate model loans for refinancing existing, completed CRE properties. Those loans are transferred directly to cover pool.

Risk Management

All decisions on the bank's credit exposure will be made by mBH, based on its independent credit risk analysis. mBH will no longer grant loans to developers, which will reduce risk profile by removal of construction phase risk.

Financed projects by type



Characteristics of funded projects

- Duration of the loan for commercial real estate is up to 21 years
- Commercial loans denominated in EUR and PLN
- 25% of the total investment cost is the minimum own funds of the borrower
- Security features required by the Bank includes:
 - mortgage entered in the first place in the Land and Mortgage Register maintained for the financed real property
 - special purpose vehicle's a specially created structure dedicated to the specific project - scope of its operation is limited to activities related to its ownership and management
 - assignment of rights from insurance against fire and other perils for real estate which is the subject of credit or the registered pledge on those rights

Source: Management Board Report mBank Hipoteczny 2022 Hl

Well diversified mixed high-quality cover pool



77% - Residential ML

WA LtMLV - 75.9%

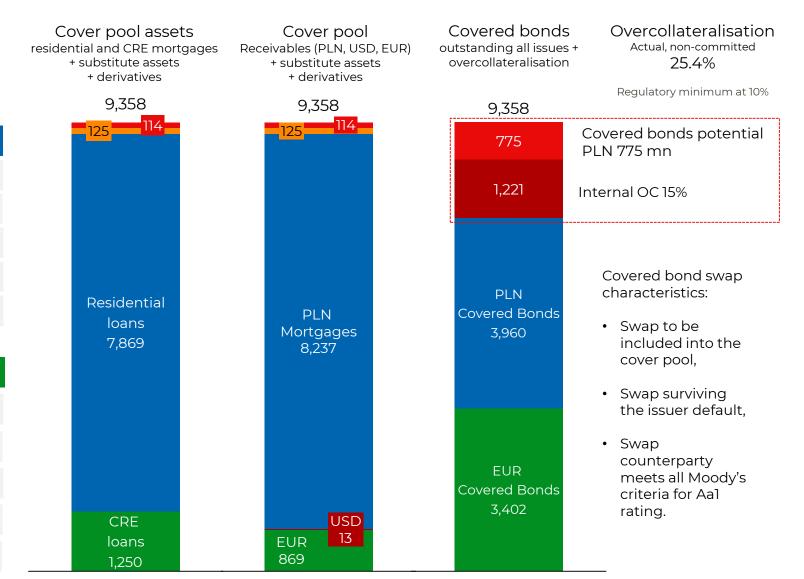
Number of loans 32,062

Average size PLN 0.25 mn

10 largest exposures – 0.2%

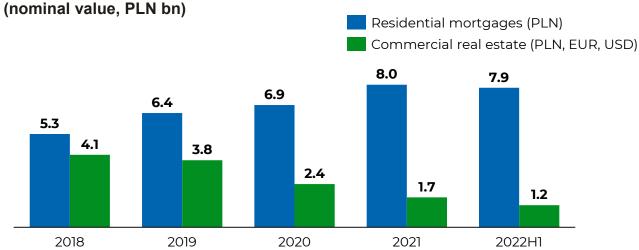
NPLs – 0.1%

23% - CRE loans WA LtMLV - 62.5% Number of loans 118 Average size PLN 10.59 mn 10 largest exposures - 26.9% NPLs - 0.00%

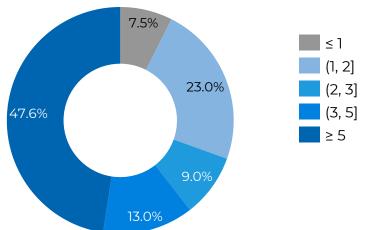


Cover Pool – currency and mortgage type split

Increasing share of residential mortgages in cover pool



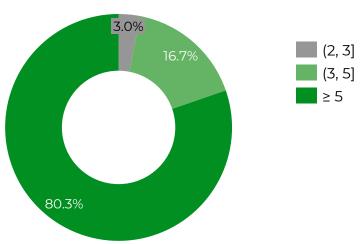
Loan seasoning – residential mortgages (year)



Characteristics of the portfolio in the future

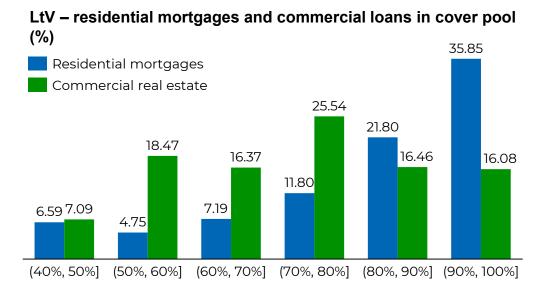
- since 2014 the currency structure of the loan portfolio in mortgage cover pool was subject to changes resulting from a systematic growth of the portfolio of retail loans granted only in PLN
- from 2022, due to Demerger Plan of mBank Hipoteczny, mBH will not grant and service loans secured by a mortgage for the financing of commercial real properties
- mBH strategy for the following years is to be EUR issuer covered by significant increase of residential PLN denominated mortgages

Loan seasoning - commercial loans (year)

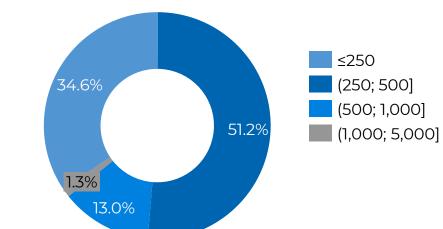


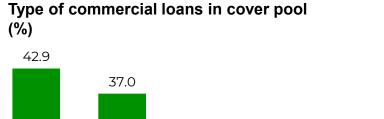
Covered Bonds Investor Presentation

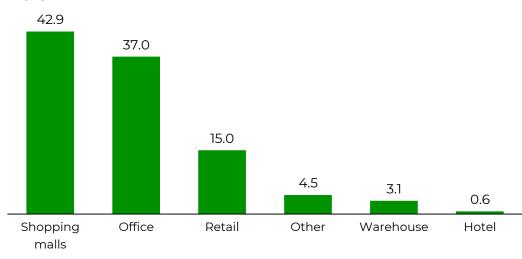
Cover Pool - loans value

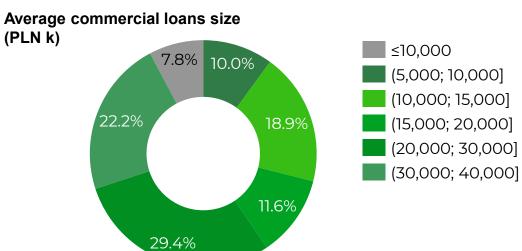


Average residential mortgage size (PLN k)



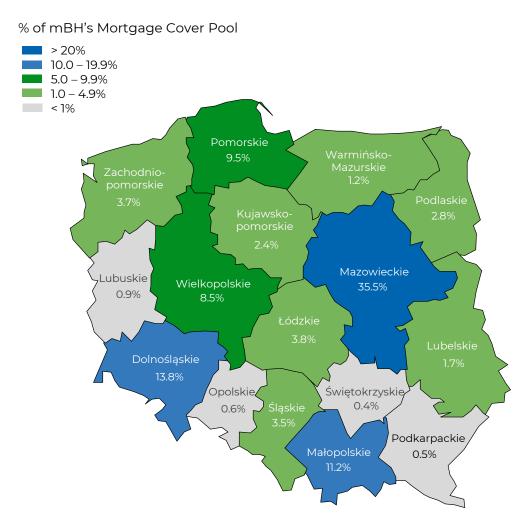




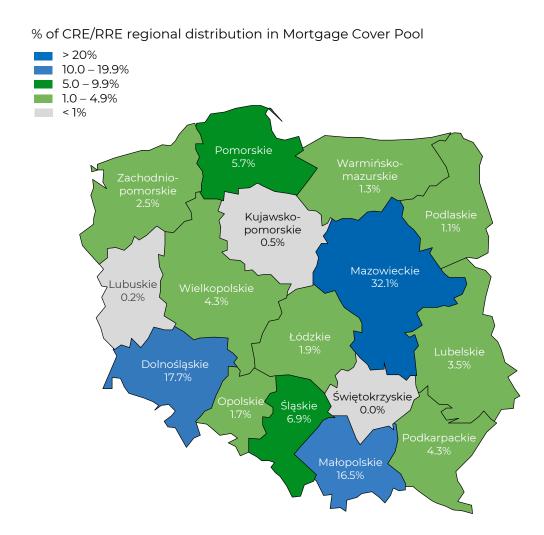


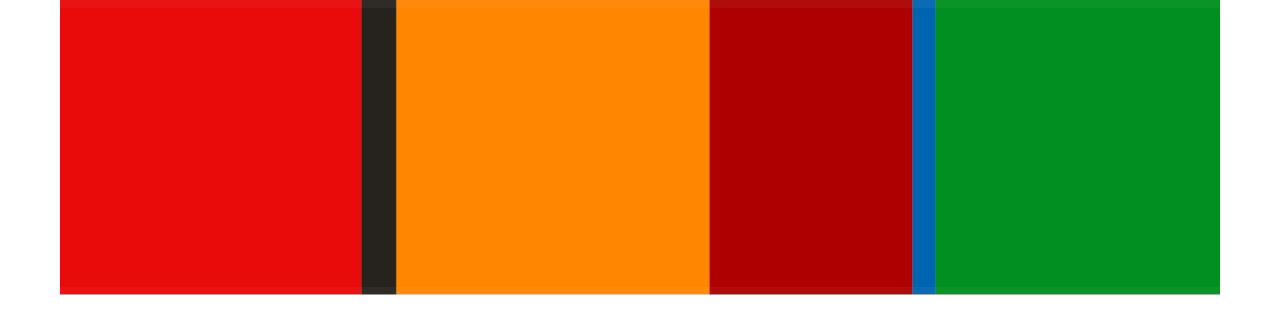
Cover Pool – regional distribution

Geographical distribution negatively correlated with unemployment– strong client base portfolio



Geographical CRE/RRE regional distribution vs existing office stock by the cities – positive correlation



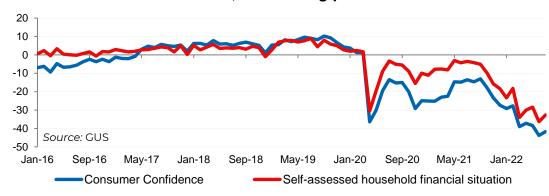


Polish economy

- Macroeconomic situation and outlook
- Forecasts and outlook for mBank Group

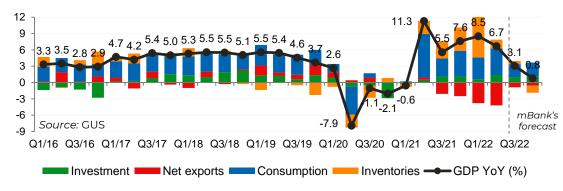
Macroeconomic situation and outlook

Consumers under constant, broadening pressure



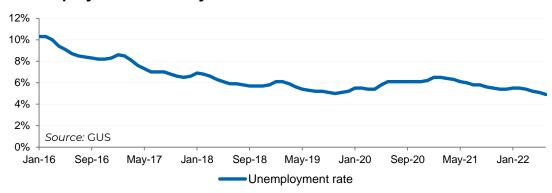
Bad consumer moods have finally arrived in the real spending data. Consumers are going to crack more under the spell of higher prices, negative real wages growth, uncertainty and tightened monetary policy.

GDP path and forecast for Poland (% YoY)



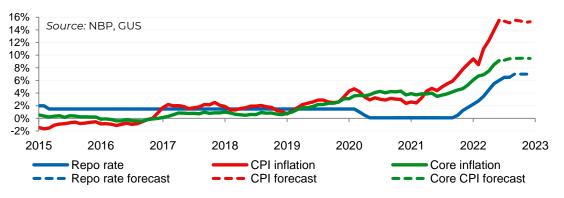
Brilliant start of the year keeps average 2022 GDP numbers high (at the level of 4.6%). Mind the falling trajectory, though. There are no obvious turnaround factors in sight and 2023 cyclical picture is much gloomier.

Unemployment rate at cyclical bottoms



As labour market has typically some inertia, the fall of GDP growth momentum has not yet been seen. However, it is just a matter of time for Poland before unemployment rate starts to rise.

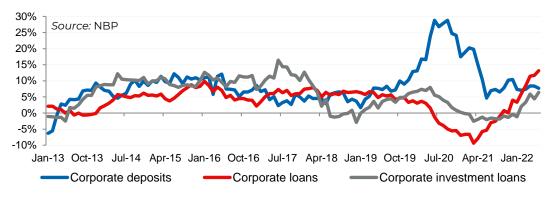
Inflation: off 2.5% NBP target, central bank in rate hike cycle



Inflation is yet to reach the top at the start of 2023 due to pending energy price increases. However, inflation momentum is falling. Therefore, the peak in rates is coming closer and ~7% seems to be still a reasonable ceiling to rely on.

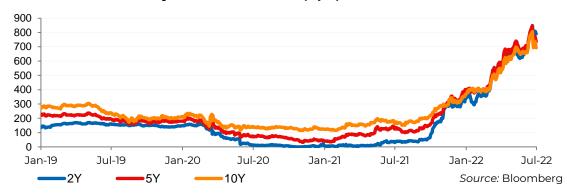
Macroeconomic situation and outlook

Corporate loans and deposits (YoY, FX-adjusted)



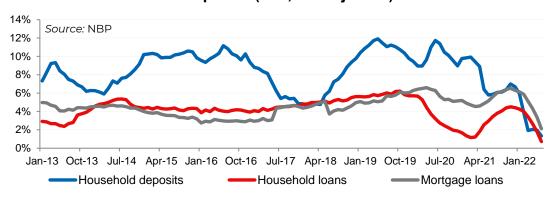
Corporate credit still enjoys decent growth rates, but momentum is slowly faltering. Economic cycle seems to be inevitable going forward. At the same time, deposit base is growing steadily.

Government bond yields: on the rise (bps)



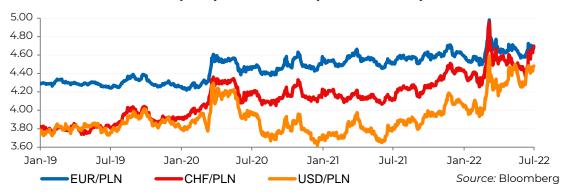
Bond yields exploded amidst higher inflation, higher expected rate path and some repricing (higher) in credit risk. And then fell even faster. Due to recession fears, it is unlikely to revisit the tops again.

Household loans and deposits (YoY, FX-adjusted)



New credit creation dropped like a stone, especially in mortgage segment due to high interest rates and regulatory requirements. Growth of household deposits weakens but it is unlikely to turn negative.

PLN: weak and bleak perspectives for spectacular improvement



Zloty is subject to a series of shocks, with war (and its consequences) being not the last one. There is some room for improvement on the basis of falling risk aversion but chances for swift appreciation are slim (cycle turns negative).

Macroeconomic forecasts and outlook for mBank Group

Key economic indicators for Poland

	2020	2021	2022F	2023F
GDP growth (YoY)	-2.2%	5.9%	4.6%	0.4%
Domestic demand (YoY)	-2.9%	7.6%	7.3%	-1.2%
Private consumption (YoY)	-3.0%	6.1%	5.3%	1.8%
Investment (YoY)	-4.9%	3.8%	5.5%	-1.3%
Inflation (eop)	2.4%	8.6%	15.3%	8.0%
MPC rate (eop)	0.10%	1.75%	7.00%	5.00%
CHF/PLN (eop)	4.22	4.42	4.79	4.49
EUR/PLN (eop)	4.56	4.59	4.65	4.55

Polish banking sector – monetary aggregates YoY

	2020	2021	2022F	2023F
Corporate loans	-4.8%	3.9%	10.0%	3.9%
Household loans	3.0%	4.9%	-1.3%	-1.0%
Mortgage loans	7.3%	7.1%	-0.4%	0.2%
Mortgage loans in PLN	9.7%	12.0%	-0.5%	4.6%
Non-mortgage loans	-3.8%	1.1%	-2.8%	-3.4%
Corporate deposits	19.0%	10.4%	1.2%	-4.7%
Household deposits	10.7%	6.7%	2.3%	4.3%

Short-term prospects for mBank (4 quarters ahead)

Net interest income & NIM

neutral



- Ongoing cycle of rate hikes translating into rising cost of deposits, exhausted potential for further margin improvement
- Material negative impact of credit vacations on interest income

Net fee and commission income

slightly positive



- Uptrend anchored in growing customer base and transactionality, as well as extending investment product offering
- Relevant adjustments to tariff of fees already implemented

Total costs

negative



- Visible wage and inflationary pressure weights on operating costs
- Investments in future growth along with increasing revenues
- An additional contribution to the Borrowers' Support Fund

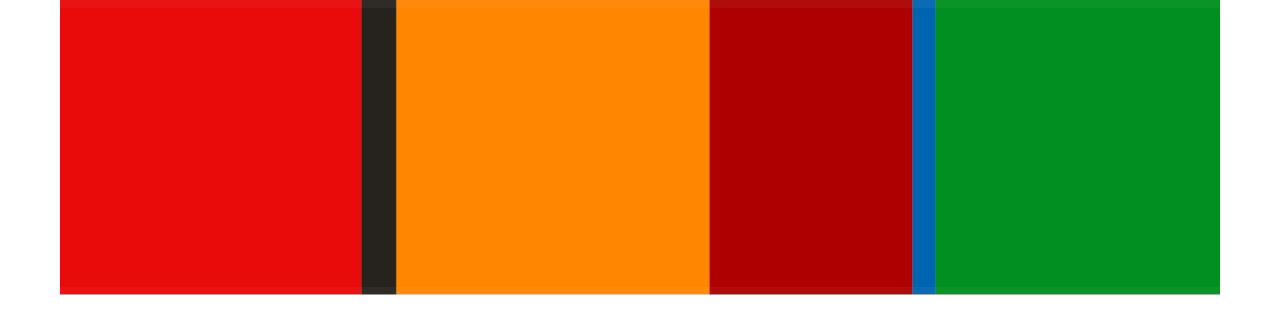
Loan loss provisions & FV change

slightly negative



- The overall asset quality should not deteriorate materially thanks to prudent approach in loan origination
- Financial standing of borrowers may be affected by the changing macroeconomic environment and geopolitical developments

Source: mBank's estimates as of 29.07.2022.

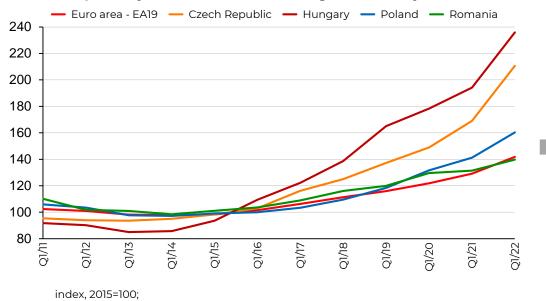


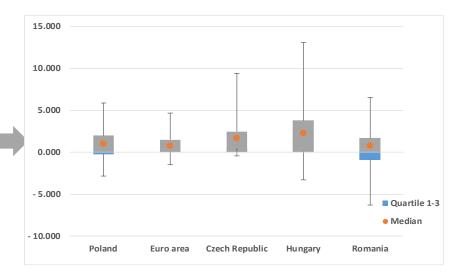
Real estate market

- Sharp decline in real estate market
- Commercial real estate and residential market outlook

Stable and growing residential market in Poland

House price dynamics in the CEE - higher volatility in Poland



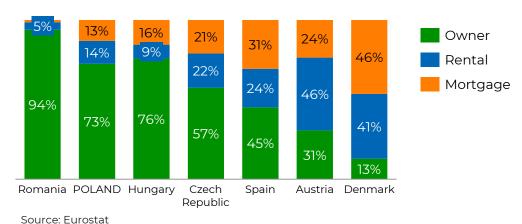


Housing prices on the primary and secondary market in Poland have changed over the years.

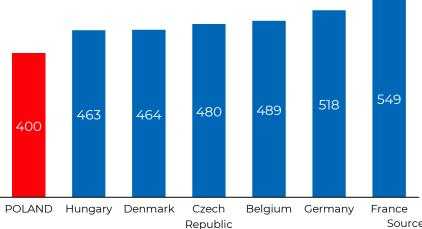
Higher volatility of house price dynamics driven by strong demand and limited supply

Source: Eurostat

Distribution of population by tenure status in selected countries



Dwellings per 1,000 citizens

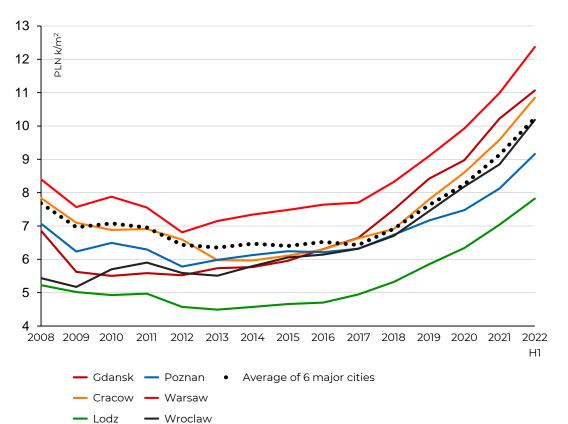


Mortgage penetration in Poland remains low while home ownership rates are among the highest in Europe.

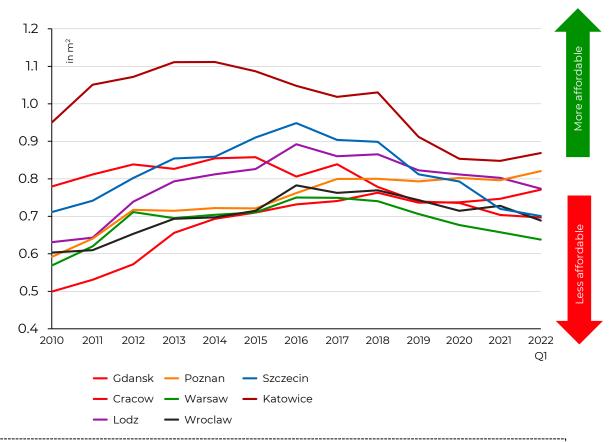
Source: Deloitte Property Index 2022

Residential market in Poland

Average house price per square meter – primary market by major Polish cities



Average house price per square meter vs. average monthly wages by major Polish cities

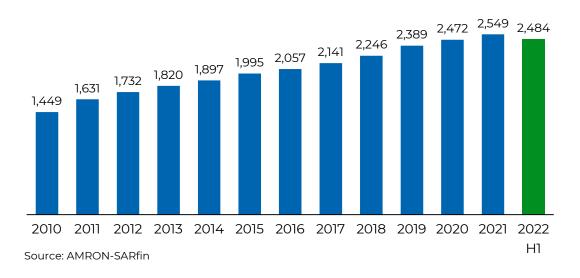


Average house prices have remained stable for many years. However, recent times have brought significant changes. Except individuals looking for a flat for themselves, the demand was driven by individual investors who, due to low interest rates and rising inflation, were looking for an alternative to bank deposits. The private rental sector has also gained in popularity and is now perceived by developers and investors as one of the most attractive and competitive.

On the other hand, Poland has been struggling with rapidly rising costs of energy, building materials and labor. All this influenced the average transaction price for the past year.

Residential market in Poland - slowdown

Volume of Mortgage loans by year (mn)

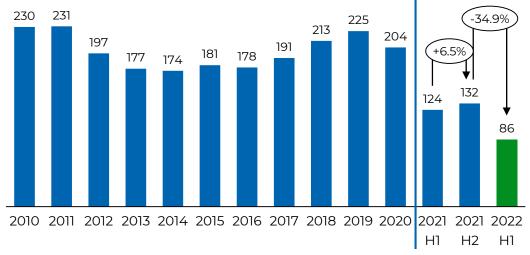


Dynamic supply increase mixed with low interest rates on mortgages increased the demand for loans granted for almost ten years.

Tighter monetary policy increases mortgage rates, which in turn reduces demand for real estate and slows growth in real estate prices.

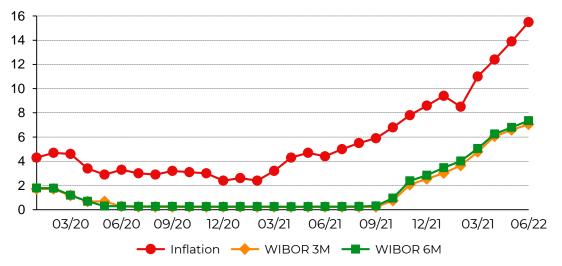
The slowdown in sales also depends on high inflation, rise in the prices of raw materials and construction materials and a slowdown in rental growth.

Volume of granted Mortgage loans by year

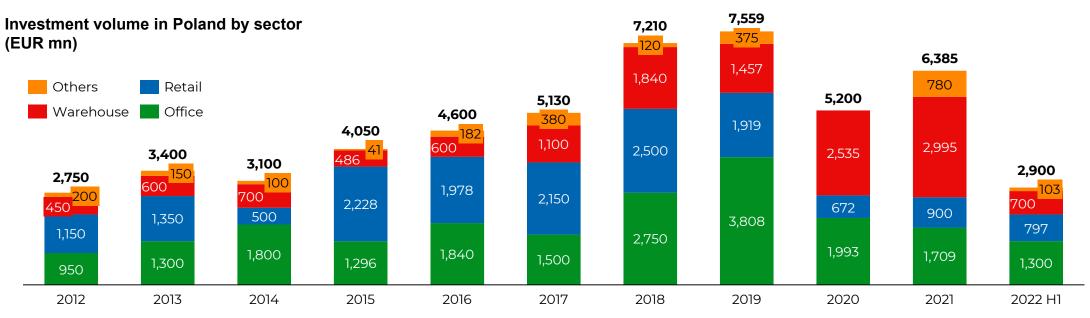


Inflation and Reference Rate by months

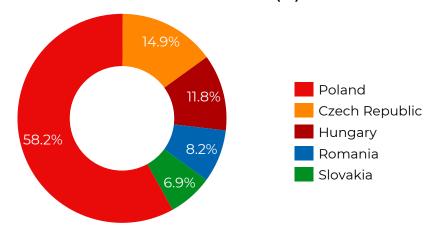
Source: AMRON-SARfin



Commercial Real Estate – investment volume



Poland - CEE leader in CRE investment volumes (%)

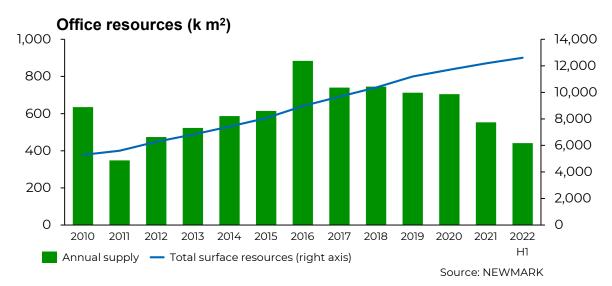


Poland - CEE leader in CRE investment (58%)

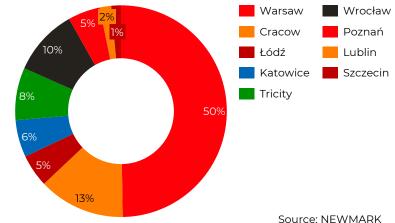
The volume of transactions concluded in the first half of 2022 on the commercial real property market in Poland amounted to approx. EUR 2.9 bn.

The share of the commercial real estate market in the first half of 2022 is approx. 45% for offices market, approx. 27% for market retail and approx. 24% for warehouse.

Commercial Real Estate - Offices

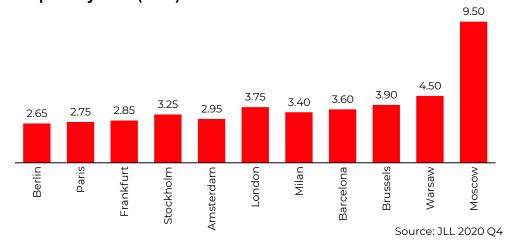




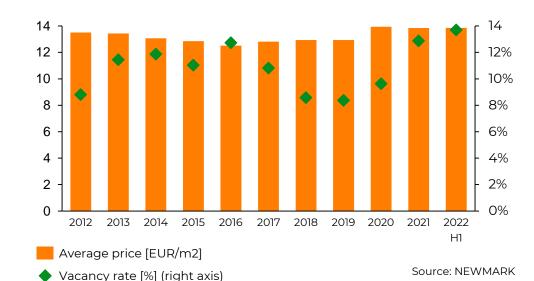


- In Poland prime yield is the highest in Europe (4.5%).
- In Poland, the average rate per m²/EUR of office space is constantly growing, despite the high supply, the vacancy rate is rising.

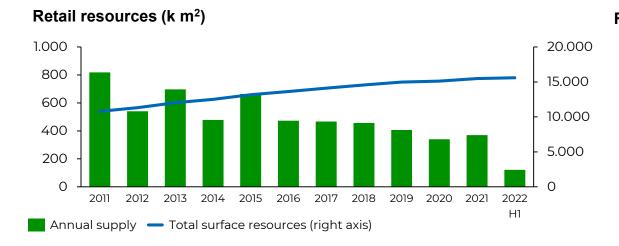
Office prime yields (in %)



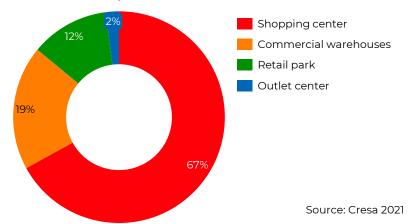
Average price (EUR/m²) and vacancy rate (%)



Commercial Real Estate - Retail



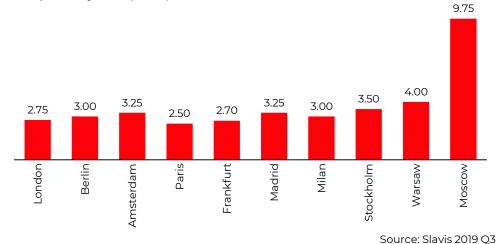
The structure of commercial space in Poland



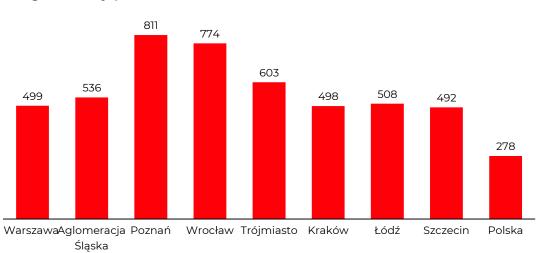
Source: JLL 2022 H1

- In Poland prime yield is the highest in Europe 4.00%
- We have stable and growing retail commercial market in Poland mostly are shopping 67%, Commercial warehouses is 19%. Retail park and outlet center are less popular 12%

Retail prime yield (in %)



Average density per 1,000 inhabitants

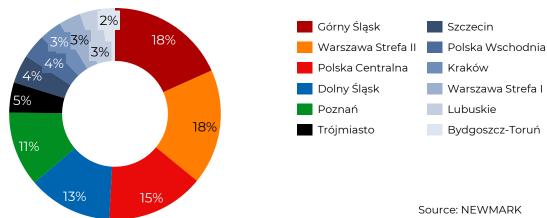


Source: PRCH

Commercial Real Estate – Warehouses

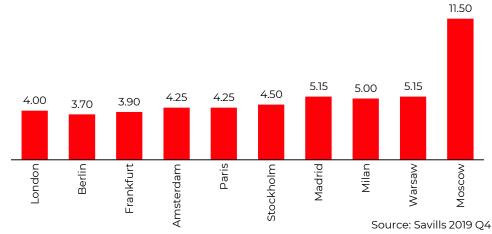
Werehouses resources (k m²) 4.000 3.000 2.000 1.000 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 — Total surface resources (right axis) Annual supply Source: NEWMARK



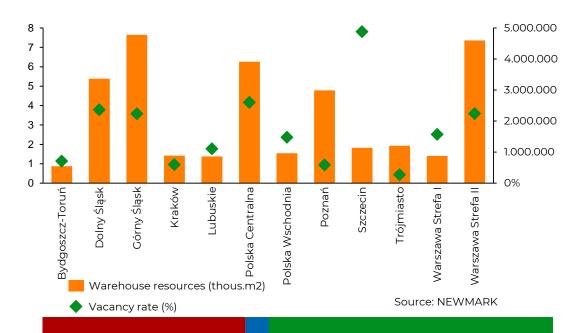


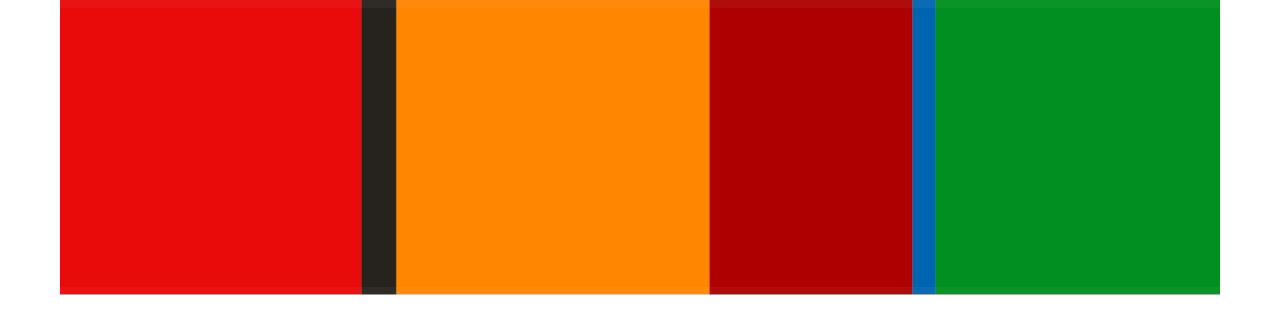
- In Poland prime yield is the highest in Europe (5.15%)
- Warehouse resources are constantly growing. Structure of warehouses by regions over 50% for Warsaw Around, Gorny Slask and Central Poland.
- · Vacancy ratio on low level differentiate by region.

Werehouses prime yield (in %)



Werehouses space resources and vacancy rate (%)





Legislation

- Positive changes in Polish Covered Bonds Law
- Legal consideration of mortgage loans

Positive changes in Polish Covered Bonds Law

Legal framework for Polish Covered Bonds

- The Act on Covered Bonds and Mortgage Banks (Ustawa o listach zastawnych i bankach hipotecznych) of August 29, 1997 as amended
- The Bankruptcy Law (Prawo upadłościowe) of February 28, 2003, Bankruptcy proceedings for mortgage banks, Article 442–450a, as amended

Mortgage bank

- Specialised bank (mortgage bank) with the supervision of Polish Financial Supervision Authority (KNF)
- Mortgage bank is a joint stock company with a legal personality (not a branch) with several licences e.a.: banking licence and a consent to start operating activity, both granted by the KNF
- A covered bond issuer may issue mortgage or public covered bond
- Specific license for each covered bond type is required before the issuer may start to issue covered bonds

Fundamental changes in 2016 revision of the Act on Covered Bonds and Mortgage Banks

in line with the best market practices and with recommendations of the European Central Bank (ECB) and credit rating agencies

Improvements:		Regulatory status -	Compliance w	vith:
✓ Increase of credibility and safety of covered bonds	soft bullet / pass-through - maturity of the covered bonds obligations extended automatically by 12 months and if asset coverage or liquidity test were negative - pass through - in case of mortgage bank's insolvency (details on the next slide)	*	Covered Bonds Programme	
			Domestic	International
		CRR art 129	√	√
	 mandatory liquidity reserve covering at least 6 months of interest due on the covered bonds outstanding minimum legal overcollateralization requirement (OC) – 10% 	UCITS 52 (4)	√	√
		BRRD	✓	√
		Credit quality step	2	2
✓ Extension of covered bond supply	 increase refinancing limit for mortgage covered bonds for residential mortgage loans to 80% from 60% 	LCR Delegated Act (HQLA)	*	✓
✓ Extension of demand for covered bonds	introduce investment limit for Pension Funds 5% of portfolio per issuer of covered bonds	ECB Repo	*	Expected category III
	 income from interest or discounts on the covered bonds earned by foreign investors is exempt from withholding tax (WHT) 	NBP Repo	√	×
		CBPP/LTRO	*	×

Positive changes in Polish Covered Bonds Law

The Act does not significantly change the model of operation of mortgage banks in Poland. It focuses mainly only on the issues of the necessary implementation of the provisions of the CB Directive.

In line with the demands of the mortgage bank environment, the statutory overcollateralisation level was reduced from 110% to 105% and the portfolio limit for credit exposures with LtV exceeding 60% was eliminated.

Fundamental changes in 2022 revision of the Act on Covered Bonds and Mortgage Banks

implements the provisions of EU Directives on the issue of covered bonds and covered bond public supervision. Act entered into force on 8 July 2022

Improvements:

obligation to submit annual activity reports by the trustee to the Polish Financial Supervision Authority		
• obligation to submit annual reports by the mortgage bank to the Polish Financial Supervision Authority		
 introducing regulations concerning the imposition of administrative penalties by the Polish Financial Supervision Authority on issuers and persons acting on their behalf 		
defines the core characteristics required for a covered bond programme		
 defines statutory requirements for quarterly disclosures on the issuer's website 		
• introduction of the protected labels "European Covered Bond" and "European Covered Bond (Premium)"		
maximum cumulative net liquidity outflows over 180 days		
formalisation of potential bond maturity extension clauses		
• minimum legal overcollateralization requirement (OC) – 5%		
defines standards for the registration of derivatives in the Cover Pool Register		

Covered Bonds repayment in case of issuer bankruptcy

Legal basis

The Bankruptcy Law of February 28, 2003, Bankruptcy proceedings for mortgage banks, Article 442–450a, as amended

The Act on Covered Bonds and Mortgage Banks of August 29, 1997 as amended

Terms and conditions of each series of mortgage covered bond

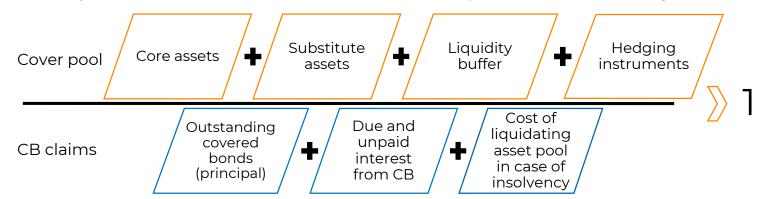
Coverage and liquidity tests performs initially 3 months after insolvency and subsequently every 3 months - liquidity test and 6 months - coverage test Coverage test* Coverage test Coverage test passed passed or failed Liquidity test Liquidity test* failed passed Maturity of outstanding covered bonds Covered bonds repaid according Extended to longest dated cover asset maturity plus 3Y, distinct rules to terms and conditions of the for pro-rata repayment before extended maturity date (fixed to covered bonds, with 12 M floating) maturity extension 2/3 majority covered bondholders may adopt a resolution to 2/3 majority covered · disapply maturity extension or bondholders may adopt a • sell cover assets to another bank or non-bank resolution to sell the separate bankruptcy asset pool to another bank Soft bullet Pass through

*details on the next slides

Obligatory cover pool tests

Coverage Test

Verifies at the day of test whether the value of the assets in the cover pool allows for outstanding covered bonds claims.

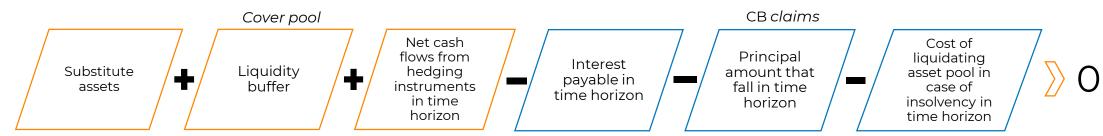


Test calculated also under stressed conditions:

 +/- 20% FX rate or highest year change in previous 12 M
 Tests performed min. once a 6M

Liquidity Test

Verifies at the day of test whether the value of the assets in the cover pool allows for outstanding covered bonds claims even in extended maturity in case of issuer insolvency. Separately for 6M and 12M horizon



Additionally for 12 M horizon:

- ➡ Interest under receivables in the cover pool for the next 12 months
- Obligations towards holders (principal + interest) that became due but were not paid before the date of hypothetical insolvency

Test calculated also under stressed conditions:

- +/- 20% FX rate or highest year change in previous 12 M
- +/- 400bps shift of interest rate curves

Tests performed min. once a 3 M

Polish Covered Bonds Law vs German Pfandbrief Law

Requirements	Poland Hipoteczne Listy Zastawne	Germany Hypothekenpfandbriefe	
Special Covered Bonds Law	YES	YES	
Special bank principle	YES	NO	
Mortgage Valuation concept	Mortgage lending value	Mortgage lending value	
Loan to Value (LtV) cap	100%	NO	
Mortgage value refinancing limit (consider as OC)	Residential: 80% Commercial: 60%	60% of mortgage lending value	
Geographical scope for mortgage assets	PL	EEA, CH, US, CA, JP, AU, NZ, SG	
Repayment structure	Soft-bullet and CPT	Hard Bullet	
Legal framework for bankruptcy	Specific legal framework superseding the general insolvency law	Specific legal framework superseding the general insolvency law	
Bankruptcy remoteness	Preferential claim by law Specific cover pool administration	Preferential claim by law Specific cover pool administration	
Recourse upon cover pool default	Yes, pari passu with unsecured creditors	Yes, pari passu with unsecured creditors	
Minimum Mandatory Overcollateralization	5%	2%	
CRR, UCITS compliant	YES	YES	

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