



Bank Hipoteczny

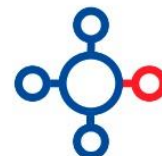
PKO Bank Hipoteczny Issuer of Mortgage Covered Bonds in PKO BP Group

PKO Bank Hipoteczny
May, 2023

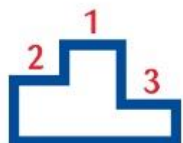
Key investment highlights of PKO Bank Hipoteczny



The biggest mortgage Bank in Poland with residential mortgages loan portfolio in cover pool of PLN 18.2 bn (as at 28.02.2023)



Effective business model synergies with its parent company PKO BP – leader of Polish banking sector



The biggest issuer of covered bonds in Poland with PLN 10.2 bn of outstanding which is 53.7% of market share (as at 28.02.2023)



First issuer of EUR denominated benchmark green covered bonds out of Poland and Central & Eastern Europe



Covered Bond rating Aa1 the highest achievable by Polish debt securities



Green covered bonds in line with ICMA and certified by Climate Bonds Initiative



Strongly committed to ESG with eligible portfolio of green assets

1. Overview of the Polish economy
2. Polish banking sector
3. Polish property market and residential mortgage lending
4. PKO Bank Hipoteczny – covered bonds issuer
5. Green Covered Bonds as an important addendum to the funding mix
6. PKO BP Group overview
7. Appendices



Overview of the Polish economy

Poland – economic growth frontrunner in the EU

Macroeconomic forecasts

		2020	2021	2022	2023 forecast
GDP	% y/y	-2.0	6.9	5.1	0.1
Consumption	% y/y	-3.6	6.2	3.3	-2.3
Investments	% y/y	-2.3	1.2	5.0	2.5
Fiscal balance*	% GDP	-6.9	-1.8	-3.7	-5.4
CPI Inflation	%	3.4	5.1	14.4	12.6
LFS unempl. rate	%	3.2	3.4	2.9	3.3
NBP reference rate	% eop	0.10	1.75	6.75	6.50
EUR/PLN	PLN eop	4.61	4.60	4.69	4.59

Source: Statistics Poland, Ministry of Finance, National Bank of Poland, PKO Bank Polski forecasts

* Forecast for 2022



Population: 37.7 m (5th largest in the EU) covering area of 312 696 km²



GDP** in 2021: EUR 574.4 bn



GDP per capita*** in 2021: USD 38.0 thous (in PPP)

Source: Statistics Poland, **Eurostat; ***IMF

Poland's credit ratings

A2 outlook
stable

A- outlook
stable

A-
outlook
stable

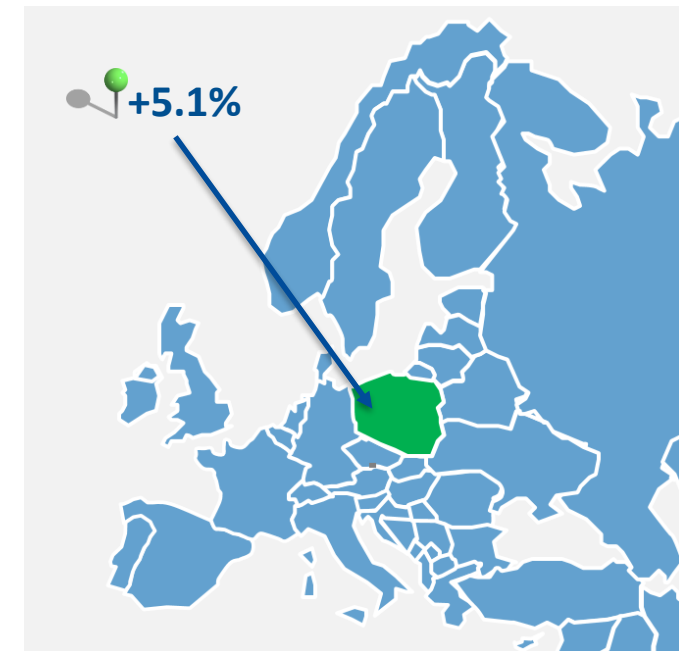
MOODY'S

Fitch
Ratings

STANDARD
& POOR'S

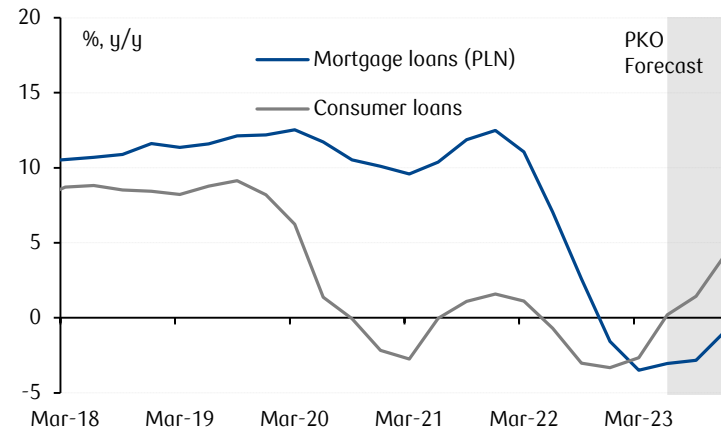
Source: Moody's, Fitch, S&P

GDP growth in 2022

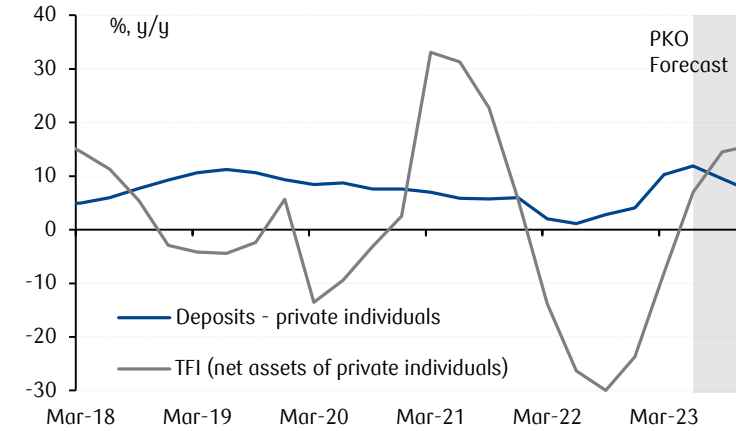


Development of loan and deposit market (FX adjusted)

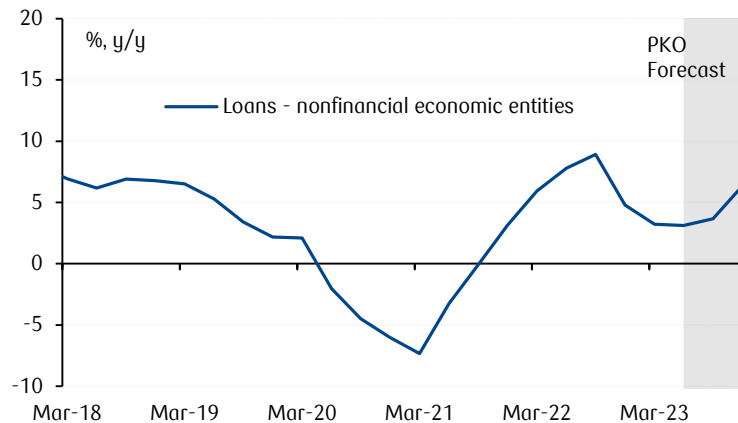
Mortgage and consumer loans



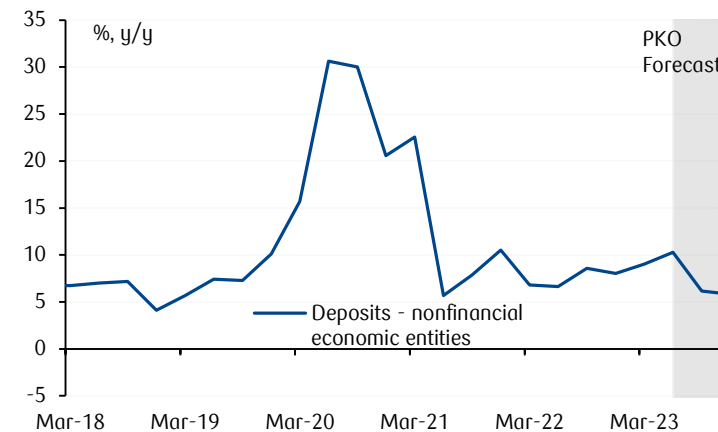
Households deposits and net assets (TFI)



Loans to non-financial economic entities

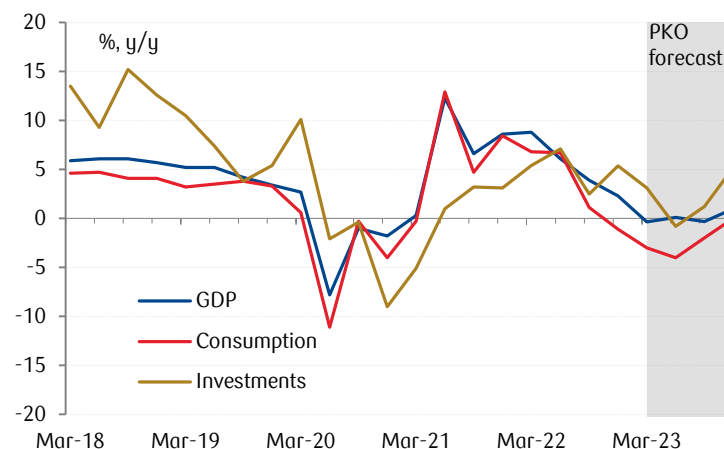


Deposits of non-financial economic entities



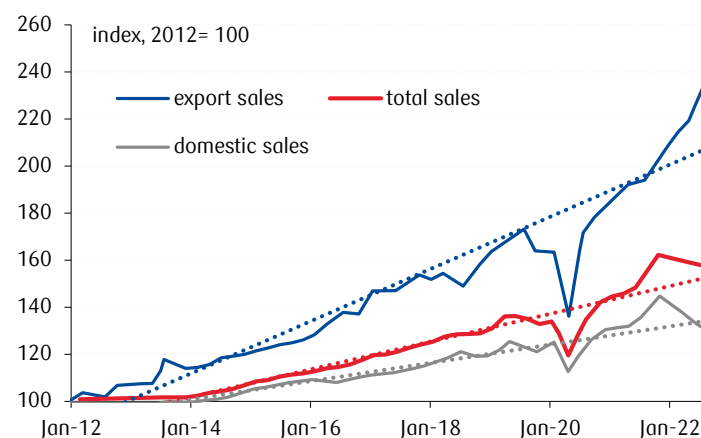
Weaker consumption, resilient exports and investment

GDP and its main components



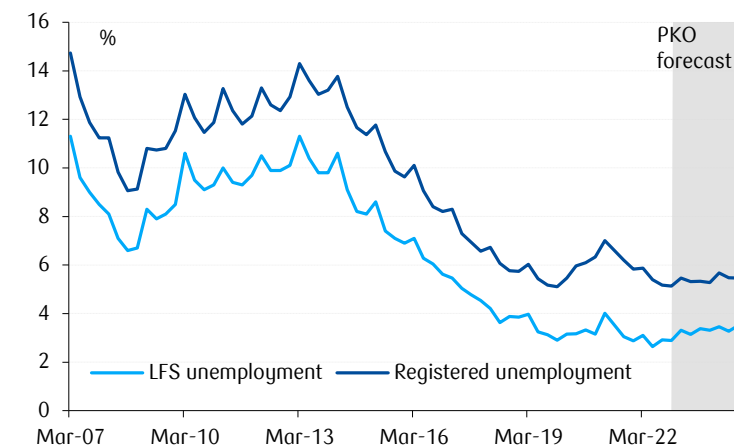
Source: Statistics Poland, PKO Bank Polski

Real revenues* in the enterprise sector



Source: NBP, PKO Bank Polski *deflated with PPI

Unemployment rate in Poland

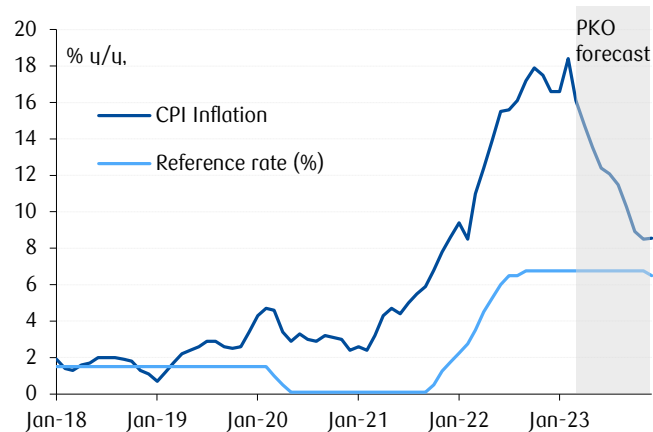


Source: Statistics Poland, PKO Bank Polski

- Monthly indicators for January-March imply that the annual GDP growth rate in 1q23 was negative. The main drag on the economic growth is a weakening in consumer demand. We expect that in 2-3q23 the Polish economy will be on the verge of stagnation while a recovery will start in 4q23, along with a decline in inflation improving the real incomes and consumption.
- Export activity is stronger than expected - recently export revenues have been growing stronger than domestic sales. Investments, supported by outlays related to energy transformation are also more resilient than expected.
- Labour market remains tight, the unemployment rate is close to the historical low. The labour market reacts to the economic downturn with a decrease in the number of vacancies and a smaller scale of new hires, while employment reduction is small. Lower labour turnover will likely constrain wage growth.

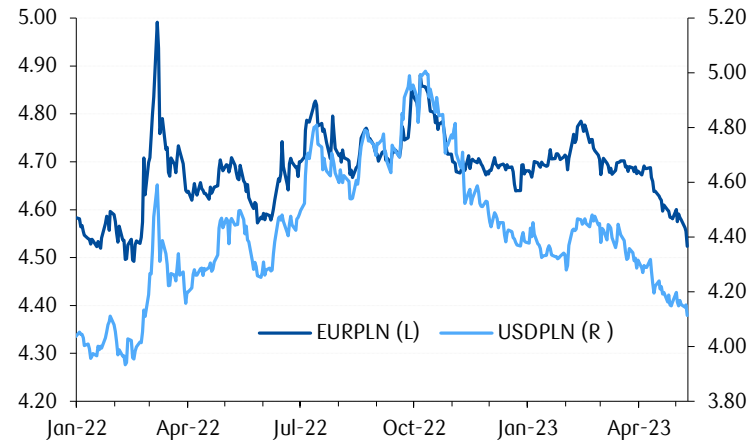
A timid start for disinflation, stable NBP interest rates

CPI and NBP reference rate



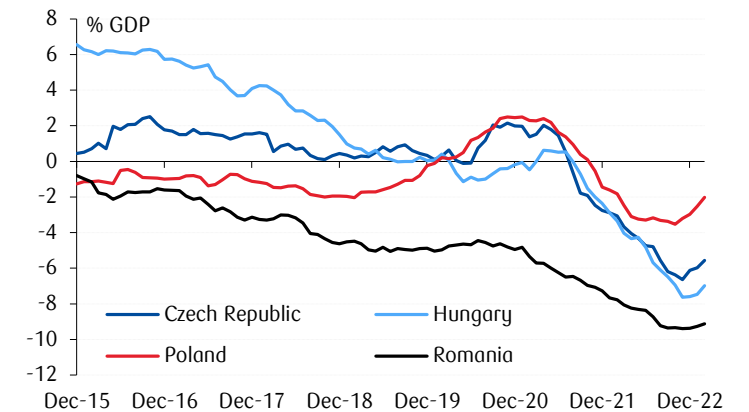
Source: GUS, PKO Bank Polski

PLN exchange rate



Source: Refinitiv, PKO Bank Polski

Current account balance



Source: Macrobond, PKO Bank Polski.

- Inflation entered a downward path. Trends in commodity and energy markets as well as lagged effects of interest rate hikes imply that inflation will continue to fall and should reach a single-digit level at the end of 2023. The MPC maintains the 'wait-and-see' approach and officially has not ended the hike cycle yet. However, according to comments of some MPC members, there might be a room for rate cuts in the near future.
- Public finances bear the costs of fighting energy crisis and higher defense spending. The fiscal deficit (taking into account all extra-budgetary funds) in 2022 amounted to 3.7% of GDP. It will increase in 2023 amid delayed negative effects of inflation (indexation) and a slowdown of nominal GDP growth (weaker tax base growth).
- Poland's external position is improving in a spectacular way, thanks to the reversal of the negative terms-of-trade shock as well as the resilience of exports to the global slowdown. The rapid reduction of the current account deficit is supportive for the PLN appreciation. The Polish banking sector has been immune to the turmoil in the financial sector in the US and Europe, and in particular has not experienced any negative changes in the area of deposits.

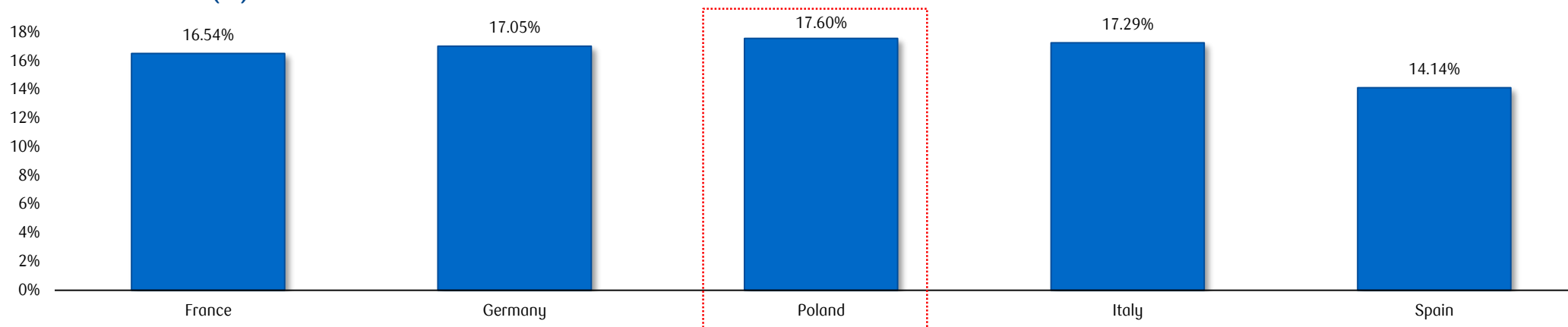


Bank Hipoteczny

Polish banking sector

Polish banking sector

Tier 1 as of 31.12.2022 (%)



Source: ECB, KNF



KPIs of the Polish banking sector as of 31.12.2022

KPIs	Banking sector
TCR	18.21%*
ROE	7.0%
ROA	0.47%
C/I	53.48%
Total NPL ratio	4.8%
NPLs in % of mortgage loans	1.9%

Source: KNF, BFG

*As of 30.09.2022

Key market parameters

	31.12.2019	31.12.2020	31.12.2021	30.12.2022	31.03.2022
 WIBOR 3M	1.72%	0.21%	2.54%	7.02%	6.89%
 EUR/PLN	4.26	4.61	4.60	4.69	4.68

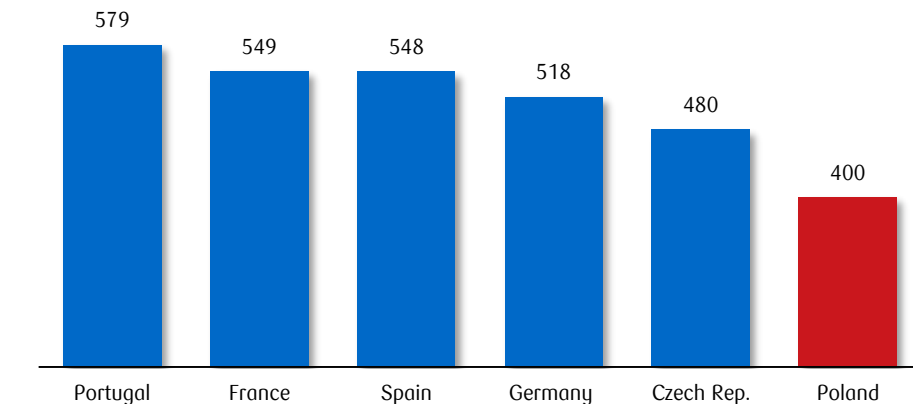
Source: GPW Benchmark, NBP



Polish property market and residential mortgage lending

Polish residential market - considerable development potential

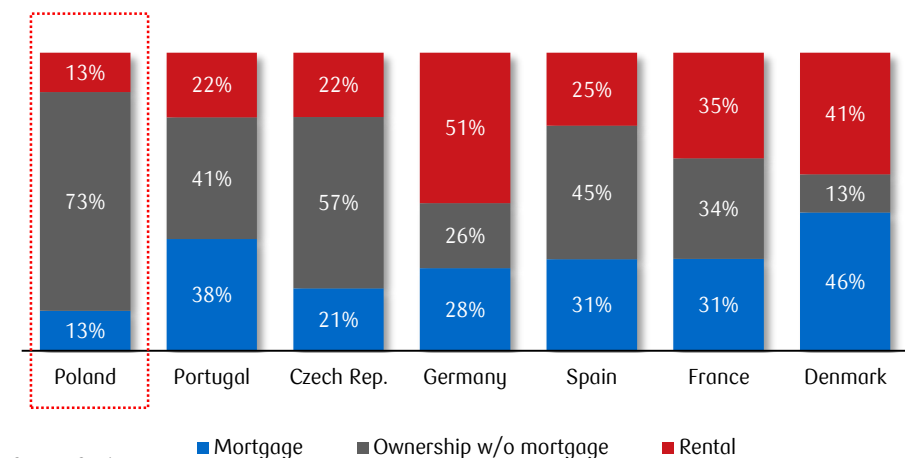
Dwellings per 1,000 inhabitants in selected EU countries for 2021



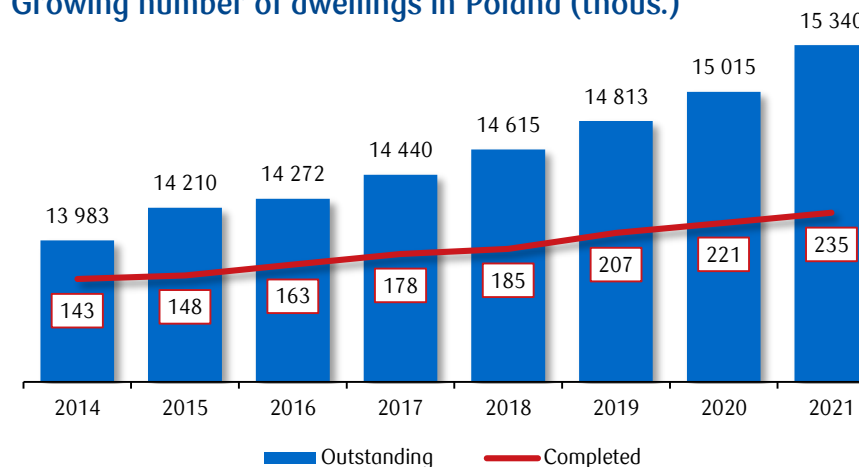
Source: Deloitte Property Index report published in August 2022

- Relatively low number of dwellings per thousand inhabitants in comparison to other EU countries.
- Constantly growing number of completed and outstanding dwellings. In 2022 the number of dwellings completed was 2% higher than in 2021, but the number of construction projects started decreased by 28% y/y.
- Polish ownership rates are among the highest in the EU and relatively low in terms of rental dwellings.
- The housing shortage in Poland is estimated at about 1 million apartments.
- The number of dwellings in Poland has been growing on average by about 210 000 p.a. over the last five years.

Dwelling ownership status for 2021 (%)

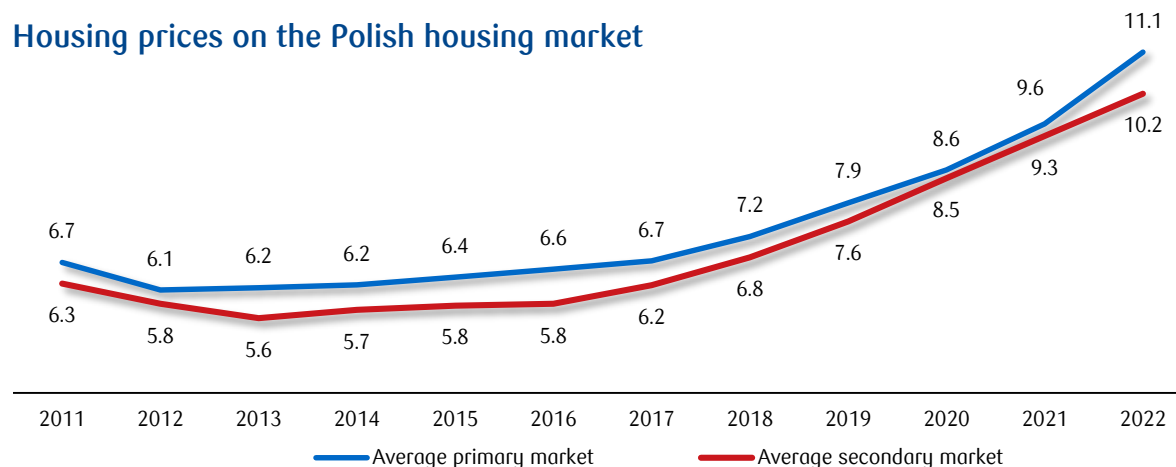


Growing number of dwellings in Poland (thous.)



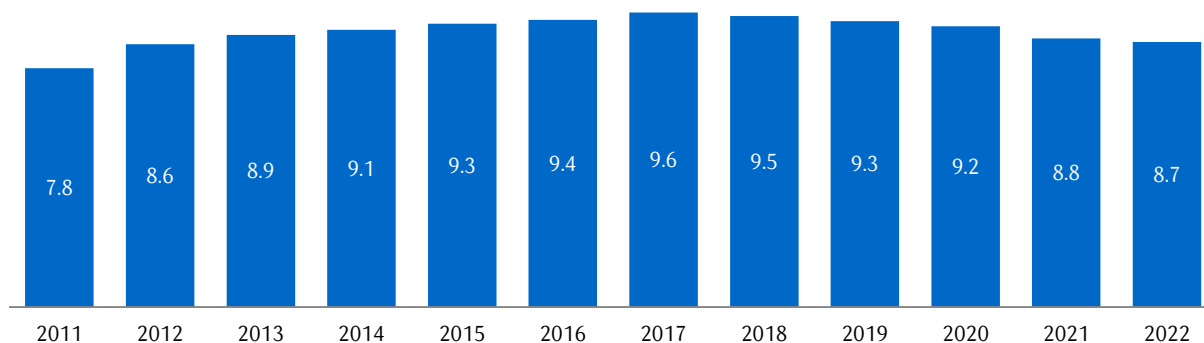
Rising housing prices on the Polish housing market persist

Housing prices on the Polish housing market



Source: PKO BH calculation based on NBP and Statistics Poland (GUS) data

Affordability on primary market (transaction prices (PLN ths/sqm) vs average annual salary)



Source: PKO BH calculation based on NBP and Statistics Poland (GUS) data

Primary market

- Average house prices on secondary and primary markets have increased by about 40% on average since 2011.
- Average price growth between 2017 and 2022 was ca. 10% p.a.
- Affordability has been slightly decreasing during last 4 years due to significant increase of house prices (a bit higher than average increase of salary).
- Houses purchasing power is currently at the same level as 10 years ago.

Secondary market

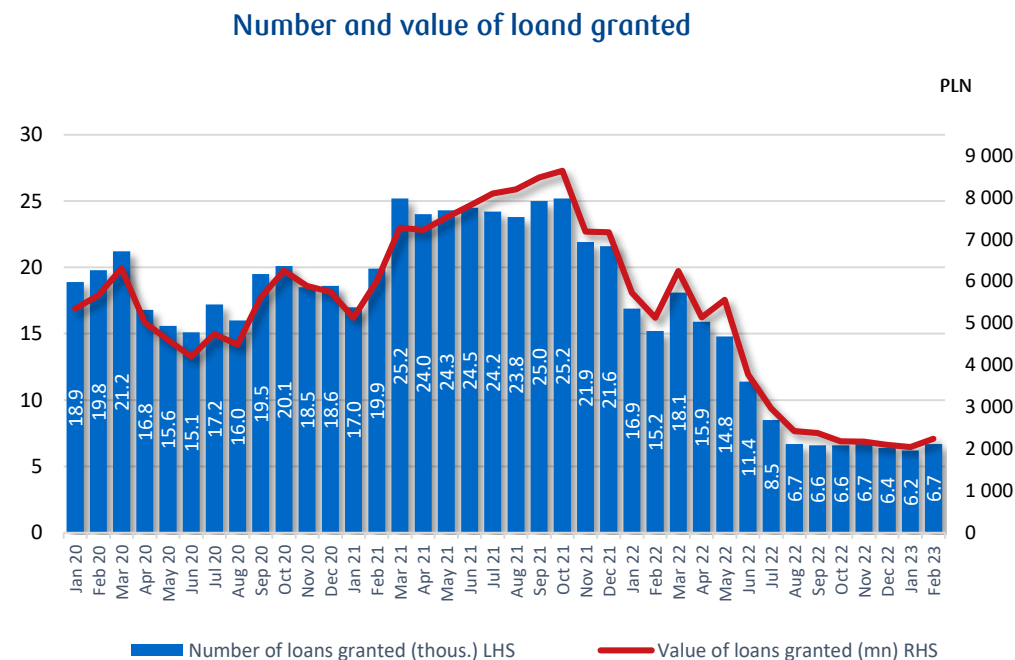
- Average house prices on secondary market are 5-8% lower compared to the primary market.
- Average price growth between 2017 and 2022 was ca. 11% p.a.

Real estate prices

- Despite the slowdown on real estate market in 2022 (mainly due to an increase in interest rates) the dynamics of the growth in residential properties prices did not decrease.
- We estimate that in 2023, the price growth will drop to max 5%.

Current situation

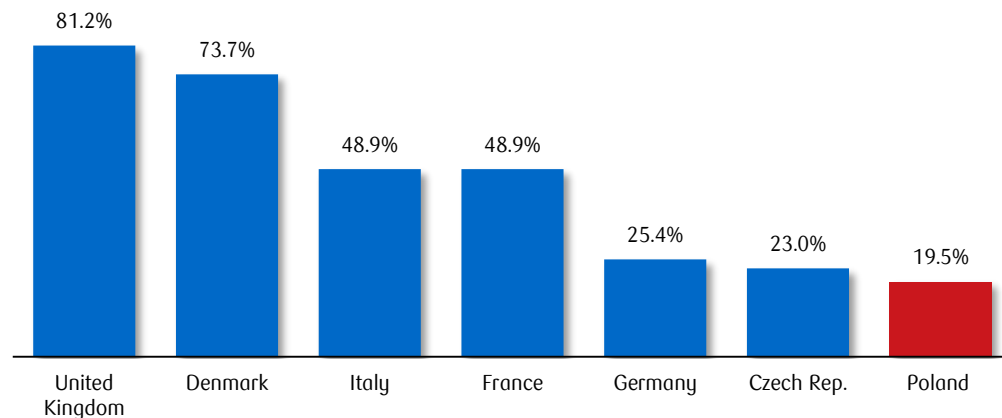
- The increase of interest rates and changes in the rules in calculating creditworthiness recommended to banks by the Polish Financial Supervision Authority (KNF) resulted in a decrease in creditworthiness by more than a half in April 2022, compared to average of 2021.
- In the second half of 2022, the decreased demand for dwellings was accompanied by a lower supply of new flats, what restored a relative supply-demand balance on the housing market.
- Number of loans granted in 2022 dropped from 276.5 thou. in 2021 to 133.8 thou. in 2022, which means a decrease from PLN 88.7 to 45.8 bn in terms of loans' value. The significant reduction of the demand for flats was compensated to a small extent by investment purchases.
- In August 2022, the decline in monthly sales of mortgage loans stopped. Sales stabilized at a relatively low level (ca. 6.5 thou. loans and over 2 bn PLN).
- Sales on the primary and secondary markets, after reaching a minimum in Q3 2022, began to grow gradually in the following two quarters (Q4 2022 and Q3 2023). In the next quarters of 2023, we expect the upward trend to continue, the dynamics of which will depend on the pace of inflation decline and the prospects for a decrease in interest rates.



Source: PKO BH calculated on BIK data

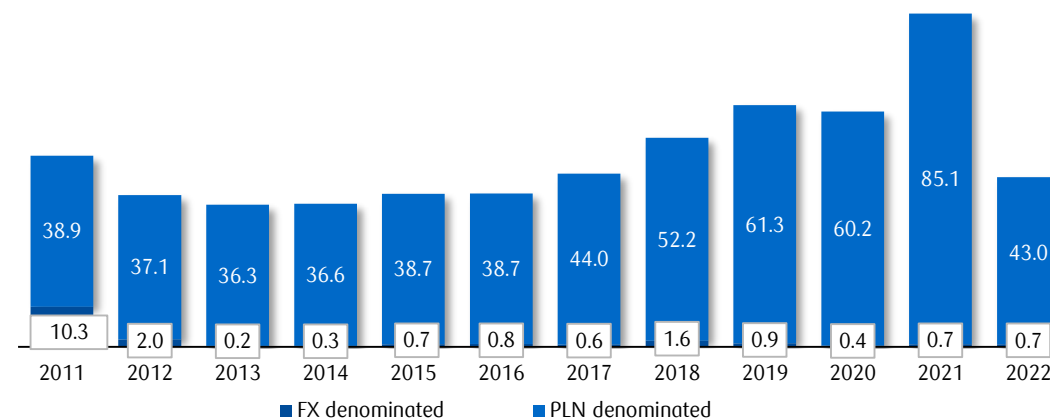
Situation on the domestic mortgage market

Ratio of total outstanding residential mortgage loans to GDP ratio for 2021 (%)



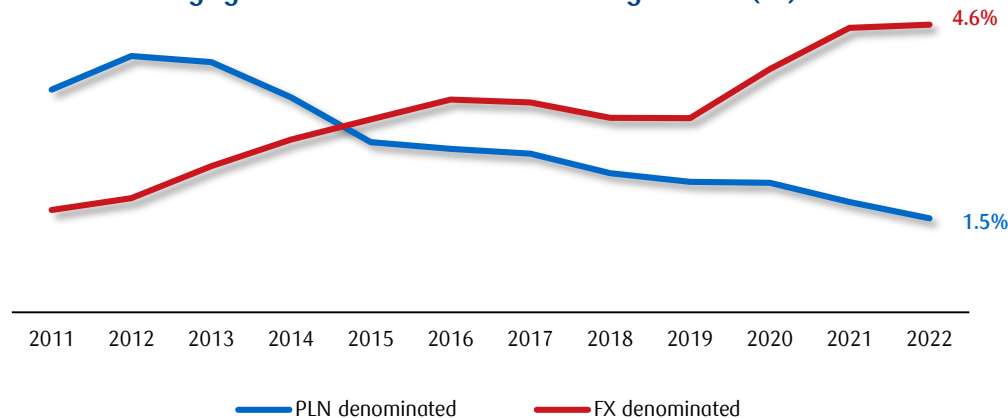
Source: EMF Quarterly review Q4 2021, <https://www.statista.com/>

Value of newly signed residential mortgage loans in Poland (PLN bn)



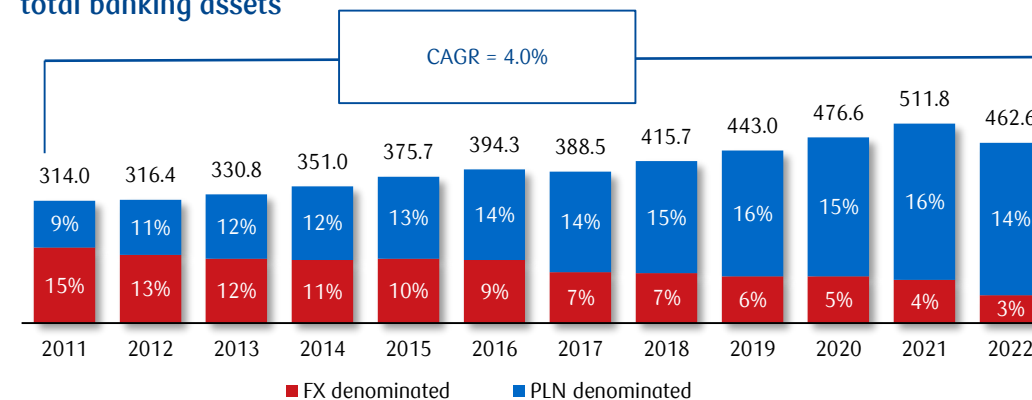
Source: Polish Banking Association

NPLs of mortgage loans in the Polish banking sector (%)



Source: NBP, Polish Financial Supervision Authority

Outstanding value of residential mortgage loans in Poland (PLN bn) as % of total banking assets



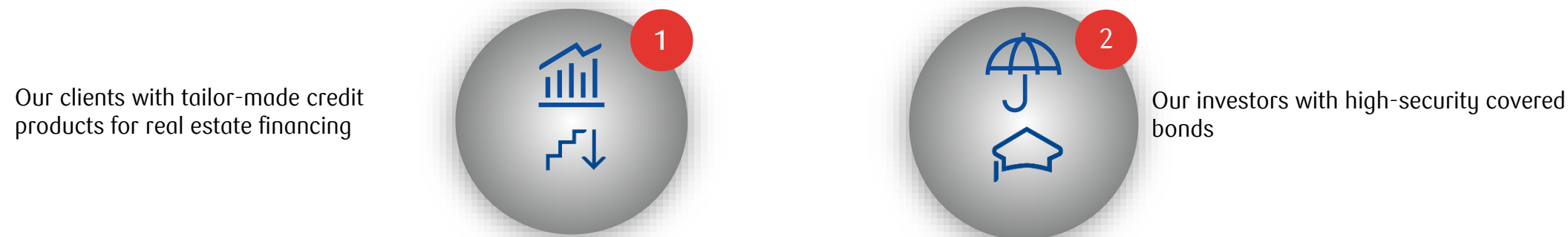
Source: PKO BH calculation based on NBP and KNF data



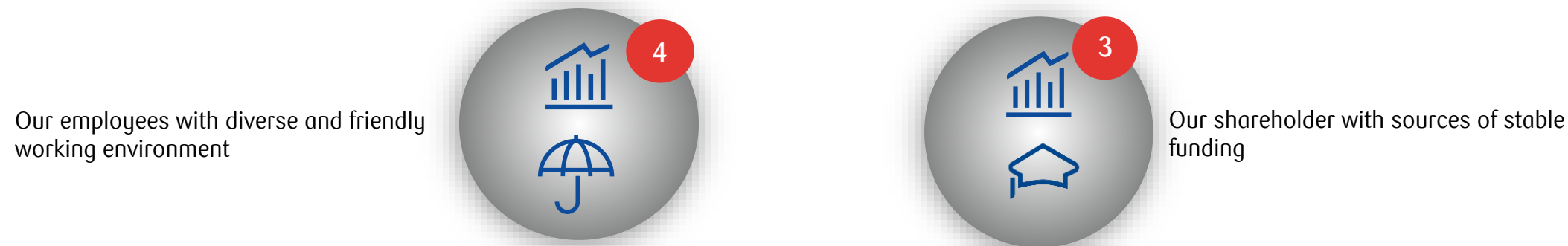
PKO Bank Hipoteczny – covered bonds issuer

Strategy for 2023-2025 „Efficient in action, committed to development”

Our advantages enable us to pursue an ambitious strategic mission caring for sustainable development. We provide:



Our strategic mission



Our advantages:



Scale of business



Security



High quality of loan portfolio



Cost effectiveness

Strategic goals 2023-2025

We want to achieve ambitious strategic goals having in mind not only current profitability, but also investing in development that goes beyond the horizon of the strategy. Strategic goals of PKO Bank Hipoteczny:



Key Achievements 2022 – financial highlights

Net profit
PLN (405.8) mn



Total assets
PLN 20.7 bn



Total equity PLN 1.4 bn
TCR 18.9% CET1 18.9%



Covered bonds volume
PLN 12.1 bn



No. of loans (28.02.2023)
105 560



Residential mortgages
portfolio PLN 19.0 bn



Low cost of risk 0.03%

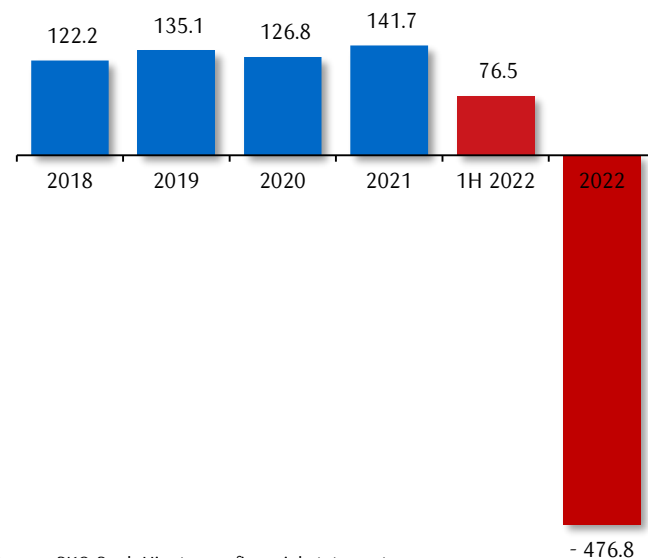


No. of employees
57

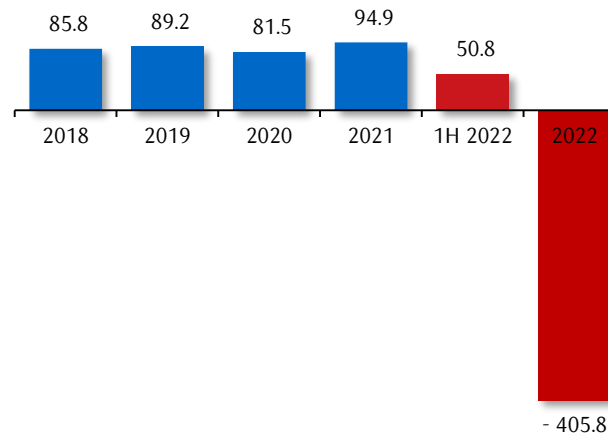


Results in 2022 affected by mortgage moratoria

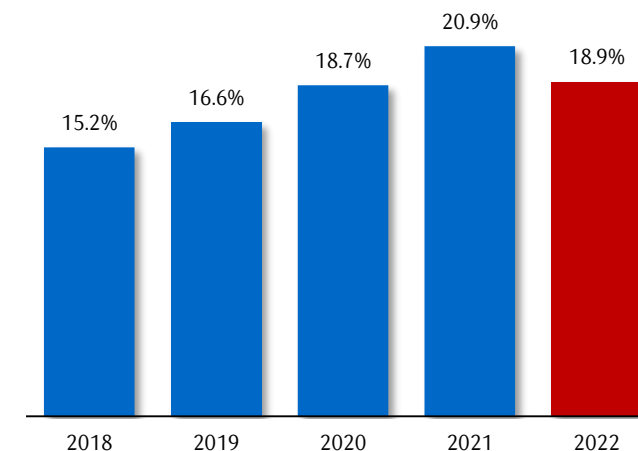
Operating profit (in PLN mn)



Net profit (in PLN mn)



Total capital ratio (in %)

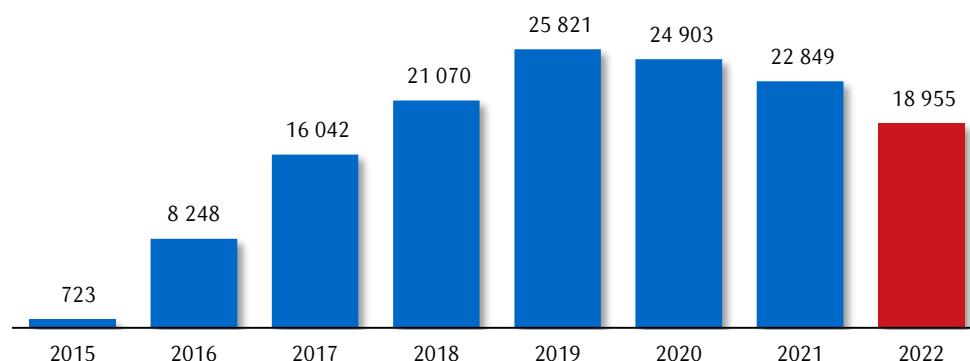


Source: PKO Bank Hipoteczny financial statements

- Mortgage moratoria („credit holidays”) were implemented in 2022 to all borrowers who finance their own housing needs. Four installments in 2H2022 were subject to moratoria and one loan installment per quarter in 2023. Moratoria are voluntary for the borrowers. This affected profitability of the Bank in 2022 as well as its capital ratios.
- Suspensions of repayment of principal and interest installments required the recalculation of future flows. A behavioral model was developed, based on which it was estimated in July 2022, that 63% of the Bank’s customers would take advantage of the repayment suspension.
- Bank adjusted the gross amount of mortgage loans by the amount of 667.8 PLN by reducing interest income, which meant that it closed the year with a loss. This amount covered the result of the credit holidays used in 2022 and 2023, but may change if more customers decide to benefit from mortgage moratoria by the end of 2023.
- Results were also impacted by regulatory costs of PLN 37.3 mn and banking tax of PLN 69.6 mn.
- Solid capital position attest to the safety and stability of the Bank’s operations.

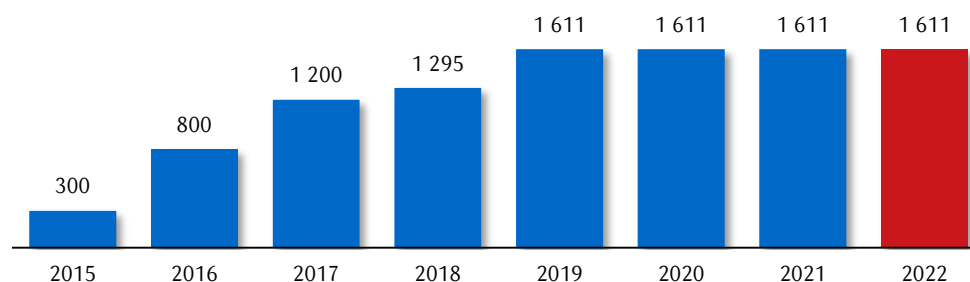
Volumes of covered bonds and PLN-denominated residential mortgage loan portfolio

Residential mortgage loan portfolio – outstanding (PLN mn)



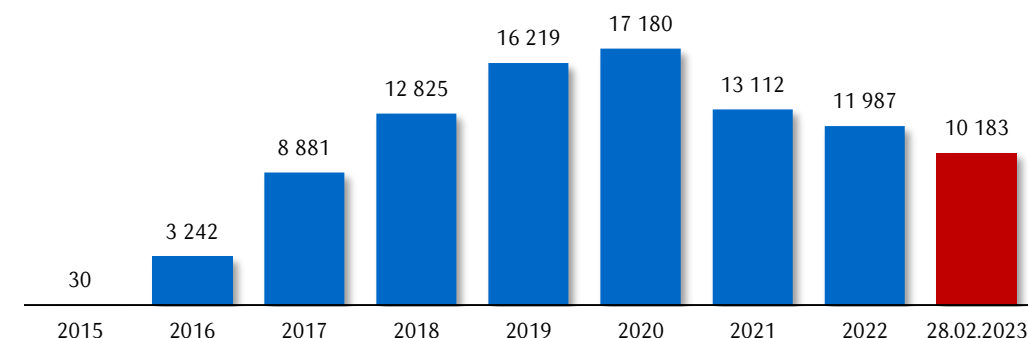
Source: PKO Bank Hipoteczny financial statements

Share capital (PLN mn)



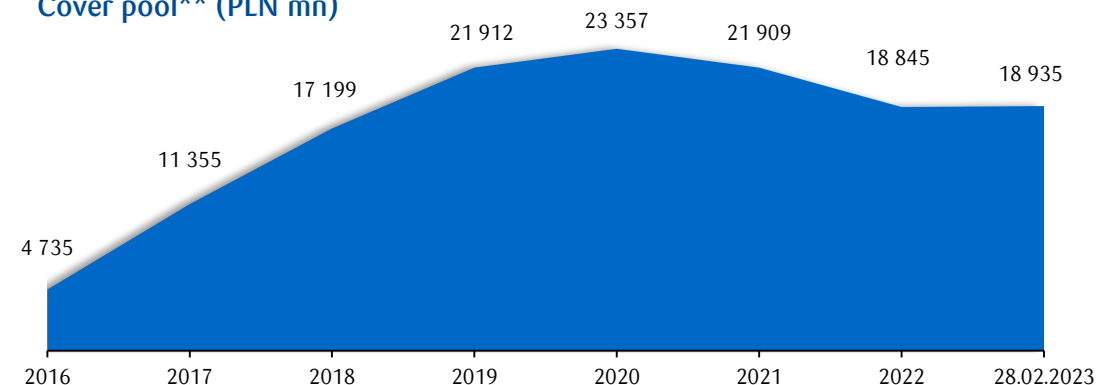
Source: PKO Bank Hipoteczny financial statements

Covered bonds outstanding* (PLN mn)



Source: PKO Bank Hipoteczny cover pool reports

Cover pool** (PLN mn)



Source: PKO Bank Hipoteczny cover pool reports

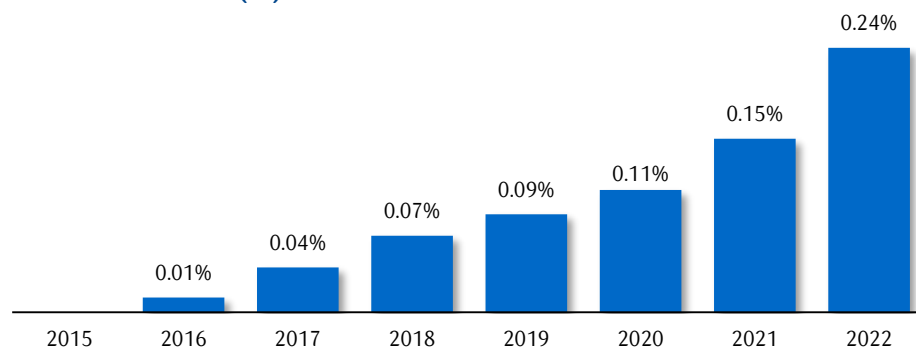
*EUR denominated issues converted by EUR/PLN NBP fixing rate as of the end of particular periods

**Without hedging instruments included into the cover pool; liquidity buffer included but not counting towards coverage and OC

Excellent quality of the housing loan portfolio at PKO BH

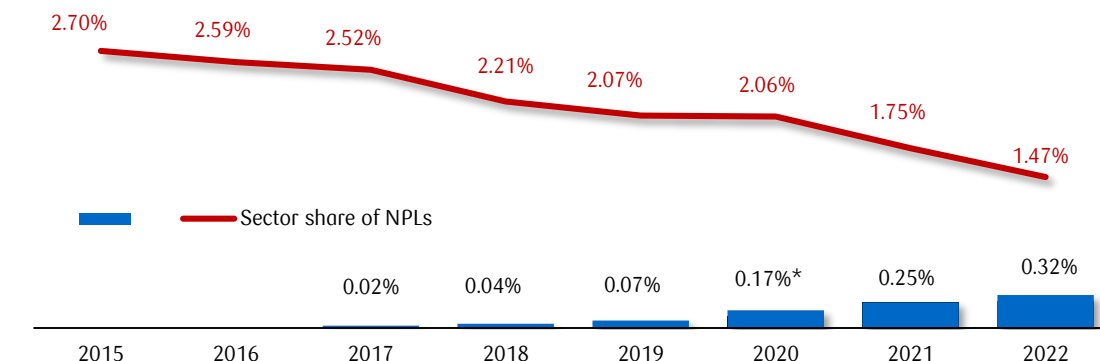
- Careful selection of the loans purchased in the pooling model
- Reminder actions taken by the Bank at an early stage of the arrears of the loans
- Active management of the impaired loan portfolio (NPL) aimed at returning to timely service
- NPL ratio is significantly below the sector level

Share of DPD30 (%)



Source: PKO Bank Hipoteczny data

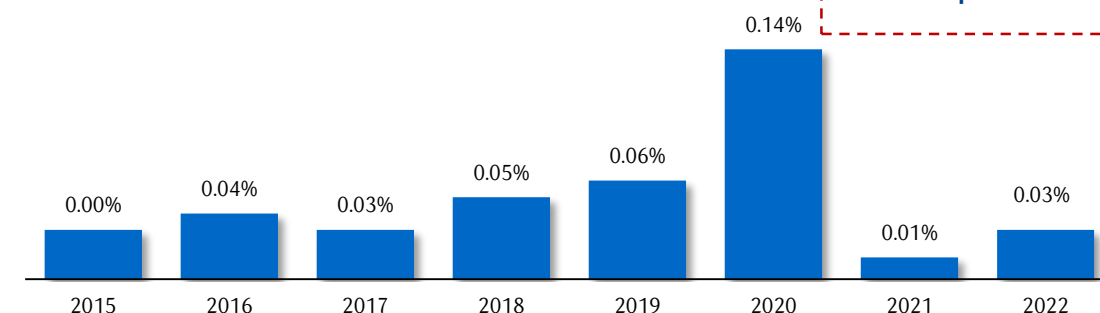
Share of NPLs (%) vs. sector



Source: PKO Bank Hipoteczny data / NBP Banking sector financial data

*Increase of NPLs due to implementation of EBA Guidelines on the application of the definition of default under Article 178 of Regulation (EU) No 575/2013. This is a change in the definition, which does not affect the quality of the portfolio and the cost of risk.

Credit risk costs



Source: PKO Bank Hipoteczny data

Higher cost of risk in 2020 due to the COVID-19 pandemic.

Safe lending criteria

Polish banking regulations

- LTV (market value) $\leq 80\%^*$

Polish regulations on mortgage banks

- LTMV (mortgage lending value) $\leq 100\%$
- First-ranking lien in mortgage register
- Legal title: ownership or perpetuity

PKO BH criteria (current offer)

- PLN loans only
- Residential mortgages (principal dwelling only)
- Contractual maturity: up to 35 years
- Interest rate: floating and fixed for 5 years (10.3% of the credit portfolio as of 31 Dec 2022)

PKO BH criteria

- New construction (selectively) and secondary market
- Collateral: flats or houses
- Not in arrears (in case of pooling)

Subject to approval by the Cover Pool Monitor, the receivables are registered in the cover pool

* In the case of using credit insurance of the required financial contribution and in a situation where the loan is secured by a mortgage established on a dwelling, LTV $\leq 90\%$ is allowed.

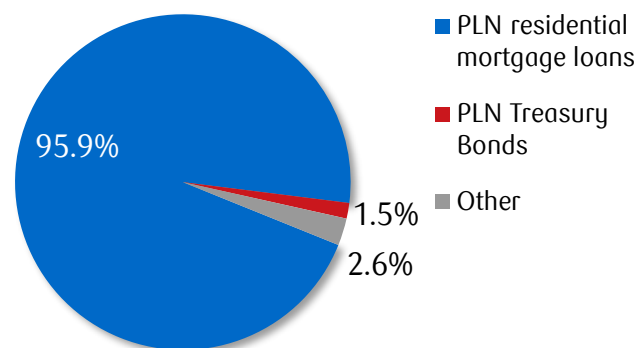
High-quality cover pool of purely residential mortgages in PLN



Cover pool value as at 28.02.2023



Cover pool structure (%) as at 28.02.2023



Mortgage characteristics (as at 28.02.2023):

- **Mortgages: PLN and residential only**
- **Overcollateralisation above regulatory limits: 79%** (vs. 5% required)
- Number of loans: 105 560
- Average loan value PLN 172.0k / EUR 36.5k
- Average indexed LtV 36.8%
- 10 Largest Exposures: 0.1% of total exposures

Features of standard residential mortgage loans in the Cover Pool:

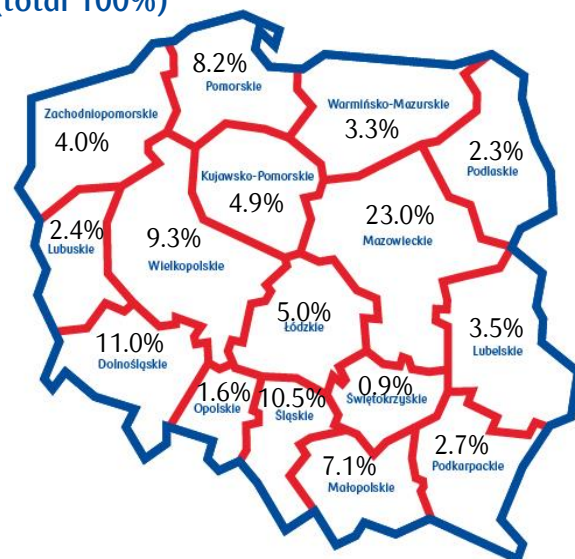
- **Variable** interest rate based on WIBOR rate or **fixed** interest rate for 5 years
- Amortizing **monthly (no interest-only)**
- For **own housing** purposes (no buy-to-let)

Source: PKO Bank Hipoteczny data including: <https://www.pkobh.pl/en/reports/cover-pool-reports/>

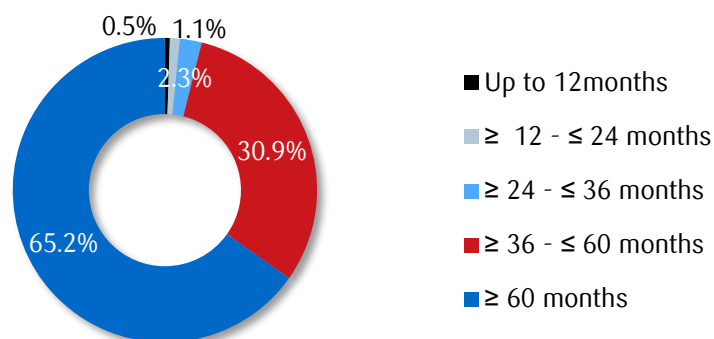
EUR/PLN NBP fixing exchange rate as at 28.02.2023, 1 EUR= 4.7170

...with good diversification and low LTV ratio as at 28.02.2023

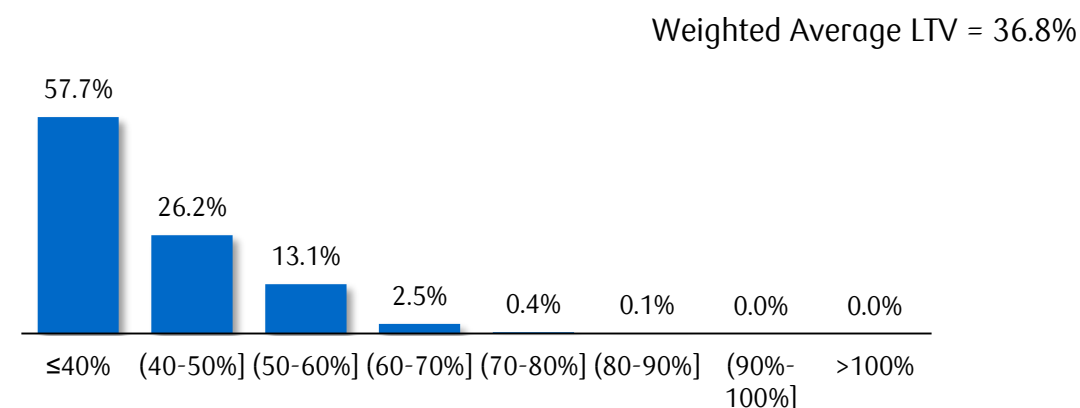
Cover pool composition by geographical location in Poland (total 100%)



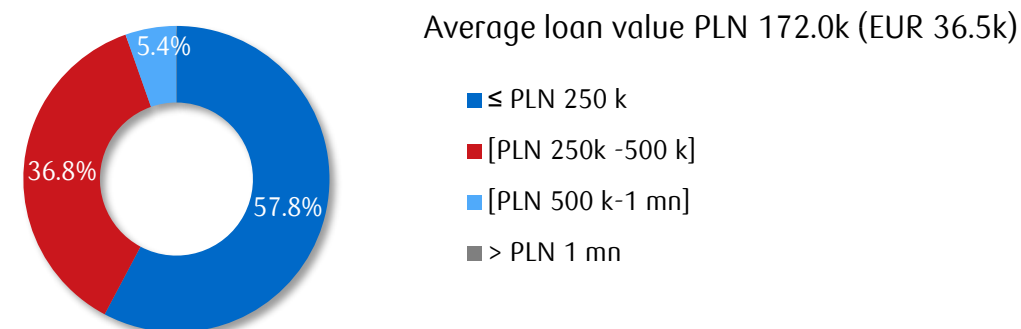
Cover pool composition by loan seasoning (%)



Cover pool composition by LTV (%)

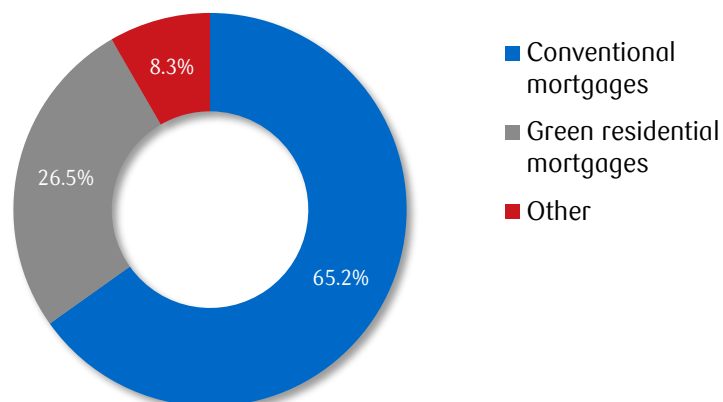


Cover pool composition by loan value (%)



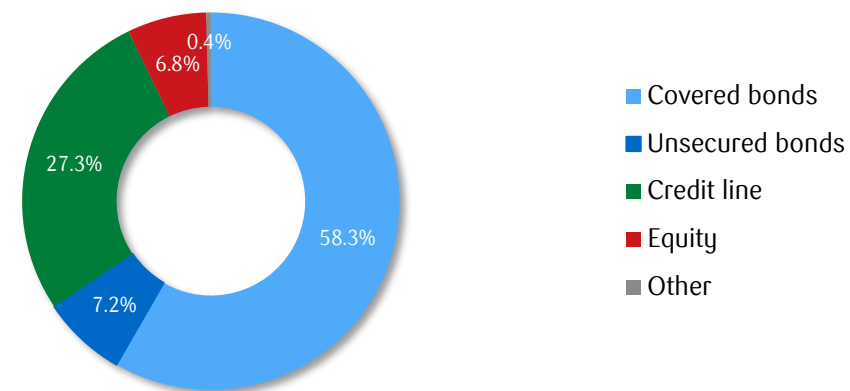
Asset and liability structure

PKO Bank Hipoteczny assets' structure as at 31.12.2022 in %



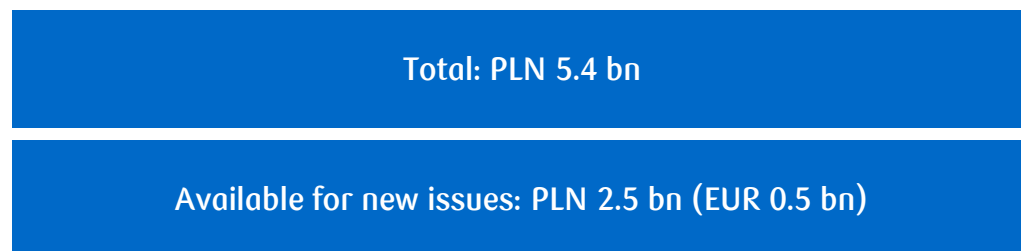
Source: PKO Bank Hipoteczny 2022 financial statement

PKO Bank Hipoteczny funding structure as at 31.12.2022 in %



Source: PKO Bank Hipoteczny 2022 financial statement

Green assets in cover pool as at 28.02.2023



Source: PKO Bank Hipoteczny Cover pool report as of 28.02.2022

Total assets in cover pool as at 28.02.2023



Source: PKO Bank Hipoteczny Cover pool report

*EUR/PLN NBP fixing exchange rate as at 28.02.2023, 1 EUR= 4.7170

Covered bond rating at country ceiling level

MOODY'S

Government of Poland rating

A2/P-1

stable outlook

PKO Bank Polski rating

A3/(P)P-2

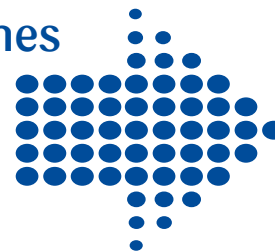
stable outlook

PKO Bank Hipoteczny rating

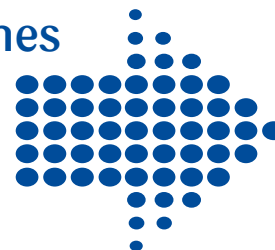
A3/P-2

stable outlook

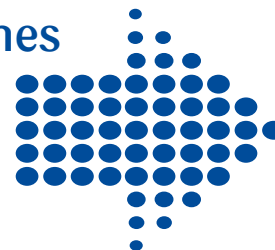
+4 notches



+5 notches



+5 notches



PKO Bank Hipoteczny
Covered Bond Rating
(PLN & EUR)

Aa1

Poland country ceiling = Aa1

PKO Bank Hipoteczny covered bond rating is based on:

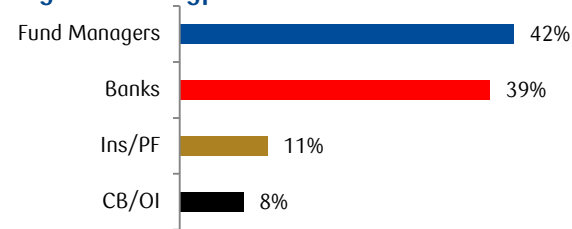
- High cover pool quality
- OC at the minimum level of 5% (Moody's OC consistent with Aa1 rating is 0.5%)
- Legally defined and predictable bankruptcy procedure

No. 1 Polish EUR bond issuer in the international markets

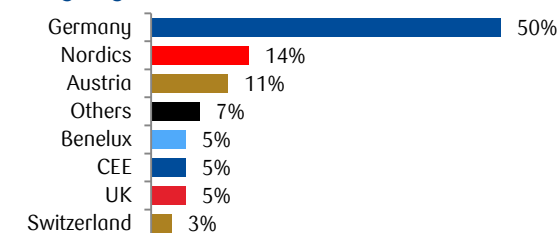
	#3 Benchmark issue	#4 Benchmark issue	#1 Private issue	#6 Benchmark issue	#9 Benchmark issue
Issue size	500 000 000 EUR	500 000 000 EUR	25 000 000 EUR	500 000 000 EUR	500 000 000 PLN
Moody's rating	Aa1	Aa1	Aa1	Aa1	Aa1
Re-offer spread	MS + 28 bp	MS + 23 bp	MS + 20 bp	MS + 36 bp	-
Annual coupon	0.750%	0.750%	0.820%	2.125%	WIBOR 3M + 0.85%
Price/Yield as of issue date as of issue date	99.906/0.764%	99.892/0.769%	100/0.820%	99.98/2.132%	100/7.76%
Issue date	27.09.2017	22.03.2018	02.02.2017	04.07.2022	02.02.2023
Maturity date	27.08.2024	24.01.2024	02.02.2024	25.06.2025	09.02.2026
Stock Exchange listing venue	Luxemburg and Warsaw	Luxemburg and Warsaw	Luxemburg	Luxemburg and Warsaw	Luxemburg and Warsaw
ISIN	XS1690669574	XS1795407979	XS1559882821	XS2495085784	XS2583335943

Distribution of all outstanding EURO-denominated benchmark covered bond issues of PKO BH

By investor type



By region



Green Covered Bonds as an important addendum to the funding mix

Green covered bonds as a financing tool for PKO Bank Hipoteczny mortgages

PKO Bank Hipoteczny as a first bank in Poland has identified a significant influence of buildings on climate and decided to establish a strategic project to acquire green assets and issue green covered bonds.

Documentation/ Framework

- PKO Bank Hipoteczny green covered bonds are in line with **ICMA Green Bond Principles (GBP)**.
- Second Party Opinion of PKO Bank Hipoteczny **Green Covered Bond Framework** has been issued by Sustainalytics.
- PKO Bank Hipoteczny green covered bonds are certified by **Climate Bonds Initiative**.



Methodology

- In 2022 PKO Bank Hipoteczny updated its Framework, which includes criteria and methodology to identify energy efficient residential buildings in the Bank's loan portfolio. It was developed by green buildings consultant Drees & Sommer.
- PKO Bank Hipoteczny methodology is approved by Climate Bonds Initiative under their Low Carbon Criteria as proxy for energy-efficient residential properties in Poland.



Special offer for green mortgages

- Dedicated offer for financing of energy efficient mortgages with valid EPCs in PKO BP.



Energy Efficient Mortgage Label

- PKO Bank Hipoteczny joined the **Energy Efficient Mortgage Label** in February 2021.
- **We report in HDT format since 1Q'22.**



PKO Bank Hipoteczny Green Covered Bonds are in line with ICMA GBP

Use of Proceeds

- Financing and refinancing of eligible assets on PKO Bank Hipoteczny's balance sheet.
- Eligible assets include loans for residential buildings as defined in the eligibility criteria:
 - new or existing residential buildings representing top 15% low carbon buildings in Poland;
 - existing residential buildings in Poland, which have undergone a property upgrade (major renovations, refurbishment, thermo-modernization or efficiency upgrade) achieving a 30% Energy efficiency improvement.

Project Evaluation and Selection

- PKO Bank Hipoteczny has established a **Green Covered Bond Committee (GCBC)** which is comprised of one representative from each of the following areas of the bank: **Treasury, Residential Mortgage Loans, Risk, Compliance, Controlling and The Cover Pool Register**.
- GCBC reports directly to the Management Board of the Bank.
- GCBC's role is to oversee the process for evaluation and selection of eligible loans according to the adopted methodology.

Management of Proceeds

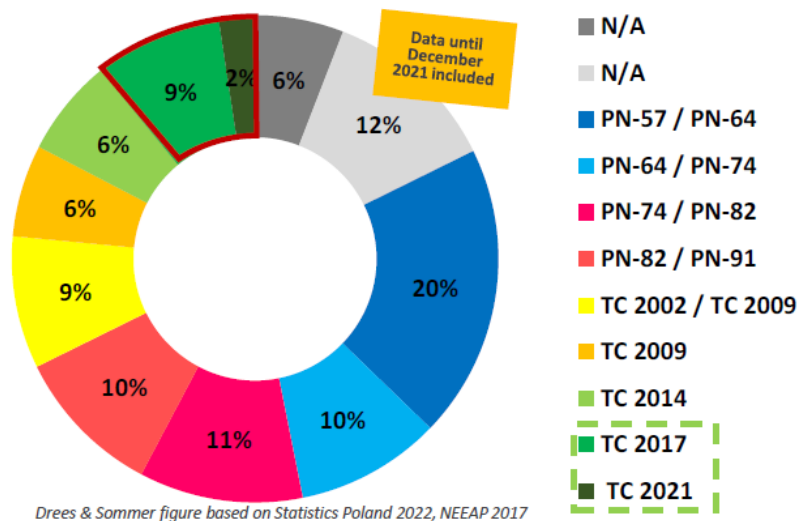
- The proceeds from green covered bonds can be allocated either to refinance existing portfolio or to finance new loans which fulfill eligibility criteria.

Reporting

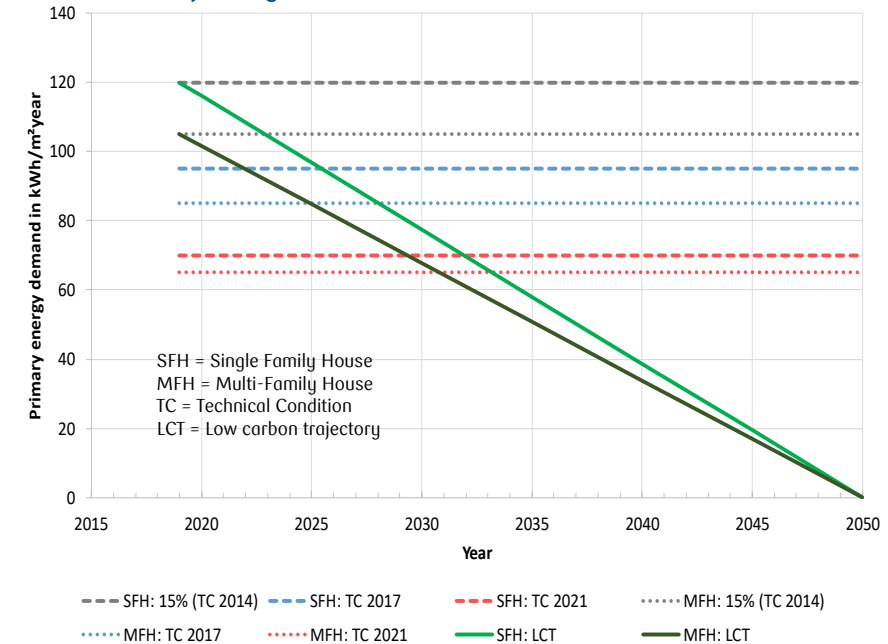
- **Allocation reporting** is available to investors after every green covered bond issuance and annually thereafter, until the bonds have been fully repaid.
- **Impact reporting** is done on an annual basis on climate benefits associated with the green eligible loans on:
 - estimated annual primary energy savings in MWh;
 - estimated annual GHG emissions avoided in tons of CO2 equivalent.

PKO Bank Hipoteczny Green Covered Bonds Methodology

- Based on the statistical analysis of buildings and mandatory building energy performance codes minimum criteria for a green bond were determined
- Buildings are deemed to be within the Top 15% of its local market if: Technical Condition is TC 2017 or newer
- Our eligibility criteria are not static and are in line with the trajectory provided by CBI (aimed at climate neutrality by 2050).
- New buildings complying with Technical Note 2017 or later by year of construction are automatically eligible for qualification for bonds where the mid-point of the bond term is no later than 2025.



A Low Carbon Trajectory



Source: <https://www.climatebonds.net/files/files/Residential%20Proxy%20Poland%281%29.pdf>

- A low carbon trajectory (LCT) connects the basis requirements of TC 2014 (SFH: PED ≤ 120 kWh/m²year | MFH: PED ≤ 105 kWh/m²year) as the start of the year 2019 towards the Zero-Emission-Goal in 2050 with zero non-renewable primary energy.
- The low carbon trajectories for single- and multifamily houses serve as the 15th percentile baseline for the local Polish residential market.



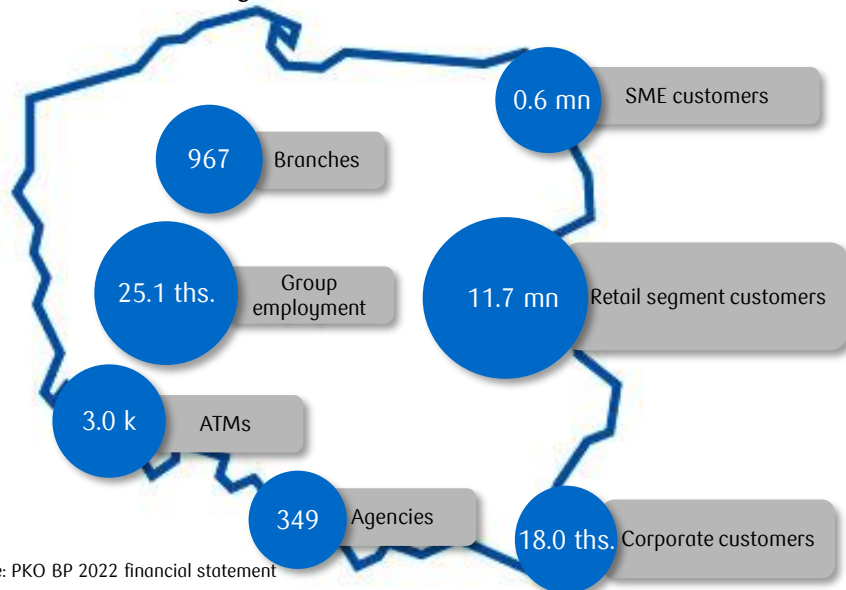
PKO BP Group overview

PKO BP Group – a leader in the Polish banking sector



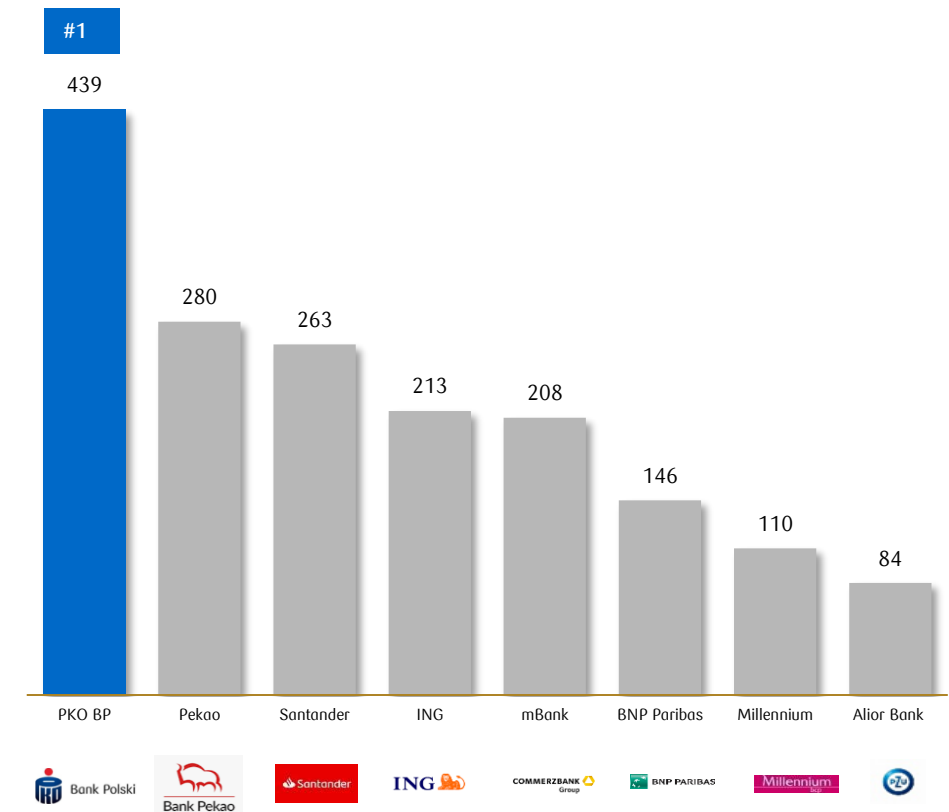
General description of PKO BP Group*:

- Leader in the Polish banking sector in terms of total assets, net income, total equity, loan and deposit portfolios, number of customers and size of distribution network, mobile banking.
- Long-term debt (senior unsecured) rating by Moody's at A3 with stable outlook.
- PKO BP Group is the biggest bank listed at WSE with capitalisation of PLN 37.9 bn as of 30.12.2022.
- PKO Bank Polski included in FTSE Russel index covering leading European companies.
- Bank paid out PLN 2.3 bn dividend for 2021.
- The State Treasury of Poland owns 29.43% of PKO BP shares.



Source: PKO BP 2022 financial statement

Market position by total assets as of 30.09.2022 (PLN bn)



Source: Financial statements of the banks

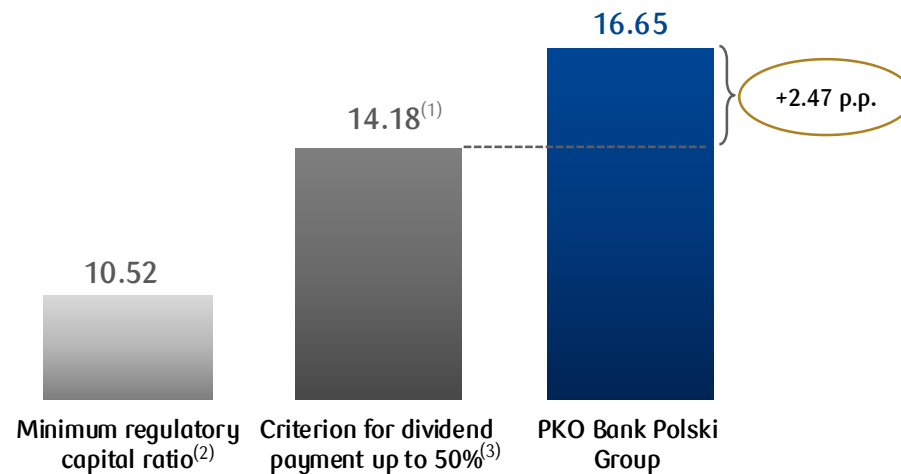
*PKO BP Group includes among others PKO Bank Polski S.A., PKO Leasing S.A. Group, PKO Towarzystwo Funduszy Inwestycyjnych S.A., PKO Finance AB and PKO Bank Hipoteczny S.A.

Solid capital position of PKO BP Group at the end of 2022

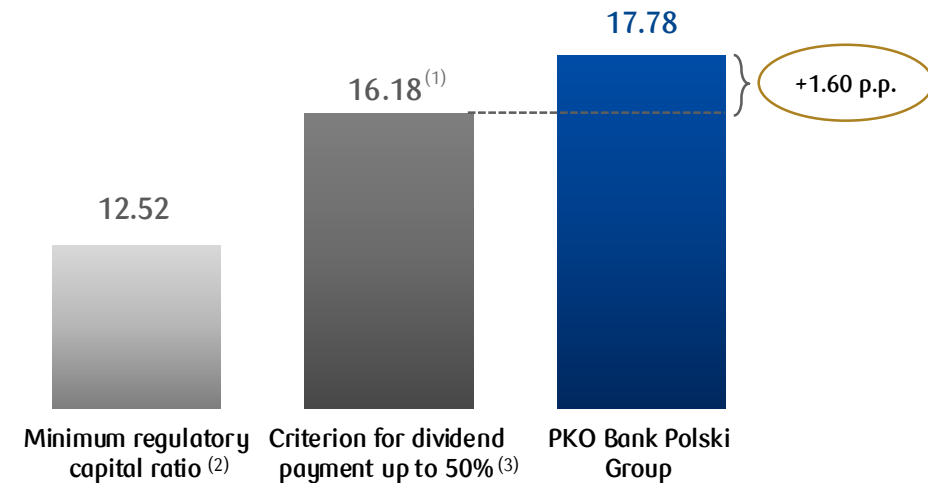


Bank Polski

CET1 = Tier 1 capital ratio [%]



Total capital ratio (TCR) [%]



-
- (1) - PFSA's buffer for Group's sensitivity to an adverse macroeconomic scenario recommended in Pillar II is 0.66% (Bank: 0.72%)
 - (2) - Tier 1: CRR 6% + conservation buffer 2.5% + OSII buffer 2% + countercyclical buffer 0.02%
TCR: CRR 8% + conservation buffer 2.5% + OSII buffer 2% + countercyclical buffer 0.02%
 - (3) - Good credit quality of the portfolio of receivables from the non-financial sector, both in the Group and the Bank level (NPL share <5%)
Dividend payment minimums after adjusting the dividend payout ratio by the following criteria:
K1 - share of the foreign currency mortgages for households in total receivables of PKO from the non-financial sector (4Q'22: Bank: 6.1%; Group: 5.0%);
adjustment by - 20 p.p., when 5%<K1<10%.
K2 - share of the foreign currency mortgages granted in 2007/08 in PKO's total portfolio of foreign currency mortgages (4Q'22: Bank: 33.8%; Group 32.9%);
adjustment by -30 p.p., when 20%<K2<50%.

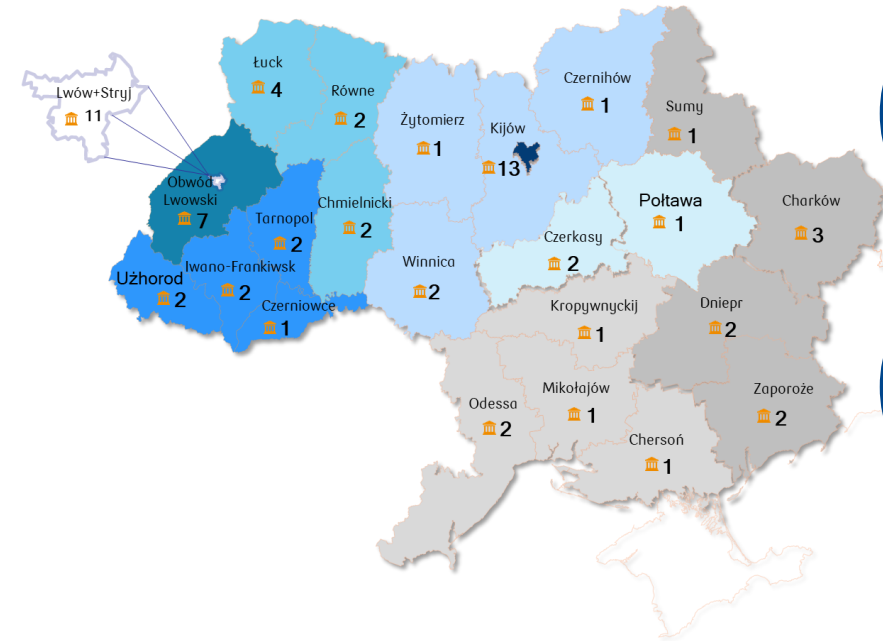
Kredobank as a Ukrainian part of business at PKO BP Group



Bank Polski

KREDOBANK S.A. is an universal bank servicing both retail and SME clients, operating mainly in western part of Ukraine and Kiev region

- Continuation of activities in regions not affected by active hostilities. 13 branches were located in the regions most affected by the war
- ~16% of the company's loan portfolio is located directly in or close to the war zones, of which less than 3% is located in areas under temporary occupation or active military action
- The company's management board estimates potential losses at a level which has no impact on KREDOBANK S.A.'s ability to continue its operations
- In 2022, KREDOBANK S.A. recognized credit risk allowances of about UAH 1.7 billion (i.e., PLN 213.9 mln)



66 branches

1 454 employees

KREDOBANK'S SHARE OF THE GROUP'S RESULTS

December 31, 2022:



KREDOBANK S.A. (mln PLN)	Dec 31, 2022	Dec 31, 2021	Δ
Gross loans	1 881	2 196	-14%
Gross deposits	4 139	3 068	35%
Total assets	4 862	4 151	17%
Equity	496	486	2%
	2022	2021	Δ
Net income	17	101	-83%

Consolidated data according to IFRS – the principles in force in the Bank's Group . Average NBP exchange rate for the day 31/12/2022

PKO BP CHF mortgage settlement program

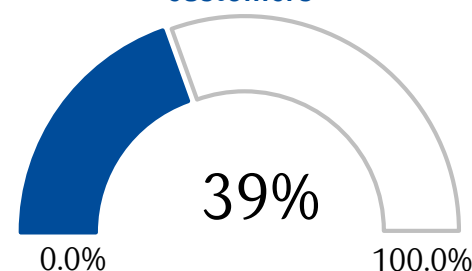


Bank Polski

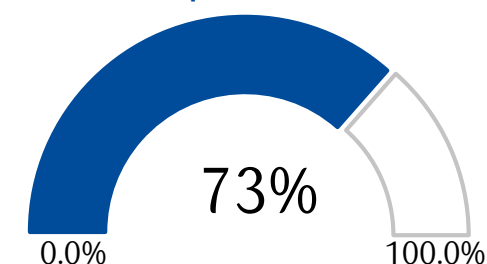
As of 31.12.2022:

- More than 37 ths motions submitted for mediation
Almost 21 ths mediations concluded successfully
- More than 20 ths settlements concluded
- Process mostly performed in remote channels (78%)
- Avg. 49 days since the submission of the motion to settlement signing
- In June, the scope of products for which settlements were available was extended to include MIX mortgage loans granted in CHF for housing needs (purchase of real estate or repayment of other liabilities)

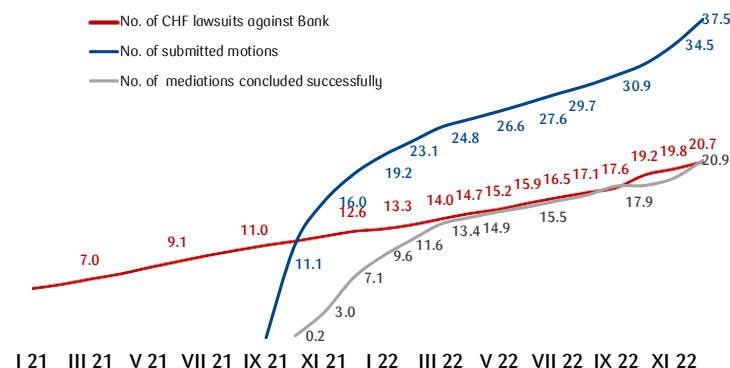
Share of motions submitted to total entitled CHF customers



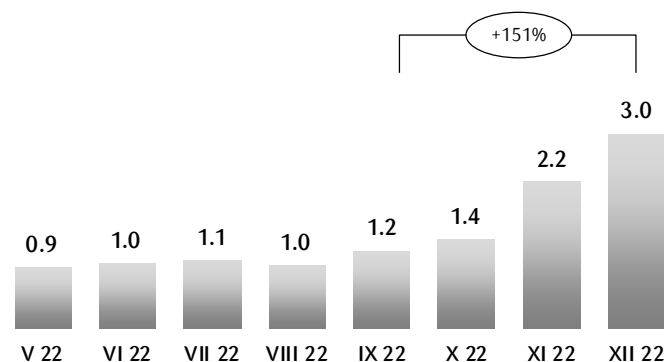
Share of successfully completed cases in total completed cases



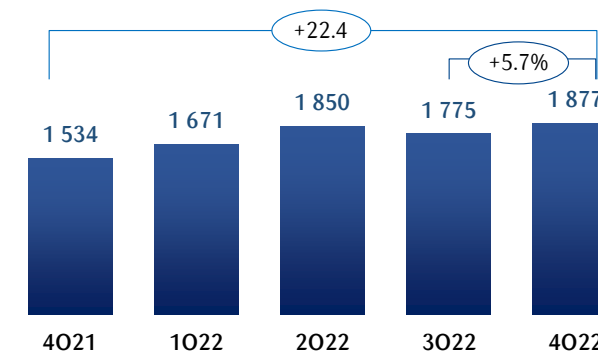
Number of cases regarding settlements of CHF borrowers



New mediation motions submitted [ths. Items]



The number of new court proceedings in a quarter [Items]



Ambitious ESG goals 2023-2025



Bank Polski



Highest volume of new financing for sustainable and transformation projects

Top 3 Bank ESG financing in each business segment

Scope 1 and 2 climate neutrality by 2030

>90% energy purchased certified as green-sourced

Green bonds preparation for the issue of the bank's own green bonds

- 1 Financial education of young people
- 2 Support the digital transformation of various social groups including seniors
- 3 Counteracting social exclusion
- 4 Support for the population of Ukraine and for the country reconstruction process

- >40%** women in managerial positions
- >30%** women in material risk taker positions
- ~0%** gender pay gap
- >2%** participation of people with disabilities in job applications, recruitment interviews, and among employees
- <7%** voluntary leavers rate
- <14%** ratio of total staff turnover
- Reduction CO₂ emission** preparation and publication of a trajectory of CO₂ emissions reduction
- Expanding disclosures** systematic expansion of the scope of disclosures in the scope of CO₂ emissions of the bank

Credit / ESG ratings and ownership

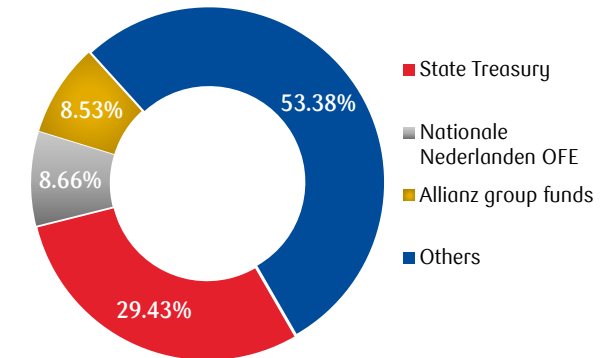


Bank Polski

Credit Ratings

Moody's Investors Service	Long-term rating	
	Deposits	A2
	Liabilities	A3
	Counterparty risk	A2
	Outlook	Stable
	Short-term rating	
	Deposits	P-1
	Liabilities	(P)P-2
	Counterparty risk	P-1
	Baseline Credit Assessment	baa2

Shareholder structure (number of shares: 1 250 mln)



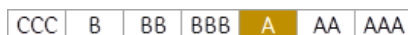
- The Bank's shares have been listed on the Warsaw Stock Exchange since November 10, 2004.
- Largest domestic bank on the WSE in terms of capitalization PLN 38 billion (as at 30/12/2022)
- Bank PKO BP is included in the following indices: WIG, WIG20, WIG30, WIG Banki, WIG-ESG, FTSE Russell, Stoxx 600
- ISIN: PLPKO0000016; Bloomberg: PKO PW; Reuters: PKOB WA

ESG Ratings



A↑

(BBB in 2021)



23,9 Medium Risk↓

(21 in 2022)



3,3↓

(3.7 in 2021)



46↓

(47 in 2021)





Bank Hipoteczny

Appendices

“Covered Bond Act” implementing the Covered Bonds Directive into Polish law

The main amendments of the Covered Bond Act which came in force since 8th July 2022:

- the decrease of the minimum level of overcollateralization of covered bonds to 5% from 10%
- the change of the minimal principal amount of a covered bond in documentary form (including in the new global covered bond form) to EUR 100 000 or its equivalent in another currency (currently, under the Covered Bonds Act the principal amount of a covered bond in documentary form must exceed EUR 100 000 or its equivalent in other currency)
- expansion of the mandatory items to be included in the terms and conditions of covered bonds (e.g. provisions setting out the manner of performance of the bank's obligation under the covered bonds in case of resolution of the mortgage bank)
- the alignment of the liquidity buffer of mortgage banks to the level set out in the Covered Bonds Directive (currently, mortgage banks are required to maintain a liquidity buffer equivalent to at least six months of nominal interest income on mortgage bonds outstanding to ensure the timely servicing of interest receivables on mortgage bonds)
- clarification of the requirements for derivatives to be registered in the cover pool
- introducing an obligation for the mortgage bank to provide KNF with information on mortgage bond issuances and specifying the scope of this information, as well as certain other information required to be on the bank's website
- new provisions concerning the fines and sanctions that may be imposed on mortgage banks by KNF
- introduction of new rules regarding the labelling of covered bonds



Promoting ESG throughout the organization by conducting the Bank's operations in a sustainable and impactful manner



Environmental

**We take care
about our
common
future by:**

- Moving to new headquarters from 3Q 2023 – SkySawa building certified by BREEAM Interim "Outstanding" rating
- Promoting pro-environmental real estate solutions
- Being a PKO Group's competence center for green residential mortgages
- Issuing green covered bonds
- Reducing the carbon footprint of Bank's operations and use of plastic and printed materials



Social

- Participating in socially responsible initiatives in the field of mortgage products, including sectoral works
- Educating customers on mortgage loans, green solutions and real estate sector via new dedicated online platform
- Putting emphasis on the transparency of communication with customers by promoting an understandable and simple language



Corporate Governance

- Promoting diversity as a value
- Creating a friendly working environment and taking care of employees' development
- Enabling effective communication between employees
- Promoting a healthy lifestyle among employees

PKO BH Green Covered Bonds: EU Taxonomy – eligibility criteria for climate change mitigation



Economic activity	Screening Criteria	Residential Single-Family ¹	Residential Multi-Family ²
7.1 Construction of new buildings Built after 31/12/2020	Nearly Zero-Energy Building Primary energy demand minus 10%	At least 10% lower than the requirements for the primary energy demand of the "Nearly Zero-Energy Building" standard (NZEB). Based on the "Energy Performance of Buildings Directive (EPBD)", the NZEB-standard is implemented in the implemented in Technical Condition 2021 (TC 2021) requirements.	
	Indicative reference values:	PED ≤ 63 kWh/(m²year)	PED ≤ 58.8 kWh/(m²year)
7.2 Renovation of existing buildings Built before 31/12/2020	Major Renovation Cost optimal level	The building renovation complies with the applicable requirements for major renovations as defined in the Energy Performance of Buildings Directive (EPBD), based on the cost optimal level as defined in Technical Condition 2014 (TC 2014).	
	Property Upgrade Relative improvement ≥ 30% in primary energy demand	Relative improvement in primary energy demand ≥ 30% in comparison to the performance of the building before the renovation. Reductions through renewable energy sources are not taken into account.	
7.7 Acquisition and ownership of buildings Built before 31/12/2020 ³	top 15% of the national existing building energy code	Technical condition TC 2017 or newer	
	top 15% of the national existing building stock	PED ≤ 95 kWh/m²year FED ≤ 67.7 kWh/m²year	PED ≤ 85 kWh/m²year FED ≤ 60.6 kWh/m²year

¹ SFH: Single-Family house with 1-2 units | ² MFH: Multi-Family house with >2 units | PED = primary energy demand | FED = Final energy demand | ³ For buildings built 01/01/2021 or newer, the criteria in 7.1 are required to comply with.

Source: Drees & Sommer low carbon building criteria are based on EU Taxonomy (Delegated Act – July 2021). Criteria are valid for assets located in Poland. Status: May 2022

PKO BH Green Covered Bonds Methodology: Climate Bonds Initiative (CBI) certified eligibility criteria

Green Bond criteria - The object fulfills one of the following criteria:				Residential Single-Family ¹ and Multi-Family ²
Climate Bonds Initiative	New Construction or Existing Buildings	1)	Energy standard or year of construction is equal or newer <i>based on CBI's low carbon buildings criteria in compliance with CBI's established residential market proxy for Poland</i>	New buildings complying with Technical Note 2017 or later by year of construction are automatically eligible for qualification for bonds where the mid-point of the bond term is no later than 2025.
	Existing Buildings	2)	Property upgrade <i>in compliance with CBI's established residential property upgrade methodology</i>	Major renovation with an improvement in the CO2 emissions figure from EPC from before and after the retrofit, based on tenor of bond, which meet the requirement of Technical Note 2014 (issued after July 2015). Minimum improvement in carbon emissions ≥ 30% Term 1-5 years: 30% improvement Term 5-30 years: 30%-50% linear improvement Term ≥ 30 years: 50% improvement

Robust regulatory regime

- Covered bonds and mortgage banks in Poland are regulated by the Polish Covered Bond Act. Covered Bond Directive was implemented into Polish Law in July 2022.
- By law, only **specialized mortgage banks** are entitled to issue covered bonds in Poland.
- **Segregation of assets** in the cover pool (only mortgages, cash, sovereign debt or similar*).
- **Constant supervision by the independent Cover Pool Monitor** (appointed by KNF) over mortgage bank activities and its cover pool.
- Conservative approach of determining **the mortgage lending value** (through-the-cycle) of real estate with rules approved by KNF.
- **Strict regulatory limits on mortgage banks and covered bonds** including:
 - min. 5% overcollateralisation (OC),
 - liquidity buffer to cover the maximum cumulative net liquidity outflow in 180 days,
 - coverage and liquidity tests.
- **Mandatory FX risk limitation.**
- **Legally defined and predictable bankruptcy procedure** (not at the discretion of the issuer) designed to achieve best-possible outcome for covered bond holders (12 months extension period after issuer's default and switch to pass-through if available liquidity will not be sufficient to repay the bonds within 1 year).
- Covered bonds exempt from bail-in protocol (BRRD)**



*Securities issued or guaranteed by the State Treasury of the Republic of Poland, the National Bank of Poland, the ECB, governments and central banks of the EU and OECD member states (except for states that have restructured their external debt in the past five years).

**In the event of compulsory restructuring of mortgage banks, covered bonds may be subject to compulsory write-down and/or conversion to the extent the value of the covered bonds exceeds the value of the cover pool.

Regulatory safeguards built into bankruptcy procedure

Process	Covered bond repayment	Recourse and priorities	Hedging
<p>P1. Clear process of bankruptcy declaration</p> <p>P2. Clear deadlines for key actions of bankruptcy procedure defined in the legal framework</p>	<p>C1. Avoidance of time subordination</p> <p>C2. Explicit rules for early repayment of covered bonds</p> <p>C3. Explicit procedure for treatment of covered bonds, which became due before declaration of bankruptcy</p>	<p>R1. Dual recourse (separate bankruptcy asset pool and general bankruptcy estate)</p> <p>R2. Clearly defined order of priorities of payments from the separate bankruptcy asset pool</p>	<p>H1. Hedging arrangements will survive declaration of bankruptcy and will be extended by 12 months.</p> <p>H2. Possibility of the bankruptcy receiver to enter into hedging transactions (provided tests are passed)</p>

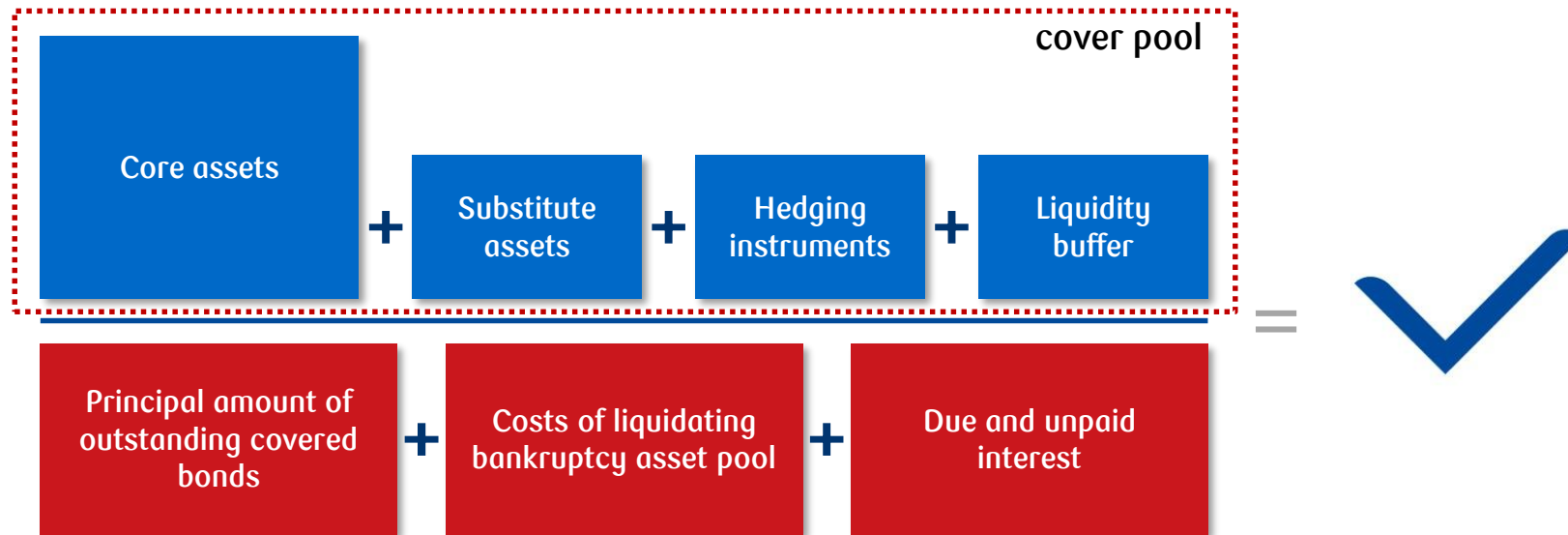
Covered bondholders entitled with option to intervene in bankruptcy procedure

Coverage test	passed	passed	failed
Liquidity test	passed	failed	n/a
Covered bonds repayment	<ol style="list-style-type: none"> Covered bonds repaid according to terms and conditions of the covered bonds, taking 12 months extension into account Receiver may enter into hedging transactions 	<ol style="list-style-type: none"> Maturity date of all covered bonds extended to the date falling three years after the latest cover asset maturity date Distinct rules for pro-rata repayment before extended maturity date 	
Holders option	Resolution of covered bondholders with 2/3 majority to sell the separate bankruptcy asset pool to another bank	Resolution of covered bondholders with 2/3 majority <ol style="list-style-type: none"> to disapply maturity extension or to sell cover assets to another bank or non-bank 	

Probability of default according to Moody's Idealised Cumulative Default Probabilities table:

- Baa1: 5Y - 1.10%; 7Y - 1.67%; 10Y - 2.60%
- A3: 5Y - 0.73%; 7Y - 1.11%; 10Y - 1.80%

To ensure the safety of the Covered Bonds the Bank is obliged to perform the coverage test

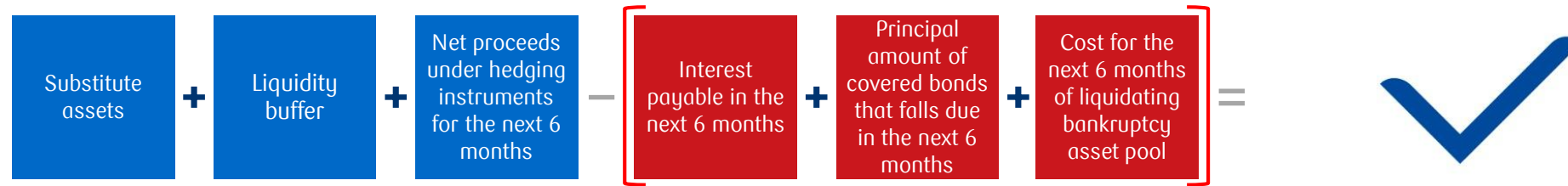


The coverage test:

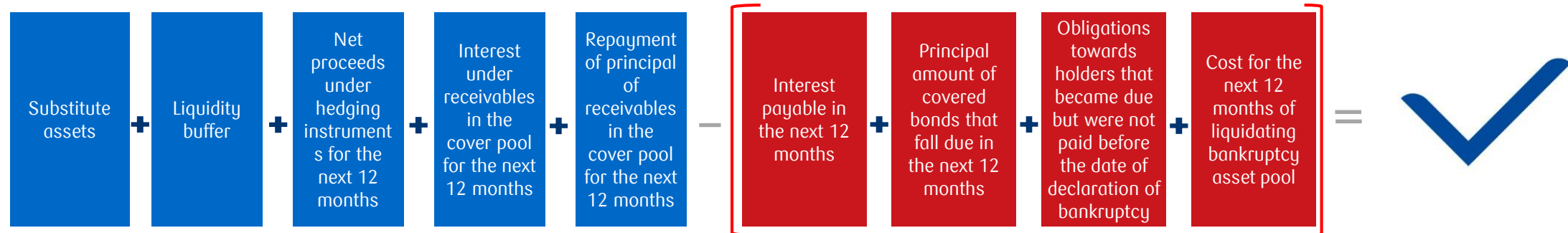
- **verifies whether the value of assets** in a cover pool **allows for full satisfaction of all claims** under outstanding covered bonds,
- **must be performed every six months**,
- is performed based on the following sets of data:
 - real data as of day of testing,
 - scenarios concerning changes of FX rates.

...and the liquidity test

6M



12M



The purpose of the liquidity test is to **verify that assets in a cover pool are sufficient for full satisfaction of all claims** under outstanding covered bonds, even if their maturity is extended in bankruptcy proceedings.

The liquidity test must be **performed at least every three months**.

The test is performed based on the following sets of data:

- real data as of day of testing,
- scenarios concerning changes of FX rates,
- scenarios concerning the shift of interest rate curves.

Experienced management team



Katarzyna
Kurkowska-
Szczechowicz

President of the Management Board

graduate of the Faculty of Economics at the Warsaw School of Economics, majoring in Finance and Banking, and a master's degree in law from the Faculty of Law and Administration at the University of Warsaw.

Responsible for internal audit, HR, compliance departments

Katarzyna Surdy

Vice President of the Management Board

graduate of the Faculty of Law at the University of Warsaw. Since 2014, she has been associated with the PKO BP Group where she participated in the project of establishing of PKO Bank Hipoteczny. Responsible for treasury, legal and product departments.

Piotr Kochanek

Vice President of the Management Board

graduate of the Faculty of Mathematics of the Silesian University of Technology. Since 2014, he has been associated with PKO Bank Hipoteczny as Head of the Risk Department. Responsible for finance and accounting, risk and credit departments.

Stanisław Skoczylas

Vice President of the Management Board

graduate of the Cracow University of Economics (now Cracow University of Economics) with a degree in Finance and Banking. Responsible for finance and financial controlling departments.

Thank you

Contact

Katarzyna Majchrzak - Head of Treasury
15 Puławska Str.
02-515 Warsaw
Tel: +48 887 098 809
e-mail: katarzyna.majchrzak@pkobh.pl
e-mail: ir@pkobh.pl

Edyta Kusińska - IR and PR Expert
15 Puławska Str.
02-515 Warsaw
Tel: +48 722 030 099
e-mail: edyta.kusinska@pkobh.pl
e-mail: ir@pkobh.pl

www.pkobh.pl/relacje-inwestorskie



Disclaimer



This presentation serves general information and advertising purposes. This presentation does not constitute an investment recommendation or information recommending or suggesting an investment strategy. It does not constitute information which, directly or indirectly, expresses a particular investment proposal in respect of a financial instrument or an issuer or which proposes a particular investment decision; and it does not constitute information recommending or suggesting an investment strategy, explicitly or implicitly, concerning one or several financial instruments or issuers.

This presentation and the information therein were prepared and provided for information purposes only. They are not (directly or indirectly) intended or to be construed as and do not constitute a direct or indirect offer, recommendation or solicitation to buy, hold or sell any securities or other financial instrument, or an invitation to make an offer to buy, to subscribe for or otherwise acquire any securities or other financial instrument or to provide or obtain any financial services.

The information contained herein does not claim to be comprehensive or complete. This presentation is not a prospectus or sales prospectus or a comparable document or a comparable information and therefore does not contain all material information which is necessary for making an investment decision. Any offer of securities, other financial instruments or financial services would be made pursuant to offering materials to which prospective investors would be referred.

This presentation contains information and statements, taken or derived from generally available sources (other than PKO Bank Hipoteczny S.A., "PKO BH"). This applies especially (but is not limited) to market, industry and customer data and reports.

PKO BH believes such sources to be reliable. PKO BH is not able to verify the information from such sources, however, and has not verified it. Therefore PKO BH does not give any warranty or guarantee, makes no representation and does not assume or accept any responsibility or liability with regard the accuracy or completeness of such information, which was taken or derived from such sources.

This presentation contains forward-looking statements. Forward-looking statements are all statements, information and data which are not statements, information and data of historical facts. They include in particular (but are not limited to) statements, information and data relating to plans, objectives or expectations, relating to future results or developments, or relating to assumptions in connection with such statements, information or data, with regard to PKO BH, products, services, industries or markets. Forward-looking statements are based on plans, estimates, projections, objectives and assumptions as and to the extent they are available to the management of PKO BH in advance to and for such statements. Forward-looking statements are only valid on such basis and only as of the date they are made. PKO BH undertakes no obligation to update or revise any forward-looking statement (e.g. in case of new information or events).

Forward-looking statements, by their very nature, are subject to risks and uncertainties. A number of factors could cause actual developments and results to differ materially from the forward-looking statements and in particular in a materially negative way. Such factors include, but are not limited to, changes in the conditions on the financial markets in Poland, Europe or other countries or regions in which PKO BH operates, holds substantial assets or from which it derives substantial revenues; developments of assets prices and market volatility, potential defaults of borrowers and trading counterparties, implementation of strategic initiatives, effectiveness of policies and procedures, regulatory changes and decisions, political or economic developments in Poland or elsewhere. Therefore this presentation does not make any statement or prediction in relation to any actual development or result (in particular (but not limited to) values, prices, portfolios, financial items or other figures or circumstances). Changes in underlying assumptions have a material impact on expected or calculated developments. Earlier or later presentations may differ from this presentation in relation to forward-looking statements, in particular in relation to developments and results as well as assumptions. PKO BH undertakes no obligation to notify recipients of this presentation with regard to such differences or presentations.

Past performance is not a reliable indicator for future performance. Exchange rates, volatility of financial instruments and other factors can have a negative effect on it. The presentation of data and performance related to the past or the depiction of awards for the performance of products are thus not a reliable indicator for the future performance.

All information in this presentation relates to the date of preparation of this document only (and historic information to its respective relevant date) and is subject to change at any time, without such change being announced or published and without the recipient of this presentation being informed thereof in any other way. There is no guarantee or warranty for the continuing accuracy of the information. The information herein supersedes any prior versions hereof and any prior presentation and will be superseded by any subsequent versions hereof, any subsequent presentations, and any offering materials. PKO BH has no obligation to update or periodically review the presentation. PKO BH has no obligation to inform any recipient of any subsequent presentation or subsequent versions hereof.

This presentation does not constitute investment, legal, accounting or tax advice. It is no assurance or recommendation that a financial instrument, investment or strategy is suitable or appropriate for the individual circumstances of the recipient. Any transaction should only be effected after an own assessment by the investor of the investor's individual financial situation, the suitability for the investor and the risks of the investment. This presentation cannot replace personal advice. It does not consider the individual situation of the investor. Each recipient should, before making an investment decision, make further enquiries with regard to the appropriateness of investing in any financial instruments and of any investment strategies, and with regard to further and updated information with respect to certain investment opportunities and should seek the advice of an independent investment adviser for individual investment advice and the advice of a legal and tax advisor. To the extent that this presentation contains indications with regard to tax effects it is noted that the actual tax effects are subject to the individual circumstances of the investor and subject to any future changes.

This presentation and its contents must not be further published, reproduced, redistributed, disclosed or passed on to any third party, in whole or in part, for any purpose, without the prior consent of PKO BH. Please note that the distribution of information relating to issuers of financial instruments, and offer and sale of financial instruments may not be permitted in all countries (in particular not in the USA or to U.S. persons). Persons who obtain possession of this document have to inform themselves about national restrictions and have to comply with them.