NARODOWY
BANK POLSKI

June 2023

Financial Stability Report

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Financial Stability Department
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This Report presents the analysis and assessment of threats to financial system stability in Poland.

The stability of the financial system is a situation when it performs its functions in a continuous and efficient way, even when unexpected, highly adverse and low-probability disturbances occur on a significant scale.

The analysis conducted in this issue of the report is based on data available up to 30 April 2023 (cut-off date). The report was approved by the Management Board of Narodowy Bank Polski at its meeting on the 13th June 2023.

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Executive summary

The domestic banking sector remains resilient, however the balance of risks is deteriorating due to a possible decline in excess capital. Banks' capital is sufficient to absorb potential losses arising from the materialisation of even extreme macroeconomic scenarios. The sector's liquidity position also remains stable. However, a likely significant reduction of the sector's capital surplus and its macro-financial impacts may become challenging.

The challenging legal circumstances and regulatory conditions remain a major impediment to banking activity and banking sector development. Challenging of the validity of long-term loan agreements by borrowers when developments become adverse, as well as changes of law that affect the terms of past loan agreements generate unexpected costs for banks. This reduces banks' propensity and capacity to lend and expand.

The outcomes of legal risk related to FX housing loans remains the main challenge for the stability of the domestic banking sector. The Financial Stability Committee recommendation of 13 January 2017 created incentives for banks to voluntary restructure FX housing loans. Banks did not take appropriate action in this regard for over 4 years. In effect they struggle currently with outcomes of the unfavourable jurisprudence of the courts. The costs of this risk will remain high in the coming years, regardless of the incoming CJEU ruling regarding potential customers claims. If the CJEU ruling in case C-520/21 turns out to be in line with the opinion of the Advocate General of the CJEU, it may result in the need of further increase of the provisioning making, but this does not fundamentally change the situation regarding the scale of banks burden.

Due to the conditions discussed above, the profitability and capacity of Polish banks to accumulate capital internally remains limited despite the fact that they operate in the environment of higher interest rates, which tends to make banking activity profitable. Higher interest rates significantly contributed to improved banks' profits in the first months of 2023. However, it needs to be considered that annual results will be affected by a further increase in legal risk provisions for FX loans and regulatory uncertainty, as was the case in 2022.

An important factor affecting the level of capital surpluses in banks and the assessment of systemic risk will be the method of fulfilment of MREL requirement. Use of own funds to meet MREL will lead to a significant reduction of banks' capital surpluses in relation to the total capital requirements. This would limit the ability and willingness of banks to finance the economy and, at the same time, make it difficult to carry out restructuring processes in the future. For most banks, current capital augmented with future profits would be sufficient to fulfil MREL and the combined buffer requirement, but at the expense of a significant decline in excess capital in a number of banks. In such a case, materialisation of adverse macro-financial scenarios would make a significant portion of the sector report capital shortfalls relative to the requirements, which would substantially increase the risk of credit rationing by these banks and in some cases result in deleveraging. Probability of such scenario

would decrease if a significant number of banks would meet the MREL requirement with eligible debt instruments.

Lending growth remains low due to persisting uncertainty in the economy and a relatively high cost of credit. Shrinkage of capital surplus could exacerbate this decline. The ratio of loans to the non-financial sector to GDP could reach approx. 30% in the short term, with a risk of stronger decline amid capital shortages.

A decline in economic activity in Poland and the higher costs of credit were reflected in an increase in loans in arrears and credit losses. However, the increase in credit risk indicators should be moderate and does not pose threat to financial stability. The deterioration in the situation of real sector should not be significant, as worsening in labour market is expected to be mild (low unemployment growth, end of period of real wage decline) and economic conditions should improve in 2024-2025. As regards housing loans, the rise of credit risk will remain limited in 2023 as, among others, borrowers are entitled to benefit from the mechanism of loan repayment holidays. After 2023, the situation will depend on the level of interest rates and macroeconomic conditions, including on the labour market. Credit risk is most likely to have a significantly lesser effect on the capital position of banks than other sources of risk, including primarily legal risk.

Banks' considerable investment in Treasury bonds (approx. 20% of assets) continues to remain a major issue. Banks' exposure to bonds has contributed to temporarily diminishing their capital by approx. 15 billion zlotys due to the revaluation of the instruments during the period of interest rate increase by over 6 percentage points. Banks responded by reducing the sensitivity of their bond portfolios to changes in their market value, which currently does not deviate much from the multi-year average.

Banks in Poland show high resilience to liquidity risk. This is because, among others, of a large portfolio of liquid assets with a short duration, a high share of retail deposits funding, a small deposit concentration and a high share of guaranteed deposits.

As regards the insurance sector, due to the lack of a regulatory restriction on the double gearing of capital and a high proportion of expected profits included in future premiums (EPIFP) in own funds, the real resilience of this sector may be inadequately reflected by capital ratios. As scale of the phenomena in the domestic insurance sector – which is well above the EU average – is significant, high solvency ratios may inadequately reflect the loss-absorption capacity of insurers. Imposing a restriction on double gearing and eliminating EPIFP would result in a decline in the sector's SCR solvency ratio from 242%to 171%.

Excessive liquidity transformation remains a risk for UCITS. In the case of most funds, the share of deposits, which are the most liquid assets, still runs at a low level. Also, there are still active funds whose liquidity ratio is close to zero. This increases the liquidity risk of the whole sector of open-ended investment funds.

Recommendations

In addition to identifying and assessing risk in the financial system, the role of the Report is to offer measures aimed at mitigating systemic risk. This is one of the ways to fulfil the statutory mandate of NBP, which includes acting to maintain domestic financial stability (Article 3 paragraph 2 items 6a and 6b of the Act on Narodowy Bank Polski). In the opinion of NBP, implementation of the following recommendations will be conducive to maintaining the stability of Poland's financial system

1. Reduction of legal and regulatory risk

The uncertainty of the legal and regulatory environment in which banks operate should be reduced. Predictability of the environment in which the financial system functions has a favourable impact on access to credit and to other financial services, which is of particular importance when geopolitical and macroeconomic uncertainty is high. At the same time, banks should strive to match their services to the needs and capacities of the client, which would reduce legal risk in the future.

2. Appropriate targeting of support for borrowers

Statutory support for borrowers, the costs of which would be charged to banks or the public sector, should be limited to financially distressed individuals. The obligation to subsidise the costs of credit by lenders reduces the banks' ability to accumulate capital and increases the risk of a credit crunch, with negative consequences for the economy. Indirectly, the costs of such support are passed onto depositors and other bank clients. In addition, the universality of such programmes may prompt new borrowers to take on excessive risk in the future (moral hazard). The existing solutions, including the Borrower Support Fund, make it possible to help distressed borrowers.

3. Settlements in FX housing loans

Banks and borrowers should continue to reach settlements in FX housing loan cases, thus contributing to accelerating the pace of dispute resolution. Such an approach should be favoured regardless of the shape of the rulings of the CJEU. Settlements reduce uncertainty related to lengthy court procedures and the shape of final rulings and their financial implications.

4. The MREL

Banks should comply with a significant part of the MREL requirement with eligible debt instruments. A suitable proportion of debt instruments in the structure of MREL is a prerequisite for the efficiency of resolution processes, which would reduce banks' future costs. At the same time, such a MREL compliance structure would reduce the scale of the decline in excess capital above the combined capital requirements in the banking system, reducing the risk of a credit crunch and its negative impact on the economy.

5. Retention of earnings by banks

Banks should consider retaining a significant part of their earnings from 2023 and previous years in order to safeguard internal sources of capital for the development of lending. The uncertainty of the legal and regulatory environment is high and the occurrence of significant costs for banks cannot be ruled out. Should shocks materialise, the lack of an additional buffer in the form of retained earnings may result in significant capital deficits, adversely affecting the possibility to implement the banks' development plans and their ability to finance the economy.

6. The cooperative banking sector

It is desirable that the record high profits of the cooperative banks in the recent period are used to increase their potential. It is necessary to further strengthen the effectiveness and resilience of the sector, as well as continue the build-up of buffers which reduce the negative effects of any possible materialisation of risk in the future. At the same time, the cooperative banking sector should continue to conduct merger processes aimed at creating financially and organisationally stronger institutions, thus improving its capacity to increase the scale of operations and generate profits in the future.

7. Insurance companies

When making their solvency assessments, insurance companies should consider the risk of the high share of EPIFP in own funds and double gearing of capital. Own funds obtained by including expected profits from future premiums and double gearing have a limited ability to cover losses, despite belonging to the highest quality category.

8. Investment funds

Open-ended investment funds should seek to reduce the liquidity mismatch between assets and liabilities. It is desirable that the liquidity profile of the assets corresponds to the frequency of unit redemption. Increasing the share of liquid deposits, including creating liquidity buffers in the form of deposits, would reduce the scale of this risk.

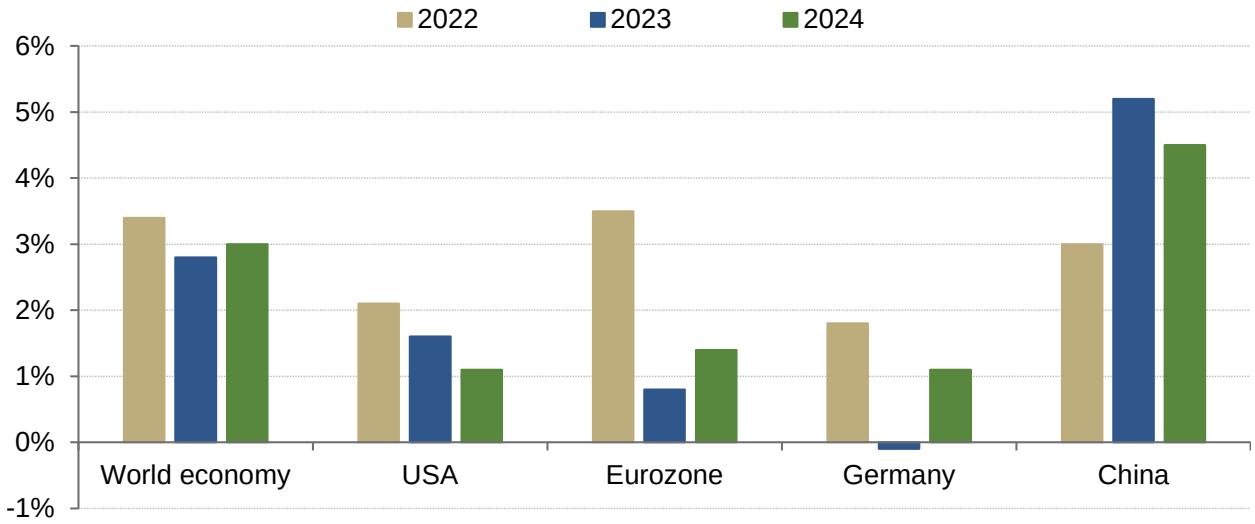
Open-ended funds should not excessively increase leverage. It is desirable to develop a consistent approach in measuring the leverage and limit the possibility to change the method of determining the total exposure. This is because the use of the Value at Risk method may favour excessive leverage and increase the risk in the sector, particularly if its use was widespread and if it occurred alongside a low level of liquid assets.

1. Macroeconomic and external factors

1.1. External factors

External risks to financial stability are still elevated. Global economic and inflation outlook remains uncertain. This causes shifts in financial market expectations about the future trends in main macroeconomic variables, as well as the scale and the speed of responses of major central banks. The International Monetary Fund[1] indicates in its April 2023 issue of *World Economic Outlook* that global economic growth will remain at around 3% y/y over the next five years, which is the lowest forecast since the 1990s. The pace of recovery expected for 2023 is anaemic and varies substantially among countries, see Figure 1.1. The IMF forecasts assume reduction of strains in the global supply chains and diminishing disruptions in the world energy and food markets. It should be stressed that the accuracy of these assumptions largely depends on the stabilization of geopolitical situation in Europe and in the Far East.

Figure 1.1 GDP growth forecasts according to the IMF



Source: IMF.

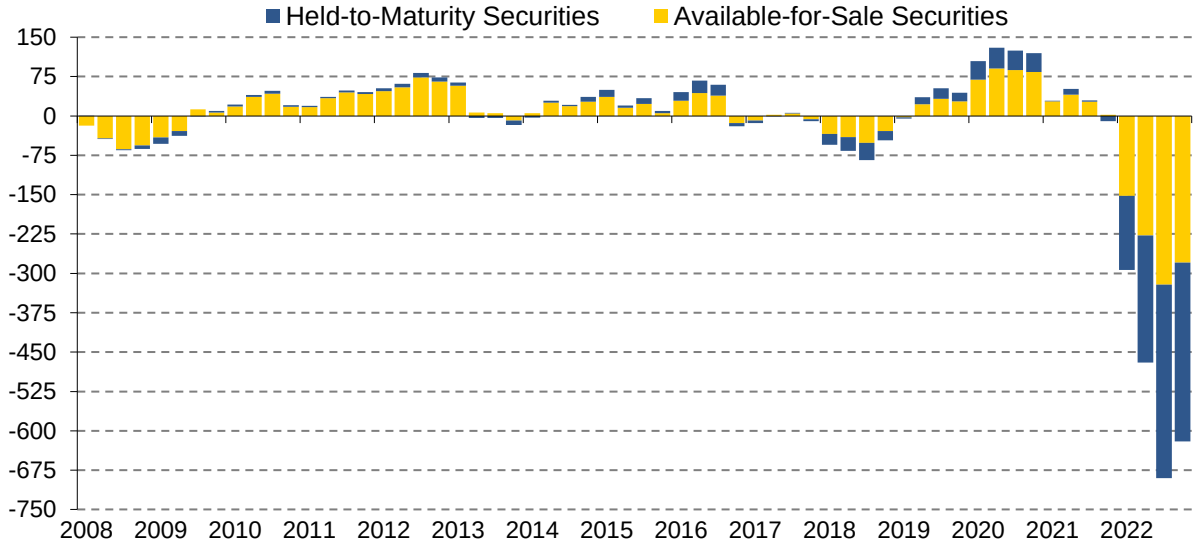
The general consensus is that the balance of risks to the global economic outlook is tilted to the downside. The risk of escalation of the current banking sector shocks is not diminishing, and could spread in some economies to other economic entities, leading to worsening of global funding conditions, as well as to a drop in consumer and business sentiment. Another source of risks to the global growth could be, a stronger than expected, effects of global monetary tightening in the high debt environment. This concerns both the materialization of hitherto monetary tightening, as well as possibly higher than currently expected interest rates of main central banks. Other risk factors include also the

[1] IMF World Economic Outlook, April 2023.

escalation of the war in Ukraine and geopolitical shocks, as well as fragmentation of global trade and increases in commodities' prices.

The rise in interest rates has led to an increased likelihood of materialization of risk in certain types of non-bank financial institutions, which was accumulating during the low interest rate environment. The size and relevance of this sector in funding of the EU and the US economies have risen strongly over the last 15 years, also as a result of the tightening of regulatory and supervisory requirements for banks. The risks are related to: i) the structural mismatch of assets and liabilities of non-banks, ii) a considerable degree of the applied leverage, iii) exposures of non-banks towards other financial institutions. These risks may materialize in the case of asset price shocks in financial markets (as in the March 2020 dash-for-cash event), as well as result from inadequate risk mismanagement (e.g. the near-collapse of UK pension funds in September 2022). It is hard to assess the degree to which financial leverage of non-banks amplifies the effects of those potential disruptions, as a broad range of financial instruments is used to achieve the desired level of leverage.

Figure 1.2 Unrealised gains and losses on the securities portfolio held by banks in the United States (USD billion)



Source: FDIC.

Despite having a positive impact on bank net interest income, the tightening of monetary policy has resulted in lower valuation of fixed-interest debt securities held in the trading book (in case of US banks, see Figure 1.2) and also a rise in liquidity risk (see Box 1.1.). At the same time, disruptions in the US banking sector led to a significant drop in market valuation of banks around the globe and a major increase in uncertainty. In Europe, the direct banking sector's exposures to the defaulting US banks are limited. Despite that, the contagion from the crisis of the middle-sized US banks was felt especially strongly by Credit Suisse (being one of the biggest banks classified as a globally systemically important institution). Yet, problems faced by Credit Suisse stemmed from sources other than those of the US banks. The mass outflows of deposits and drying-out of other sources of bank's funding caused an intervention of the Swiss financial safety net institutions and led to the bank's takeover by the UBS.

Financial markets witnessed also a huge spike in aversion to AT1 capital instruments, which in case of Credit Suisse were entirely written-down by the Swiss authorities, while the shares were not written down. This was an opposite approach to the one applied in the EU law concerning institutions undergoing resolution.

Box 1.1. Turmoil in the US banking sector

Events in the US banking sector in March 2023 confirmed interactions that may exist between monetary policy and financial stability. These interactions came to light as some banks failed to manage interest rate risk and liquidity risk properly, and run business model based on cheap, largely uninsured deposits. Lax regulation and inadequate supervision added to the problems.

Following a long period of low interest rates, a rise in global inflationary pressure prompted monetary authorities to tighten monetary policy and significantly raise interest rates. This posed challenges for some banks. Developments in the US banking sector also showed that the problems of even medium-sized banks can sometimes have systemic consequences, adversely affecting confidence in the entire sector and resulting in large-scale deposit withdrawals.

Causes and evolution of the crisis of SVB and other regional banks in the US

The Silicon Valley Bank (SVB) crisis was a consequence of the business model adopted by the bank coupled with improper management. Factors contributing to the bank's problems included: the mismatched asset and liability structure, management failures related to interest rate and liquidity risks, and heavy dependence on a volatile funding source, i.e. uninsured deposits of technology companies. In addition, the bank experienced unusually rapid and significant deposit outflows, which highlights the growing impact of new technologies and social media on the stability of banking institutions.

SVB was a medium-sized bank (the 16th largest US bank by total assets) which specialised in providing financial services to technology companies, particularly start-ups and venture capital funds. The period of low interest rates was conducive to the bank's robust growth. The companies served raised capital cheaply on financial markets and deposited the funds at the bank, resulting in tripling of the bank's assets between 2019 and 2021. The bank's main source of funding were high-value deposits of technology companies, the vast majority of which (94%) were not insured by the Federal Deposit Insurance Corporation (FDIC). At the same time, not anticipating a significant rise in interest rates in the US, the bank invested most of the funds in long-term securities, primarily US Treasury bonds or government-backed mortgage bonds. Although these instruments are characterised by low credit risk, they are highly sensitive to interest rate risk due to their long-term character.

The dynamic interest rate increase in the USA exposed a range of problems at SVB, which the bank tried to address too late. On the one hand, the bank had observed a gradual outflow of deposits for some time as a result of the difficulties experienced by its clients in raising market funding. On the other hand, the rise in interest rates caused a decrease in the market value of bonds held by the bank, which led to an (unrealised) loss on the bank's balance sheet. The loss materialised when SVB decided

to sell part of its bond portfolio in order to obtain funds for the mounting outflow of deposits.

The measures presented at the beginning of March 2023, aiming to enhance the bank's liquidity and capital positions, were perceived by its clients as a sign of SVB's weakness. When the bank announced the realised loss of USD 1.8 billion on the sale of its Treasury and agency bond portfolio, and a planned equity offering of USD 2.25 billion, it sparked concerns about the bank's current liquidity and capital position, resulting in a bank run. The information shared through social media caused that within a single day depositors withdrawn USD 42 billion of deposits, or 25% of the bank's deposit base. This prompted the supervisory authorities to step in and subsequently close the bank, bringing it under the control of the FDIC.

This caused the confidence in the stability of the US banking sector to decline, particularly with respect to medium-sized and larger regional banks[2] with a high share of deposits uninsured by the FDIC and a high level of unrealised losses on their securities holdings. Signature Bank, which was also linked to the technology industry – including activities related to crypto-assets – also experienced a significant deposit outflow (approximately 20%). This bank was also closed and brought under FDIC's control only within 53 hours of SVB failure.

The events surrounding SVB and Signature Bank caused a lot of nervousness in the US market, which manifested itself in a drop in the share prices of other regional banks. Among those was First Republic Bank, which held deposits of USD 176 billion at the end of 2022, of which 70% were uninsured. Despite assurances of a sound liquidity position of the bank, its shares were losing value rapidly. Faced with the mounting crisis, on 16 March 2023, 11 largest US banks provided liquidity support by making USD 30 billion of uninsured deposits into First Republic Bank. This, however, did not help to restore the confidence in the bank which continued to experience a significant outflow of deposits.

Towards the end of April 2023, while presenting its Q1 results, First Republic Bank revealed that during the first three months of 2023 the stock of deposits at the bank had shrunk by more than USD 100 billion (a fall of 40% as of end-2022). This caused the share prices to fall further and led to the closure of the bank. On 1 May 2023, First Republic Bank was put under the control of the FDIC which on the same day announced that a buyer, JP Morgan Chase Bank, had been found for the majority of the bank's assets and deposits.

Following the failure of First Republic Bank, further regional banks came under pressure, in particular PacWest and Western Alliance, whose shares saw sharp falls at the beginning of May 2023.

[2] According to the Fed analysis, small regional banks with assets under USD 50 billion did not experience massive deposit outflows. See S. Luck, M. Plosser, J. Young, Bank funding during the current monetary tightening cycle, Liberty Street Economics, Federal Reserve Bank of New York, 11 May 2023.

Regulation and oversight of SVB

The review of SVB oversight published by the Fed[3] shows that alongside mismanagement by the bank, its problems were also compounded by oversights and a less assertive supervisory approach. Although the supervisor identified many faults and weaknesses in the management of SVB, yet it failed to fully correctly assess risks building up in the bank. The bank's rapid asset growth caused that in recent years it was subject to two different sets of regulations, and different successive supervisory teams, which further complicated effective supervision.[4] In its review, the Fed also points out that the legislative changes of 2018, relaxing the requirements of the Dodd-Frank Act, led to SVB being subject to less stringent regulations than would have been the case had these changes not been enacted. Due to its asset size, SVB was classified as a so-called Category IV bank. As a result of the relaxed regulations, SVB did not have to meet the full Basel LCR and NSFR liquidity requirements, as well as the supplementary leverage ratio.[5] Moreover, it enjoyed milder capital planning requirements, did not have to recognise unrealised losses on securities held as available for sale (AFS) and it was also less frequently stress-tested by the Fed. SVB's resolution planning requirements were also limited. In its conclusions, the Fed indicates that if SVB had been subject to the pre-2018 regulatory requirements, this would have certainly affected its management, particularly in terms of liquidity.

Actions taken by financial safety net institutions in the US

Actions taken by the financial safety net institutions in the US were prompt, firm and unconventional. The package announced on 12 March 2023 consisted of two elements. Firstly, the Fed temporarily launched a new liquidity support programme, the so-called Bank Term Funding Program, offering loans with a maturity of up to one year against eligible collateral (including U.S. Treasury bonds) at par value rather than market value and without haircuts. In addition, the Fed programme has been backstopped by the US Treasury up to USD 25 billion. Secondly, following the adoption of the so call-

[3] Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank, Board of Governors of the Federal Reserve System, 28 April 2023.

[4] Until February 2021, the regulations and supervisory approach envisaged for regional banks (the regional banking organisations portfolio) were applied to SVB. Since February 2021, as the bank had reached the threshold of USD 100 billion in assets, SVB was supervised by a different supervisory team and in accordance with requirements provided for large banks (the large and foreign banking organisations portfolio).

[5] SVB had to meet the leverage ratio calculated as Tier 1 capital to total on-balance assets.

ed systemic risk exception[6], the FDIC protection was extended to all SVB and Signature Bank deposits and resolution of both banks started. To that effect, the FDIC set up a separate bridge bank for SVB and Signature Bank, respectively. In parallel, a bidding process for both bridge banks was initiated. Within a week, a purchaser, Flagstar Bank, was found for Signature Bridge Bank. After another week, it was announced that First Citizens Bank&Trust Company had acquired Silicon Valley Bridge Bank. In each case, the new private purchaser assumed the entire portfolio of deposits which at the moment of the acquisition became subject to the standard FDIC insurance limit, i.e. up to USD 250,000. The exception to this were deposits related to crypto-assets which were held at the Signature Bridge Bank and were excluded from the transaction. Moreover, the new market buyers did not take over some of the bridge banks' assets, leaving approximately USD 60 billion in loans and USD 90 billion in securities under receivership.

The SVB crisis also required supervisory authorities in other jurisdictions in which the bank operated to intervene. In the United Kingdom an SVB subsidiary, after it had experienced a heavy outflow of deposits, was acquired by HSBC for a symbolic GBP 1. In turn, in Germany and Canada it was decided to close the SVB branches operating in those countries.

Cost of the crisis to the FDIC

Since March during the regional bank crisis, the FDIC has carried out three resolution procedures, using the P&A (purchase and assumption). All costs related to resolution are funded from the Deposit Insurance Fund (DIF), whose balance as at end-2022 amounted to USD 128 billion. Preliminary estimates of the costs of the failures were as follows:

- Silicon Valley Bank – USD 20 billion
- Signature Bank – USD 2.5 billion
- First Republic Bank – USD 13 billion

Initially the FDIC estimated that losses resulting from protecting uninsured deposits due to the announcement of systemic risk exception would be USD 19.2 billion. However, on 11 May 2023 the FDIC informed this amount has been revised downward to USD 15.8 billion. According to the regulations, losses to the DIF as a result of protecting uninsured deposits should be recovered from the banking sector through a special assessment. The FDIC intends to impose special assessment on banks that

[6] The FDIC Act requires that the FDIC interventions against banks be conducted in line with the so-called least cost principle. Yet, there is one exception to this general principle, which applies in the face of systemic risk (the so-called systemic risk exception). If the actions taken against the problem bank in compliance with least-cost principle should imply serious adverse consequences for financial stability or the real economy, a waiver from the principle is possible. In such circumstances, after receiving a written recommendation of the FDIC and the Fed, the Treasury Secretary, in consultation with the President, approves the systemic risk exception.

benefited most from systemic risk exception determination, i.e. larger banks with large amounts of uninsured deposits. It is estimated that 113 banks would be subject to special assessment and that banks with assets over USD 50 billion would finance 95% of it. Smaller banks (with assets under USD 5 billion) would not be subject to the contribution The FDIC plans to collect special assessment for eight quarters starting in 2024.

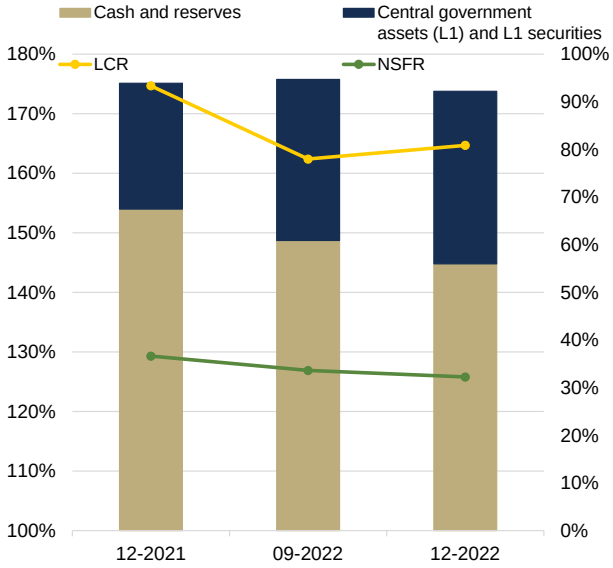
Banks in the EU are less exposed to the liquidity and interest rate risks than the U.S. banks. The short-term and long-term liquidity ratios of banks in the EU significantly exceed the regulatory minima (in the fourth quarter of 2022, the average LCR in the EU was 164.7% and in the case of NSFR it was 125.8%, see Figure 1.3). In the EU banks, cash and reserves account for, on average, half of liquid assets, while funding sources are diversified, with the leading share of retail deposits (substantial part of which is covered by the deposit guarantee scheme). Nevertheless, the global market turmoil, upcoming targeted long-term refinancing operations (TLTRO) repayments by euro area banks, as well as the possibility of a further rise of interest rates, especially in the euro area, will contribute towards a gradual increase in the costs of bank funding in the following quarters. However, the impact of interest rate increases on individual banks will be heterogenous, dependent on their balance-sheet structure and the extent to which banks hedge against this risk.

Highly uncertain global outlook, low economic growth forecasts for 2023, still elevated inflation and persisting high interest rates may contribute to the deterioration of asset quality and to rising credit risk in the EU banking sector. Global corporate indebtness remains at its all-time high, enterprise costs of financing are going up, while both profitability and cash buffers built up during the COVID-19 pandemic are decreasing. Moreover, tighter bank lending policy limits access and increases costs of credit-funded financing to enterprises. Also, the credit risk of households is growing, which stems from, among others, a reduction in the purchasing power due to high inflation. All these factors may negatively impact the banking sector's earnings and contribute towards the rise in credit risk in the EU banking sector. This is evidenced by the halt in the hitherto downward trend of the non-performing loans ratio in the fourth quarter of 2022, while the share of Stage 2 loans in banks' portfolios remains high (see Figure 1.4).

The risk of cyberattacks against financial institutions still remains high. Such risk has grown significantly since Russia invaded Ukraine and may destabilize the continuity of provision of critical functions in the economies and financial systems of EU countries, thus potentially causing systemic consequences. In line with the ECB analysis,[7] exposure to cyber risk is one of the major challenges currently faced by financial institutions in Europe.

[7] ECB, Aggregated results of SREP 2022, Frankfurt 2023 and ECB, SSM supervisory priorities 2023-2025, Frankfurt 2023

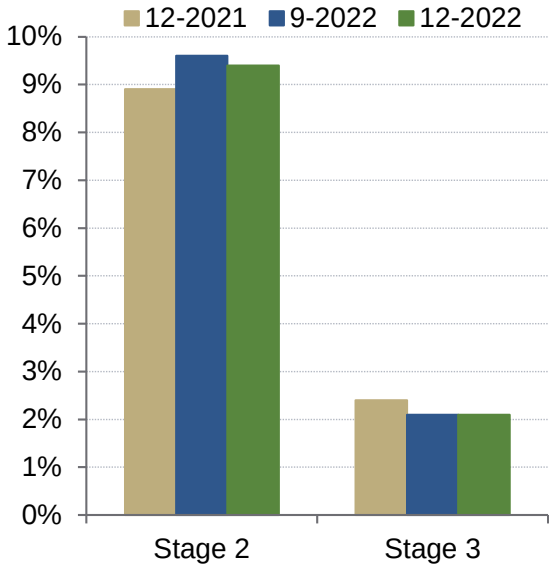
Figure 1.3 LCR and NSFR at banks in EU



Notes: Lines are the levels of LCR and NFSR (left-hand scale); values shown in columns are sum of shares of cash and reserves, as well as "Level 1 assets" in liquid assets compliant with the LCR requirements (right-hand scale); values of "Level 1 assets" mean assets of high liquidity and credit quality, referred to Article 416(1) of Regulation (UE) No 575/2013.

Source: EBA Risk Dashboard 4Q2022.

Figure 1.4 Share of Stage 2 and Stage 3 loans according to IFRS 9 in total loans in EU



Notes: Values are shown as shares in total exposures in a given country.

Source: EBA Risk Dashboard 4Q2022.

Despite the discussed risks, the resilience of the EU's banking sector is high. This is evidenced by the stable and relatively high capital adequacy ratios and a moderate level of leverage. Such assessment is also confirmed by the positive results of the 2022 ECB Supervisory Review and Evaluation Process (SREP) for banks in the banking union,[8] including for the interest rate risk management. A further rise in banks' profitability (mostly stemming from higher net interest income following interest rate hikes)[9] also has a positive effect on bank resilience in the EU. On the other hand, the risk of potential materialization of liquidity problems is reduced by the central banks' declaration of readiness to provide access to liquidity supporting instruments[10] to commercial banks.

[8] Details of the results of the SREP in the banking union can be found at https://www.bankingsupervision.europa.eu/press/pr/date/2023/html/ssm.pr230208~8971619db2.en.html.

[9] Despite this, ROE remains slightly below the estimated cost of capital. See EBA, Risk assessment of the European banking system, December 2022.

[10] ECB press releases available at: https://www.ecb.europa.eu/press/pr/date/2023/html/ecb.pr230319_1~8d62af24ac.en.html and https://www.ecb.europa.eu/press/pr/date/2023/html/ecb.pr230319~744758829c.en.html.

1.2. Macroecnomic situation in Poland

Following a period of a robust economic recovery, since 2022 Q2 economic climate in Poland has worsened due to the global supply shock aggravated by the consequences of Russia's aggression against Ukraine. GDP growth in 2022 Q3 and Q4 declined to 3.9% y/y and 2.3% y/y, respectively (compared to 6.1% y/y in 2022 Q2), amid a considerably slower consumption growth and pessimistic consumer sentiment. At the same time, the scale of the fall in GDP in this period was limited by the rising contribution of net exports.

CPI inflation in Poland in recent months has declined, although it still continues to run high. The annual growth in consumer prices, following a 18.4% y/y rise in February 2023, declined in March and April to 16.1% and 14.7%[11], respectively, which was supported by a fall in energy price inflation, largely on account of the base effect connected with the strong rise in the prices of fuels, heating oil and liquid gas in 2022 i.e. after the outbreak of the Russian aggression against Ukraine. The persistently high growth in consumer prices – despite falling demand growth – is supported by the cost pressure driven by high energy prices as well as the earlier disruptions in global supply chains and international transport. On the other hand, the scale of the current inflation is limited by the anti-inflationary measures taken by the government.

In accordance with the March "Projection of inflation and GDP" – prepared under the assumption of unchanged NBP interest rates[12] — the rate of economic growth in Poland in 2023 will amount to 0.9% y/y (compared to 5.1% y/y in 2022 according to the Statistics Poland data). In the coming quarters domestic economic conditions will be affected by the strong negative supply shock – spread out over time - reflected in high prices of many commodities, goods and services. In 2023 domestic economic growth will be also curbed by a significant fall in GDP growth abroad and the gradually materialising effects of the NBP interest rate hikes implemented up to date. The scale of the decline of domestic GDP growth will be mitigated by the changes in fiscal policy reducing the negative impact of high energy prices on households, sensitive entities and enterprises. In the years 2024-2025 economic growth will accelerate slightly (to reach 2.1% y/y and 3.1% y/y respectively) due to the gradual fading of negative supply shocks and the rebound of activity abroad. In line with the projection, by the end of 2025 GDP in Poland will continue to run below its potential, which will support the fall in CPI inflation in the coming years.

In the years 2023-2025, along with the fading impact of negative supply shocks, amid lower level of demand pressure in this period, CPI inflation will decline. In accordance with the March projection, despite the expected gradual decline, consumer price growth will not return to the tolerance band of deviations from the NBP inflation target of 2.5% +/- 1 p.p. until the second half of 2025. The current inflation, which has climbed to the highest level in many years, is becoming more and more persistent

[11] Data for April 2023 based on the Statistics Poland Quick Estimate of 28 April 2023.

[12] The projection was prepared under the assumption of unchanged NBP interest rates based on the data available until 28 February 2023 (consequently, the reference rate of 6.75% was assumed).

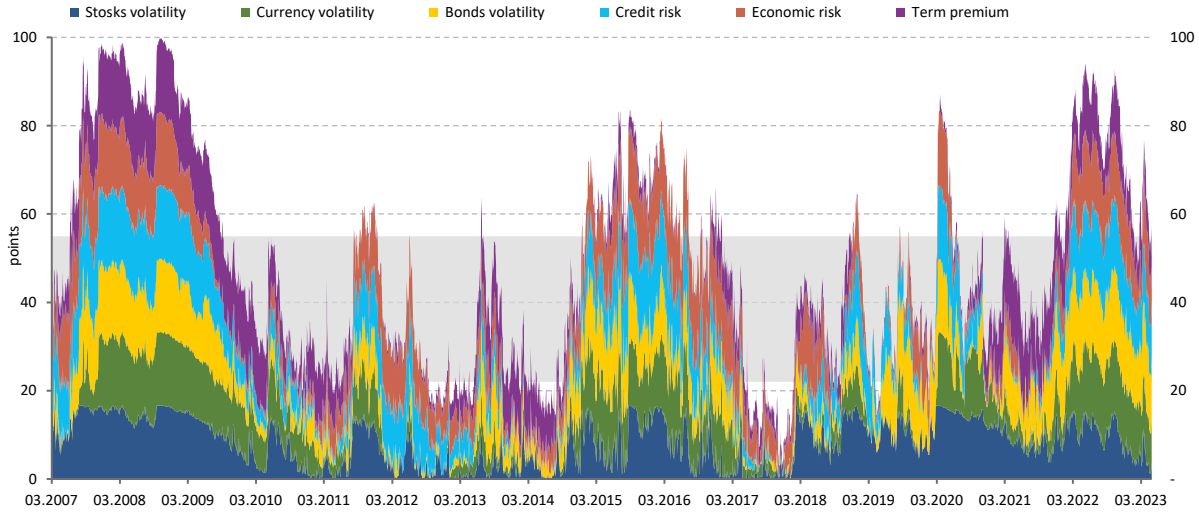
due to rising short-term inflationary expectations, which translate into the still heightened wage pressure and the increased acceptance of price rises in many sectors of the economy.

The future economic outlook and the path of CPI inflation in Poland are largely dependent on macroeconomic consequences of the Russian aggression against Ukraine. The effects on the global economy of monetary policy tightening by many major central banks are an additional serious risk factor in the environment of the Polish economy. Apart from the external conditions, the scale and the scope of the future anti-inflationary shield measures of the government are an important source of uncertainty.

1.3. Financial markets

1.3.1. Global markets

Figure 1.5. Risk pricing on global financial markets



Notes: Risk index estimate based on normalised distribution of empirical measures of selected risk categories according to weights defined on the basis of the analysis of the main components: stock market volatility – the VIX index, bond volatility – the MOVE index, currency volatility – the JPM G7 volatility index, economic risk – TED spread, credit risk – the credit spread of corporate bonds; the grey area denotes risk-neutral levels, below 22 points – risk appetite, above 55 points – risk aversion.

Source: Bloomberg data, own study based on Morgan Stanley Research "EM Risk Indicator: A Regime-Switching Model Approach".

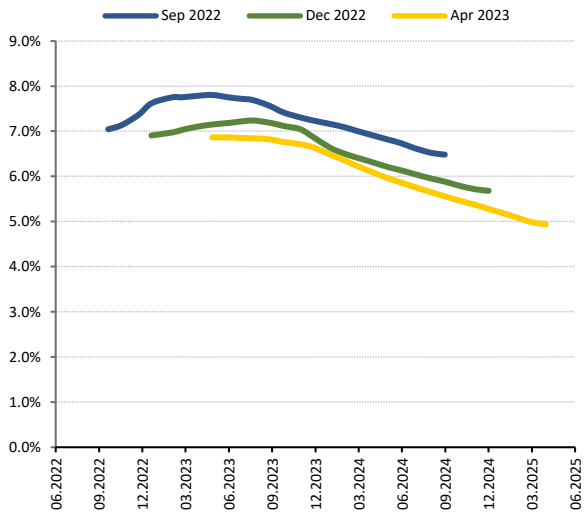
Positive sentiment on global financial markets since early 2023 changed in March when the risk premium grew significantly. The initial decrease in risk pricing was related to reduced global recession concerns and investor expectations about rapid end of the interest rate increase cycle by major central banks. The situation changed abruptly upon the emergence of problems of regional banks in the United States (see Box 1.**1**), which had a negative impact on the perception of the situation of banks in Europe, and in particular caused a loss of confidence in the stability of Credit Suisse. This led to a significant, albeit temporary, surge in risk aversion and investors' flight to safe havens assets (see Figure 1.5). Moreover, investors' concerns about the potentially negative impact of the financial sector turmoil on global economic growth have increased. In turn, despite still high inflation readings, this reduced the scale of

the expected monetary policy tightening in the United States and the euro area. Persistently high uncertainty about the future rate of economic growth and inflation additionally translated into an increase in risk aversion, and the largest discounts in the period of the disturbance in the banking sector concerned the assets of financial institutions. On the other hand, the war in Ukraine currently does not have a significant impact on the valuation of financial assets.

1.3.2. Financial market in Poland

Market expectations for a further NBP interest rate increases have faded. This was driven by slowing inflation forecasts as well as the reduction of the expected target levels of interest rates in the United States and the euro area. As a result, FRAs began to factor in the possibility of an NBP interest rate decrease in early 2024 (see Figure 1.6).

Figure 1.6. Changes in the FRA-implied expected WIBOR 1M rate



Source: Thomson Reuters, own calculations.

Figure 1.7. Yields on Treasury securities and spread to German Bunds

Notes: The spread in the yields on Polish bonds denominated in PLN and in EUR to German Bunds.

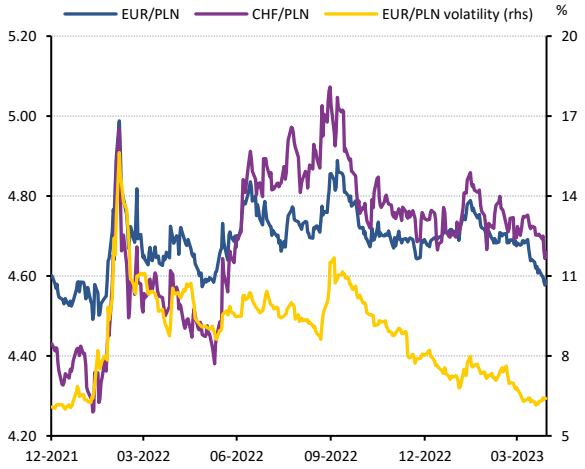
Source: Thomson Reuters.

The decline of bond yields from the record level of 9%, observed since the end of October 2022, has been driven by the decrease in the expected target level of interest rates and falling risk aversion on global financial markets (see Figure 1.7). Moreover, uncertainty about the possible broader consequences of failures in the U.S. banking sector and the failure of Credit Swiss have translated into a rise in attractiveness of safe assets. The subsequent interest rate increases by the ECB and the dwindling interest rate spread between Poland and the euro area have translated into a narrower spread between yields on Polish bonds, denominated in both PLN and EUR, and yields on German Bunds.

Throughout most of the period under analysis, the zloty exchange rate against EUR and CHF have remained stable thanks to strong macroeconomic fundamentals and a better current account balance. The volatility and range of zloty fluctuations against EUR and CHF have diminished considerably (see Figure 1.8).

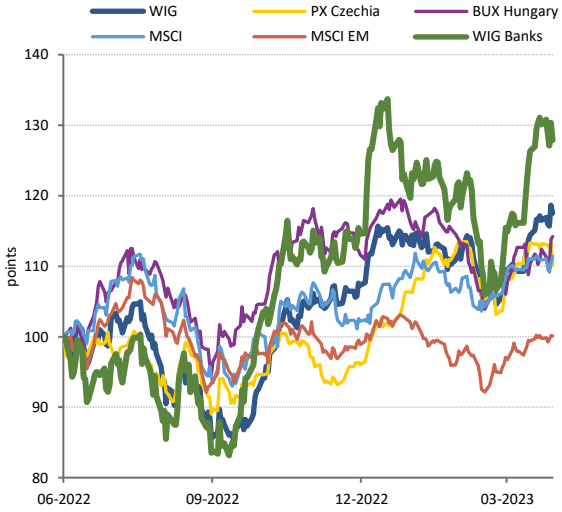
In the first quarter of 2023, the Polish equity market remained in a horizontal trend after a dynamic rebound in the fourth quarter of 2022 from the previously observed low share valuation. Against the backdrop of the equity market, bank valuations stood out in the wake of rising interest income and low costs of credit risk despite uncertainty regarding a continuation of the loan repayment holidays. However, the February 2023 release of an opinion of the Advocate General of CJEU and the panic selling of bank stocks in the United States and Europe were behind their significant albeit temporary markdown in March 2023 (see Figure 1.9).

Figure 1.8. Zloty exchange rates against EUR and CHF and implied EUR/PLN volatility



Note: EUR/PLN exchange rate volatility implied from 3M options.
Source: Thomson Reuters.

Figure 1.9. Changes in the WIG index against regional indices and indices of emerging markets



Note: Stock exchange indices: the global index (MSCI), indices of selected emerging markets (MSCI EM), WIG, WIG Banks, PX and BUX were normalised to 100 as at the end of June 2022.

Source: Thomson Reuters.

Box 1.2. Challenges associated with the replacement of WIBOR reference rates with the WIRON benchmark or compound rates based on WIRON

WIBOR reference rates which are widely used in financial contracts and financial instruments will be replaced by the WIRON benchmark or compound rates[13] based on WIRON. In December 2020, the KNF authorised GPW Benchmark as the administrator of the critical interest rate benchmark[14], thus confirming that the methodology of determining the WIBOR reference rate is compliant with the

[13] WIRON is an O/N rate. The compound rates determined on the basis of WIRON (for predefined terms or a fixed-based index for any term) allow to devise the term structure for using them in financial contracts and financial instruments.
[14] The decision of KNF is available at https://dziennikurzedowy.knf.gov.pl/DU_KNF/2020/32/akt.pdf.

BMR[15] and ensures that this benchmark is robust and reliable. Therefore, there are no legal or economic grounds to deny the correct determination of the benchmark. An orderly replacement of the WIBOR reference rates, coordinated by the National Working Group for benchmark reform, which was set up in July 2022, results from the implementation of the recommendations of international organisations regarding the move away from IBOR-type benchmarks around the world, the structural determinants of the domestic deposit transactions market, and measures taken in other jurisdictions. In September 2022, the Steering Committee of the National Working Group selected WIRON as an alternative benchmark to WIBOR and adopted a road map for the said replacement.[16] In line with the road map, WIBOR benchmarks will no longer be calculated and published in 2025.

A replacement of WIBOR benchmarks in the existing financial contracts which do not contain suitable fallback provisions, describing the procedures in event of the cessation of the benchmarks applied in these contracts, may be conducted as a result of the voluntary annexing of these contracts or by regulatory means. This applies in particular to contracts concluded with non-financial entities, including individual clients, and to issued bonds, because the bulk of transactions in interest rate derivatives between financial institutions are based on ISDA[17] documentation, while transactions cleared by CCPs will be subject to fallback provisions included in these entities' documentation. The National Working Group's recommendations are aimed at indicating to financial market participants the good practices related to the replacement of references to WIBOR benchmarks in the existing contracts (the so-called legacy portfolio) on a voluntary basis between parties to the contracts, e.g. by signing annexes with suitable fallback provisions. The Minister of Finance regulation could apply to all the remaining contracts which will not contain the said fallback provisions upon the cessation of the publication of the WIBOR benchmark. The Minister of Finance regulation could indicate the replacement for that benchmark, the method for determining the spread adjustment to correct for the structural differences between the benchmark to be replaced and its replacement, the corresponding

[15] Regulation (EU) of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014 (OJ L171 of 2016, p. 1, as amended).

[16] The National Working Group document is available at https://www.knf.gov.pl/knf/pl/komponenty/img/mapa_drogowa_procesu_zastapienia_wskaznikow_referencyjnych_79725.pdf.

[17] Amendments to *2021 ISDA Interest Rate Derivatives Definitions* and *ISDA 2020 IBOR Fallbacks Protocol* introduce the suitable fallback clauses in the event of the cessation of the WIBOR benchmark.

essential conforming changes and the date/dates from which the replacement applies. The amendment of the BMR[18] empowered the European Commission and the relevant national authorities of EU Member States to designate replacements for critical benchmarks. The EC has already used these powers, issuing in 2021 an implementing regulation which determined a replacement for the CHF LIBOR benchmark. The prerequisites for the regulatory replacement in existing contracts of a benchmark critical for one Member State, such as WIBOR, are, in turn, laid down in Article 23c of the BMR.

Replacement of WIBOR with WIRON may result in temporary difficulties for financial institutions in effectively hedging against interest rate risk. This is related to the replacement of WIBOR benchmarks, whose level is known at the beginning of the interest period (forward looking), with compound rates (calculated by compounding WIRON benchmarks observed each day) whose level is known only at the end of the interest period (backward looking). As far as the methods of calculating interest rates in new contracts can be developed in a way that would ensure strong overlap of the observation period and the interest period, and thus high efficiency of derivatives in reducing interest rate risk, in the case of the legacy portfolio the rules of converting the existing contracts may envisage a different way of calculating interest than the applicable standard for OIS transactions used for hedging against interest rate risk. Irrespective of this, the effectiveness of such transactions will hinge on the existence of a liquid market of derivatives based on the WIRON benchmark or compound rates calculated based on WIRON. The emergence of such a market may depend on, among others, the pace at which domestic banks include in their offer new products that are based on the new benchmark, the scale of issuance of WIRON-based floating rate bonds, as well as on ensuring that financial market infrastructure entities (especially trading venues and CCPs) are able to process WIRON-based transactions.

A smooth replacement of WIBOR reference rates by the WIRON benchmarks or by compound rates calculated based on WIRON requires the proper preparation and involvement of all market participants and stakeholders of the above mentioned benchmarks. In particular, the following are the key factors for the success of benchmark replacement: increasing the awareness of the process and its possible consequences, increasing financial sector entities' and bond issuers' activity related to offering new WIRON-based products, developing reference rates which could serve as alternative benchmarks to WIRON (among others, for the purposes of complying with the requirements arising from Article 28 of the BMR) and increasing the liquidity of the OIS market based on WIRON.

Should a substantial portion of the existing contracts where WIBOR reference rates are used be subject to the conversion on a regulatory basis, it would be important to ensure that no party to the contract is given preferential treatment. The spread adjustment adopted in the regulation by the

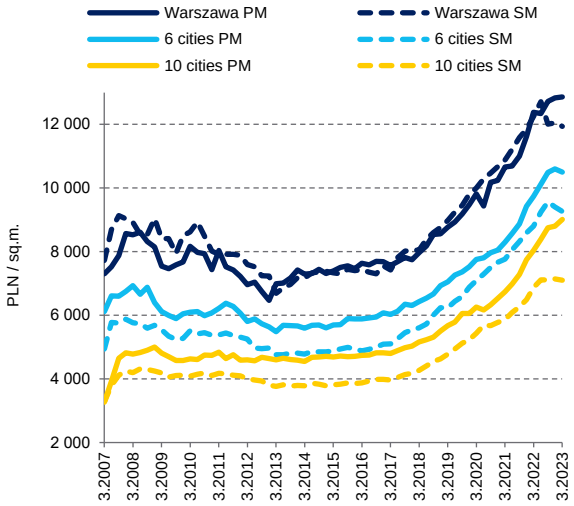
[18] Regulation (EU) 2021/168 of the European Parliament and of the Council of 10 February 2021 amending Regulation (EU) 2016/1011 as regards the exemption of certain third-country spot foreign exchange benchmarks and the designations of replacements for certain benchmarks in cessation, and amending Regulation (EU) No 648/2012 (OJ L49 of 2021, p. 1).

Ministry of Finance should be set in compliance with international standards and should be uniform for various products. Otherwise, in the case of loan agreements this could imply a negative impact on banks' net income, and in the case of e.g. bonds this could undermine investor confidence in bond issuers. Moreover, it would be advisable for the conversion rules determined in the said regulation to make it possible for banks to maintain the existing links under hedge accounting rules, so that they avoid the need to recognise the one-off impact of a change on their profit and loss account, which could result in substantial losses.

1.4. Real estate market[19]

The second half of 2022 saw activity stabilisation on the housing market and search for a fresh balance point following the significant correction of demand. **The impacts of halted demand on price developments on local housing markets varied.** Real transaction price growth, measured by CPI growth and wages growth, fell, to the most extent in Gdańsk. Demand for older dwellings, in better locations, but smaller ones, has continued.

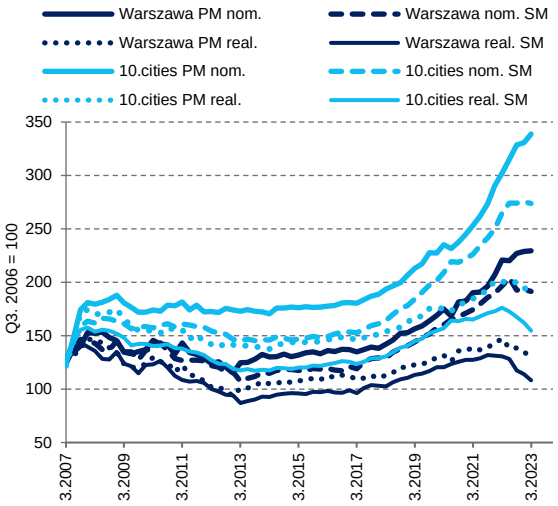
Figure 1.10. Transaction prices of dwellings in the primary (PM) and secondary market (SM) in selected groups of cities in Poland



Note: 6 cities include Gdańsk, Gdynia, Kraków, Łódź, Poznań and Wrocław, and 10 cities include: Białystok, Bydgoszcz, Katowice, Kielce, Lublin, Olsztyn, Opole, Rzeszów, Szczecin and Zielona Góra.

Source: NBP.

Figure 1.11. Index of nominal and real dynamics of housing transaction prices on the primary (RP) and secondary (RW) markets in Warsaw and 10. cities (Q3 2006=100)



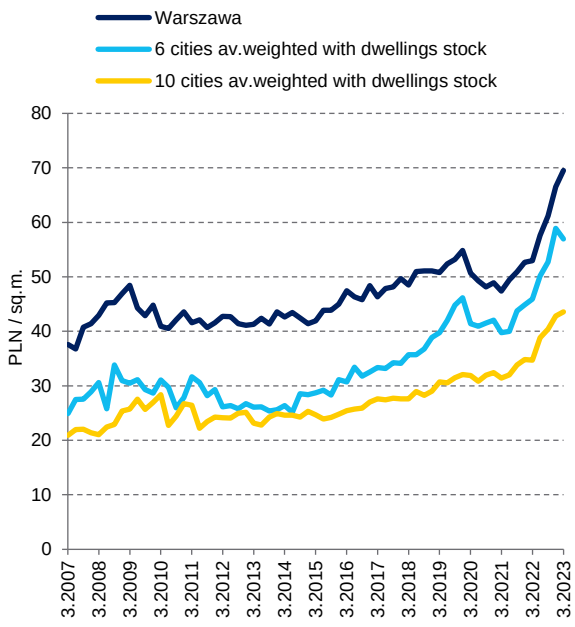
Source: NBP.

[19] More information about the current situation in Poland's real estate market can be found in "Information on home prices and the situation in the residential and commercial real estate market in Poland in 2022 Q4", available at the NBP website https://nbp.pl/publikacje/cykliczne-materialy-analityczne-nbp/rynek-nieruchomosci/informacja-kwartalna/

Rental rates in Poland's largest cities continued to rise amid sustained significant demand for rental (among others, students and staffed working remotely and war migrants), with limited supply of new dwellings for rental. Despite the rise, rental is still cheaper than the loan-financed purchase of own dwellings. The profitability of rental remains higher than the interest rate on deposits, however it is lower than on Treasury bonds. This means that potential investors continue to show interest in investment in rental housing.

The year 2022 saw a decline in the number of contracts sold for housing constructions on the primary market compared to the last years' average. The decline should be related to the dwindling purchasing power of average households and the higher cost and requirements of credit availability. As a result, the time needed to sell the whole housing stock put on the primary market has increased recently (assuming current demand levels).

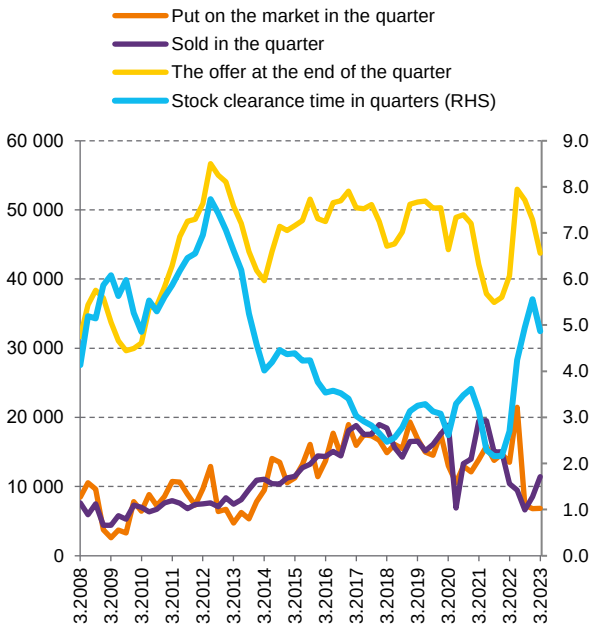
Figure 1.12. Average (asking and transaction) rental rates in selected groups of cities in Poland



Note: 6 cities include Gdańsk, Gdynia, Kraków, Łódź, Poznań and Wrocław, and 10 cities include: Białystok, Bydgoszcz, Katowice, Kielce, Lublin, Olsztyn, Opole, Rzeszów, Szczecin and Zielona Góra.

Source: NBP.

Figure 1.13. Sale time, number of flats introduced to the primary market, sold and offered on the six largest markets in Poland



Source: NBP.

The commercial real estate market is functioning in a similar way as before the pandemic, but the pandemic-related restrictions accelerated the previously observed changes. In view of the rising share of remote work, commercial tenants report lower demand for office space. High-standard office buildings in prime locations, in terms of availability of transport, especially those environmentally friendly, are the exception. Remote work and e-commerce have a negative impact on office space demand. As a result, there has been a slowing supply in new office space, stagnation in supply in new

retail space and a still rising supply of warehousing space. The value of real estate stock is still relatively low as Polish banks show a low interest in the commercial real estate sector relative to its assets[20].

A relatively stable situation on the commercial real estate market can also be evidenced by credit risk indicators in the case of loan-financed commercial real estate. The share of stage 2 loans for office and retail real estate has fallen since the second quarter of 2022, and in the case of office space real estate it has returned to pre-pandemic levels (see Chapter 2.1 and Figure 2.9). The relatively stable situation may seem non-obvious against the backdrop of the problems of the commercial real estate market in the world. It is the result of, among others, the fact that the commercial real estate stock in Poland is still small and relatively dispersed across the country.

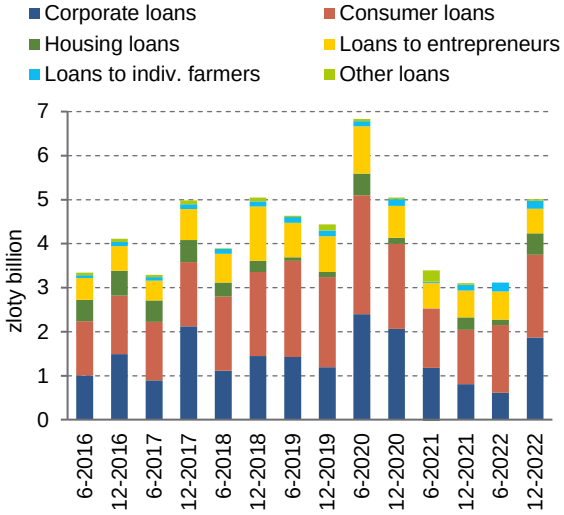
[20] The end of 2021 value of commercial real estate in Poland is estimated at 355 billion zlotys (see *Report on the situation in the residential and commercial real estate market in Poland in 2021*). The financial market's exposure to real estate for enterprises (loans to housing developers, loans for office real estate, retail real estate, warehouse real estate and other real estate) takes two main forms (see definitions of the European Systemic Risk Board). The former is related to the financing of a given real estate by a loan. The end of 2022 value of loans for this purpose amounted to 71 bn zlotys. The latter includes loans granted to enterprises for various purposes but secured on real estate. Gross carrying amount of a portion of fully mortgage-backed exposures at the end of 2022 amounted to 149 bn zlotys, and it included, to a considerable extent, loans for commercial real estate purchase and real estate construction purposes. It can be estimated that the enterprises in question were granted approx. 78 billion zlotys in mortgage-secured loans for purposes not related to loan collateral, including working loans and investment loans. The scale of banks' investment in the commercial real estate sector can be seen if the loans are compared with the total value of loans granted to enterprises, which at the end of 2022 amounted to 435 billion zlotys. Loans granted for commercial real estate purchase or commercial real estate construction account for 16% of loans granted to entrepreneurs, whereas mortgage-secured loans account for 34% of corporate loans.

2. Main risk areas in the banking sector

2.1. Credit risk

The deteriorating economic situation observed since the second half of 2022 and higher loan servicing costs were reflected in an increase in loans in arrears and credit losses for the majority of loan types (see Figure 2.1-Figure 2.4). Short and medium-term arrears have reached levels similar to those before the Covid-19 pandemic. The weakening of the loan servicing capacity of enterprises has been affected by the deterioration of the financial position of enterprises[21], including liquidity and profitability ratios, in an environment of declining economic growth. However, these ratios are still at relatively high levels, similar or higher than before the pandemic.

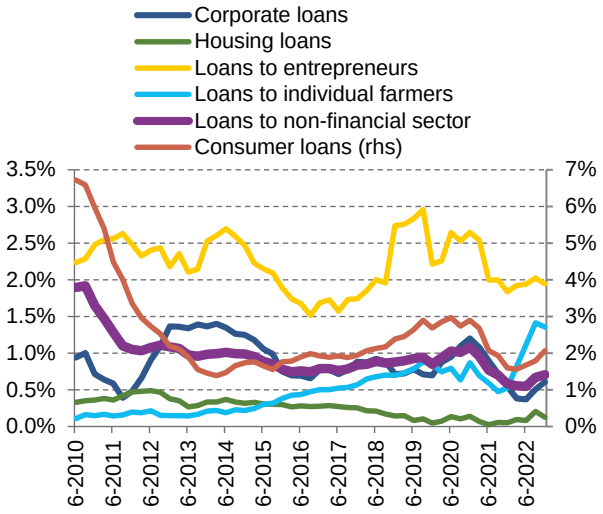
Figure 2.1. Loan losses by semi-annual periods



Notes: in this and the following figures: data for loans to individual entrepreneurs and farmers, excluding housing loans, data on housing loan losses, excluding the impact of the costs of provisions for the legal risk of FX loans, recognised as loan losses by several banks.

Source: NBP.

Figure 2.2. Loan losses to net loans ratio



Notes: Annualised data.

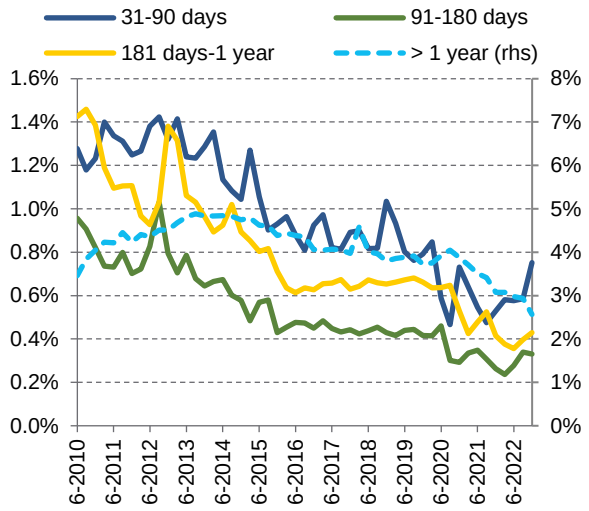
Source: NBP.

On the other hand, the household sector was adversely affected by the real fall in wages and the rise in the cost of living. At the same time, unemployment, which is the strongest determinant of households' loan servicing ability, remained very low. The ability to repay both household and corporate loans was reduced by the high loan servicing costs due to relatively high interest rates. In the case of

[21] Information and assessments on the situation of enterprises surveyed by NBP, their demand for loans and the reasons for changes in the demand referred to in this chapter come from the NBP publication: "NBP Quick Monitoring Survey. Economic Climate in the enterprise sector", April 2023, and its previous editions, available at www.nbp.pl. The assessment of the situation of households is based on "Inflation Report. March 2023".

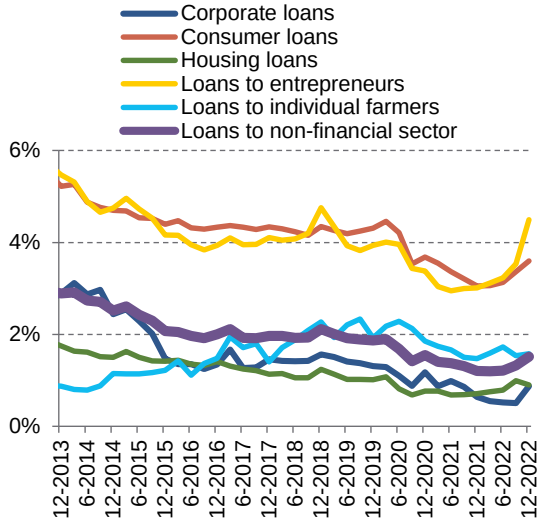
housing loan borrowers, the impact was limited by loan repayment holidays and the possibility to receive support under the Borrower Support Fund.

Figure 2.3. Shares of loans in arrears to the non-financial sector in individual arrears classes



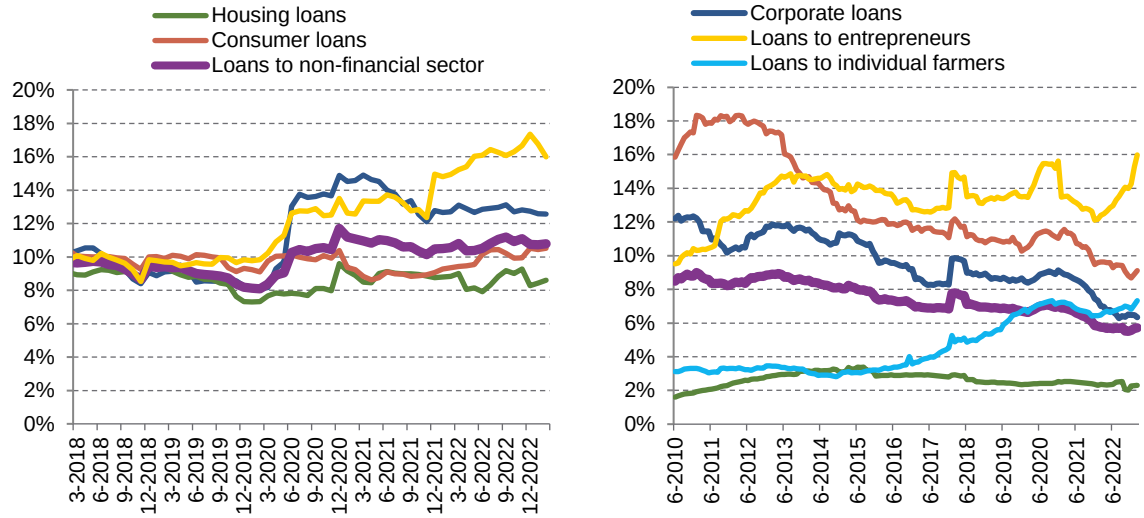
Source: NBP.

Figure 2.4. Shares of short and medium term arrears (31 days to 1 year) for individual types of loans and for the entire aggregate of loans to the non-financial sector



Source: NBP.

Figure 2.5. Share of Stage 2 loans (left-hand panel) and Stage 3 loans (right-hand panel) in individual types of loans and for the aggregate of loans to the non-financial sector



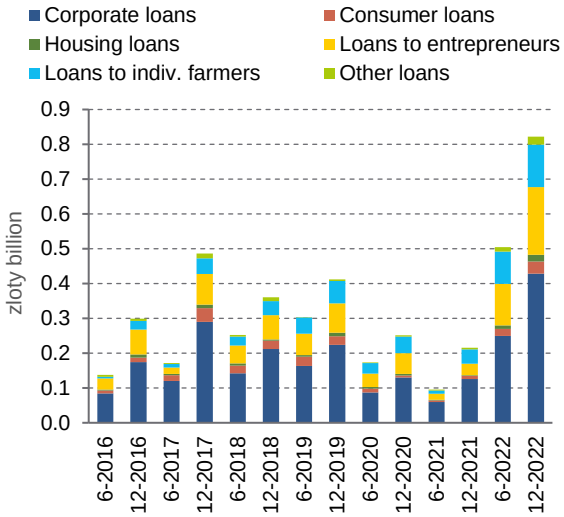
Notes: Share of Stage 2 loans – data for banks applying IAS/IFRS. Share of Stage 3 loans (impaired loan ratio) – aggregate data for the banking sector.

Source: NBP.

The impact of the deteriorating situation of borrowers on the quality of banks' loan portfolio (see Figure 2.5) was offset by factors of an extraordinary nature. The slight decrease in the share of impaired loans in total loans was the result of the following events: (i) large loan sales transactions, (ii)

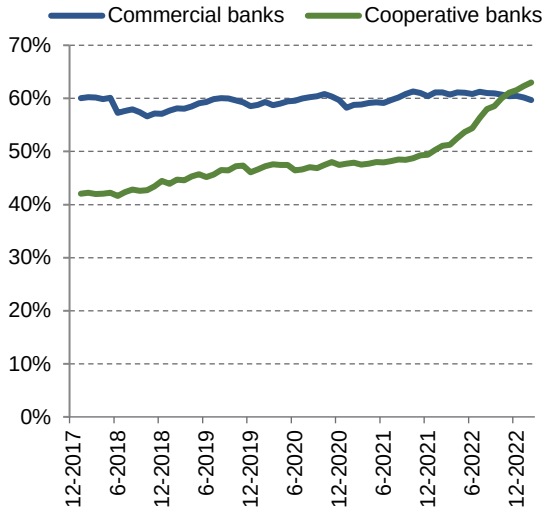
transfers to off-balance sheet records after they have been fully written off[22] and (iii) statistical effects resulting from the discontinuation of activity by Getin Noble Bank[23]. The exception was the deterioration in the quality of loans to individual entrepreneurs, which was affected by the difficult situation of the sector of micro-enterprises.

Figure 2.6. Loan losses in cooperative banks by semi-annual periods



Source: NBP.

Figure 2.7. Coverage of impaired loans by provisions in loans to the non-financial sector



Source: NBP.

A relatively high increase in loan losses was recorded in cooperative banks (see Figure 2.6). However, this was to a considerable extent the result of a more conservative approach of these banks to specific provisions. At the same time, the value and ratio of impaired loans did not change significantly while the increase in arrears was insignificant. The higher level of impaired loan coverage by provisions (see Figure 2.7) resulted, among others, from the reduction in the value of collaterals deducted from the base of creating specific provisions in 2022 (mainly in cooperative banks belonging to the IPS BS systems). The extent of this increase was so high that the coverage of impaired loans by provisions, which in cooperative banks has historically been much lower than in commercial banks, now exceeds them (see Figure 2.7). The more conservative approach of cooperative banks to the creation of specific provisions was supported by the strong growth in profitability of cooperative banks in the environment of high interest rates (see Box 2.1).

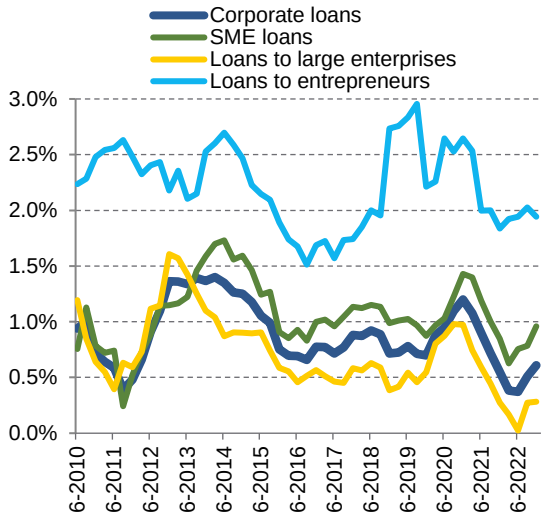
[22] Excluding the effect of the partial acquisition of Getin Noble Bank S.A. loans by Velobank S.A., the amount of impaired loans sold in the second half of 2022 reached PLN 2.0 billion, while the amount of impaired loans transferred to off-balance sheet records was PLN 2.6 billion.

[23] Since October 2022, assets of Getin Noble Bank S.A. have not been included in the aggregates presented in the *Report* on the basis of FinRep prudential reporting, which has an impact on the changes in their value in 2022 Q4, particularly in the case of housing loans and, to a lesser extent, in consumer loans.

Loans to business entities

The deterioration in credit risk indicators affected the liabilities of all groups of enterprises (see Figure 2.1-Figure 2.5 and Figure 2.8). Short and medium arrears increased in all loan segments, while loan losses increased in loans to large enterprises and SMEs. In the scope of loans to individual entrepreneurs, credit losses increased mainly in cooperative banks. At the same time, credit risk indicators were the lowest in loans to large companies, slightly higher in loans to SMEs, while the indicators for loans to individual entrepreneurs were the worst, which reflects the diversity of the economic situation of entities, depending on their size.[24]

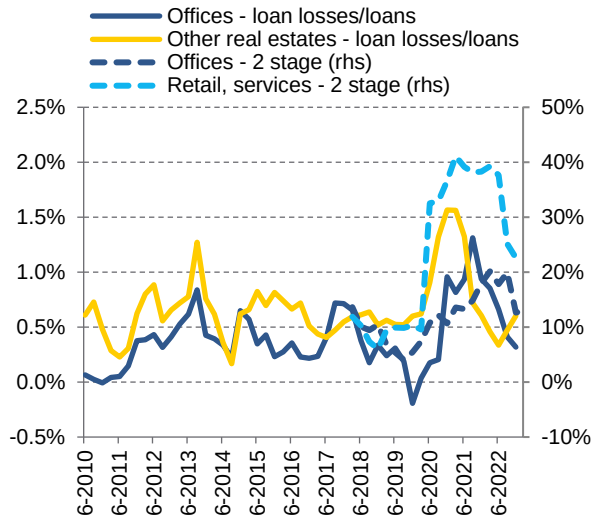
Figure 2.8. Ratio of loan losses to net loans in corporate loans and loans to individual entrepreneurs



Notes: Annualised data.

Source: NBP.

Figure 2.9. Ratio of loan losses to net loans and share of Stage 2 loans in loans by individual types of real estate (according to their purpose)



Note: Share of Stage 2 loans – for banks applying IAS/IFRS. Other real estate – other than residential or office (including commercial and retail) real estate. Ratio – annualized data.

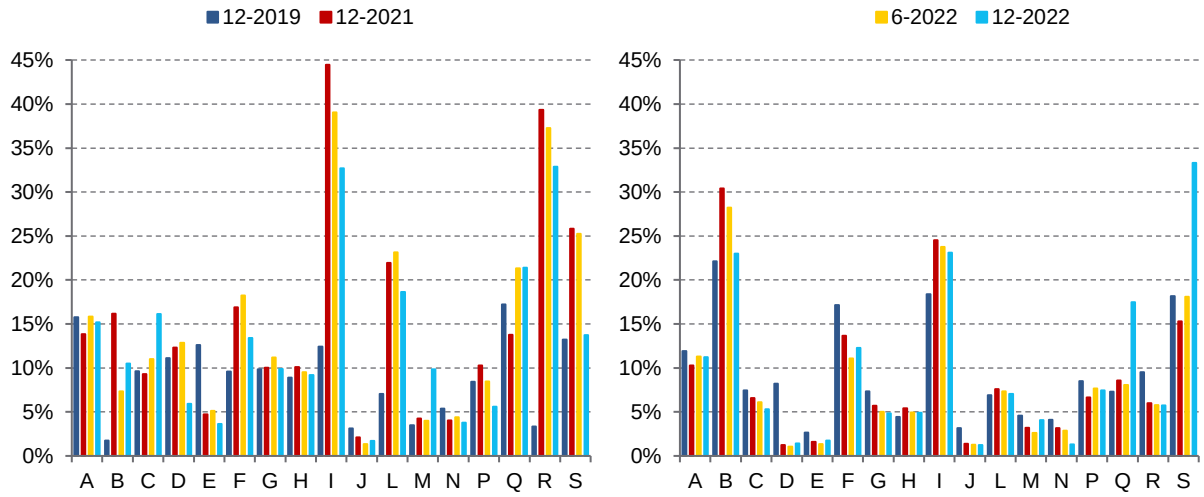
Source: NBP.

The impact of the war in Ukraine on the position of enterprises and the recovery of the branches most strongly affected by the Covid-19 pandemic, contributed to the change in risk assessment of individual industries by banks. In some of the branches most strongly affected by the rise in energy and gas prices, in particular for some industries in the manufacturing section (e.g. production of ceramic tiles and glass, fertilisers, furniture) and the healthcare section (hospitals), the shares of Stage 2 and, in some cases, Stage 3 loans increased (see Figure 2.10). On the other hand, an improvement was

[24] Approx. 54% of micro-enterprises described their condition as good or very good in the final months of 2022 (against 65% in the previous year), compared to 70% of entities in the SME sector and 80% in the sector of large enterprises – see NBP publication: "NBP Quick Monitoring Survey. Economic Climate in the enterprise sector", January 2023, p. 22, available at www.nbp.pl.

seen in loans to entities in the section most severely affected by the pandemic in the past – accommodation and food service activities, real estate services, culture, recreation and entertainment and other services. The decrease of risk in loans to the section of real estate services was also reflected in an improvement in credit risk indicators for loans to retail real estate (including the so-called shopping malls) and commercial real estate (see Figure 2.9).

Figure 2.10. Share of Stage 2 loans (left-hand panel) and Stage 3 loans (right-hand panel) in loans to individual NACE sections



Notes: data for banks applying IAS/IFRS. Estimates of shares in loans based on the reporting of large exposures. Data also includes part of the loans to entrepreneurs and individual farmers. Sections: A – Agriculture, B – Mining, C – Manufacturing, D – Electricity, gas and heating supply, E – Water supply, sewerage and waste management, F – Construction, G – Trade and repairs, H – Transportation and storage, I – Accommodation and food service activities, J – Information and communication, L – Real estate activities, M – Professional, scientific and technical activities, N – Administration and support service activities, P – Education, Q – Health care, R – Arts, entertainment and recreation, S – Other services.

Source: NBP.

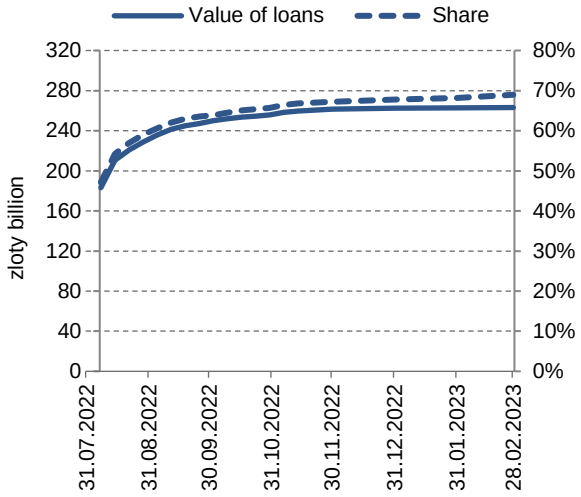
The expectations of enterprises and projected macroeconomic developments indicate a further increase in credit risk in the coming quarters. The level of loan losses will be adversely affected by low economic growth in 2023 and high loan servicing costs. Despite the improvement in recent months, the expectations of enterprises regarding their economic position in the perspective of the coming quarter and year were pessimistic, significantly below average levels. Enterprises expect that their liquidity position will deteriorate; however, at the same time profitability is forecast to increase. In the longer term, an increase in economic growth in 2024-2025 will have a positive impact on the risk of loans to enterprises.

Loans to households

Borrowers' use of loan repayment holidays and the support provided under the Borrower Support Fund has reduced the negative impact of increases in principal and interest instalments on the materialisation of credit risk associated with housing loans (see Figure 2.1-Figure 2.4). Nevertheless, most commercial banks reported a slight increase in short and medium arrears and loan losses. The

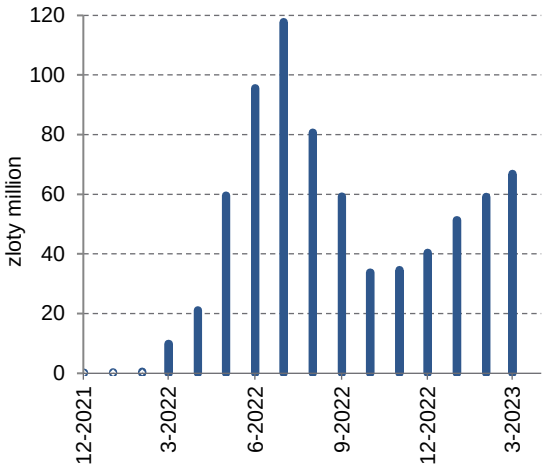
share of loans covered by credit holidays has stabilised at a level of approx. 70% of the PLN housing loan portfolio (see Figure 2.11). On the other hand, the extent of the Borrower Support Fund use in 2022 Q4 was significantly lower than before the introduction of the loan repayment holidays but has been increasing steadily again since December 2022.

Figure 2.11. Value of loans under loan repayment holidays and their share in the zloty housing loan portfolio



Source: UKNF non-standard reporting data.

Figure 2.12. Value of support granted under the Borrower Support Fund in individual months of 2022-2023



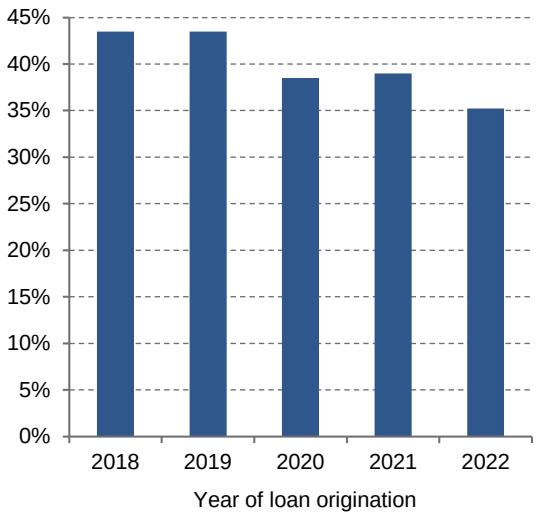
Notes: the period before December 2021 has been omitted for clarity of the figure. The average monthly value of support in this period was very low and amounted to PLN 0.5 million.

Source: BGK.

For banks, the cost of loan repayment holidays is disproportionately high in relation to the reduction of credit risk costs (PLN 13 billion, the equivalent of which would be at least a fivefold increase in zloty impaired housing loans). The high costs result from the assumptions adopted in the programme, i.e. the lack of a link between the possibility of participation and the borrower's financial position and their ability to service the loan, and the high value of the banks' housing loan portfolios combined with the suspension (for up to 8 months) of interest accrual on the entire loan amount.

Consumer credit risk indicators deteriorated in the second half of 2022 and in early 2023 (see Figure 2.1-Figure 2.4). Loan arrears, loan losses and the shares of loans with a significant increase in credit risk since loan origination (Stage 2) have increased. However, the increase in short and medium arrears was only slight and they are still lower than before the pandemic. The increase was primarily the case of high-value consolidation loans, which represent the group of consumer loans with the highest risk (see Figure 2.14). These borrowers are particularly sensitive to real wage declines and rising interest rates on loans.

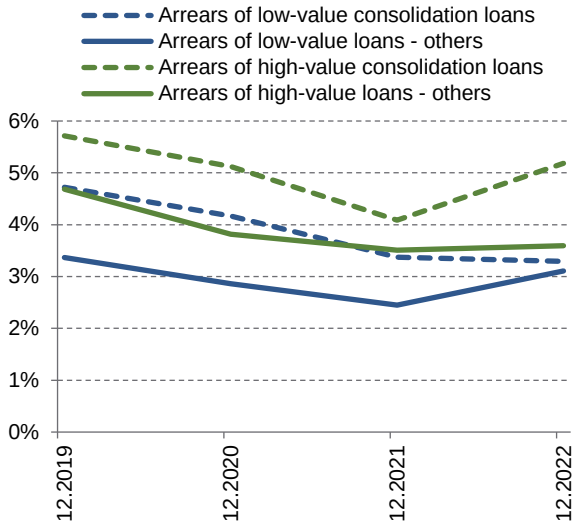
Figure 2.13. Share of high-value loans in new consumer loans granted in 2018-2022



Notes: large consumer loans – loans with the value above 50,000 zlotys as at the loan origination date. Estimates for periods earlier than 2022 have been made by indexation of the 50,000 zloty threshold adjusted (downwards) by the wage growth index.

Source: NBP estimates based on Statistics Poland data and UKNF non-standard reporting data.

Figure 2.14. Estimated share of loans in arrears from 31 days to one year, by the criterion of amount and loan consolidation



Notes: large consumer loans – loans with the value above 50,000 zlotys as at the loan origination date.

Source: NBP estimates based on UKNF non-standard reporting data.

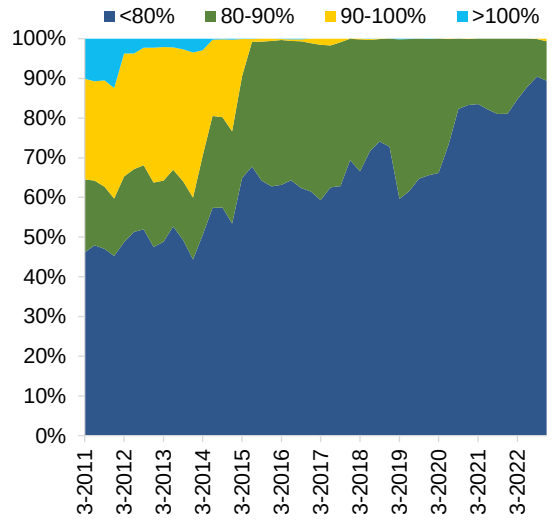
In connection with a significant tightening of lending policy by banks in the segment of loans to households in 2022, new lending can be expected to generate a lower credit risk. In the case of housing loans, this was reflected by a significant reduction in the value of loans demonstrating high debt service burden ratios (LTI, DTI) and high loan-to-value ratios (LtV) (see Figure 2.15 and Figure 2.16). The increase in income level requirements as a result of rising interest rates and the increase in the minimum buffer for interest rate increases to 5 p.p.[25] contributed to the strong decline in LTI and DTI ratios. These ratios are likely to increase slightly in 2023 as a result of an easing of the KNF requirements for this buffer.[26] In the case of consumer loans, the tightening of lending policy was also reflected in a

[25] See: "Stanowisko UKNF skierowane do Prezesów Zarządów Banków oraz Dyrektorów oddziałów instytucji kredytowych ws. działań mających na celu ograniczenie poziomu ryzyka kredytowego" ["Position of the UKNF addressed to Presidents of the Management Boards and directors of branches of credit institutions on measures aimed at reducing the level of credit risk"], 7 March 2022, available at: https://www.knf.gov.pl/knf/pl/komponenty/img/Stanowisko_UKNF_do_bankow_ws_ryzyka_kredytowego.pdf.

[26] See: „Stanowisko UKNF skierowane do Prezesów Zarządów Banków oraz Dyrektorów oddziałów instytucji kredytowych ws. oceny zdolności kredytowej przy udzielaniu kredytów oprocentowanych zmienną i okresowo stałą

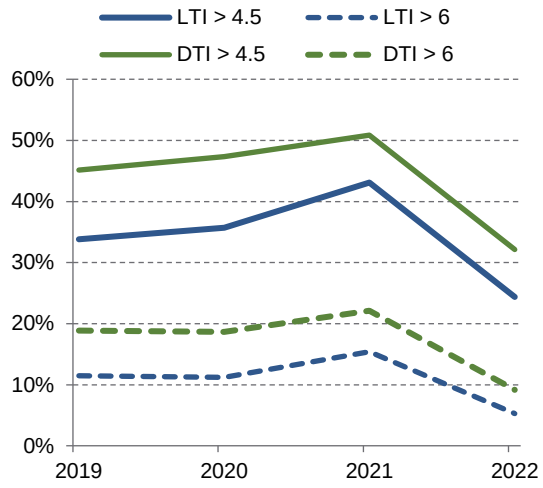
decline in the share of riskier high-value consumer loans (see Figure 2.13). A significant increase was also recorded in the share of loans granted at a fixed or periodically fixed rate in both types of loans (see Chapter 2.3).

Figure 2.15. Distribution of LtV values of newly granted housing loans



Source: NBP estimates based on UKNF non-standard reporting data.

Figure 2.16. Shares of new housing loans with high LTI and DTI ratios in 2019-2022



Source: NBP estimates based on UKNF non-standard reporting data.

In the environment of high market interest rates, it can be expected that upon the termination of loan repayment holidays at the end of 2023, the scale of problems related to the servicing of housing loans may increase. At current interest rate levels, however, repayment problems should not be widespread, even for the loans with high loan repayment burden originated in 2020-2021 (where repayment problems intensity may be highest) and will mainly affect borrowers with a high repayment burden already upon borrowing and low income growth since then.[27] The impact of customer income drivers is likely to be limited. Indeed, the projected increase in unemployment in the coming quarters is insignificant, while the decline in real wages should end in 2023 Q2, to be followed by a slight increase. In addition, according to the assessment of banks surveyed by NBP, the termination of loan repayment holidays should not trigger a significant increase in credit losses. The banks estimate that these losses will amount to PLN 1-2 billion in 2023-2024.

Under the circumstances of difficulties in regular loan servicing upon the termination of loan repayment holidays, banks may seek to reduce credit losses by debt restructuring. As long as the repayment problems will be temporary and mainly caused by an increase in the cost of loan servicing

stopą procentową" ["Position of the UKNF addressed to Presidents of the Management Boards and directors of branches of credit institutions concerning on the assessment of creditworthiness when granting floating-rate or periodically fixed rate loans", 7 February 2023, available at: https://www.knf.gov.pl/knf/pl/komponenty/img/Stanowisko_UKNF_ws_oceny_zdolnosci_kredytowej_81068.pdf.

[27] See previous edition of the *Report*, pp. 32-33.

rather than a decrease in income, assuming a gradual decrease of interest rates in the future, the average loss on restructuring such a loan can be multiple times lower than the cost of termination of the loan agreement and debt collection. As part of the restructuring process, borrowers in the transitional period would be able to pay only interest instalments or their part according to their financial situation, while extending the maturity of the loan. The banks' loss would be limited in such a case. On the contrary, in the case of default and recourse to debt collection measures, the banks' losses would be multiple times higher – the average provision/specific provision on an impaired zloty loan at the end of 2022 amounted to 53% of the gross value of the loan.

Increased use of the Borrower Support Fund may also reduce credit losses. However, should the need for new contributions arise, its cost to banks in another line of the income statement could also be significantly higher than the cost of credit risk if an individually negotiated restructuring of the loan took place.[28]

2.2. Legal risk associated with the portfolio of FX housing loans and its economic impact

Legal circumstances

Banks' future costs arising from the legal risks of FX housing loans are affected by proceedings before the Court of Justice of the European Union concerning the possibility to claim additional benefits beyond reimbursement of payments made in the performance of an invalid credit agreement and late payment interests (hereinafter: Case C-520/21).[29] In February 2023, the Advocate General of the CJEU issued the opinion in the case stating that the provisions of EU law do not preclude an interpretation of the national law which allows consumers to gain additional benefits from the use of the capital paid to banks by borrowers in performance of a loan agreement. At the same time, the Advocate General emphasised that it is for the national court to decide whether national law allows it and whether the consumer in a particular case can actually claim additional benefits. Furthermore, the Advocate General's position ruled out similar possibility for banks to claim such benefits. Although the Advocate General's opinion is not binding on the CJEU, it is assessed that following its issuance the likelihood of CJEU delivering a ruling which is unfavourable for banks has increased.

National courts resolving disputes arising from FX loans continue to rule in borrowers' favour. In the majority of cases, the courts pronounce the loan agreements invalid (ineffective).[30] Only a few rulings deal directly with the follow-up financial settlements between the contracting parties of an invalid agreement, including the aforementioned possibility of claiming remuneration for the use of capital

[28] See "Financial Stability Report. June 2021", NBP, pp. 33-34.

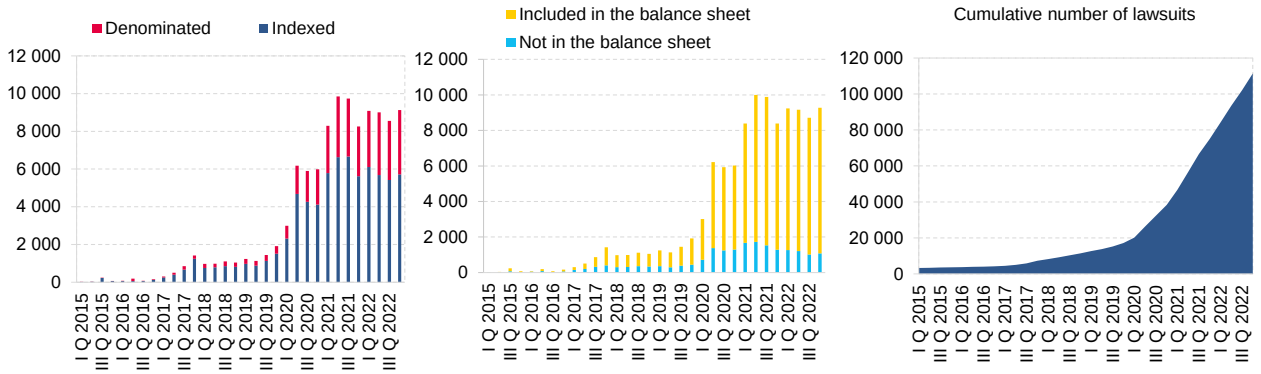
[29] There are also other legal issues pending before both the Supreme Court and the Court of Justice of the European Union, the resolution of which will clarify a major part of the legal uncertainties related to the issue of FX loans.

[30] However, it is worth noting that in its judgement of 5 April 2023 (ref. II NSNc 89/23), the Supreme Court ruled that an abusive consumer clause in the agreement shall not automatically invalidate the entire agreement. See ii nsnc 89-23.pdf

provided in the performance of an invalid agreement. The majority of cases are proceeded still in the first instance (approximately 74% of cases), although the last six months have seen a marked increase in proceedings at the appeal stage (an increase of 5,000 cases to 20,000 cases). To date, approximately 7,000 judgements have become final and binding.

The number of lawsuits brought by consumers against banks is steadily increasing. By the end of 2022, more than 111,000 actions have been filed (see Figure 2.17), which is 11% more compared to the end of the first half of 2022. The vast majority of lawsuits (over 80%) concern active loans still being recognised in banks' balance sheets (i.e. still being serviced).

Figure 2.17. Quarterly number of new lawsuits concerning FX housing loans, broken down into FX indexed loans and FX-denominated loans (left-hand panel) and into balance sheet and other loans (middle panel), and the cumulative number of lawsuits (right-hand panel)



Source: NBP estimates based on UKNF non-standard reporting data.

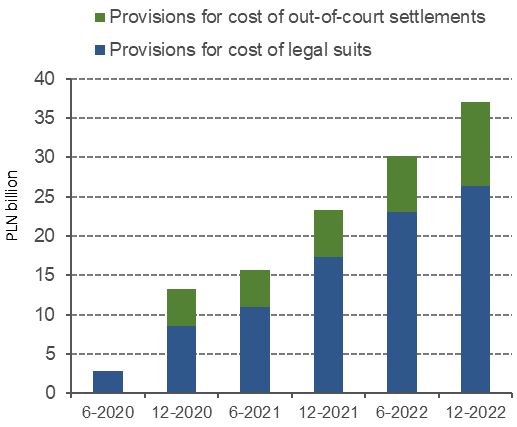
The number of out-of-court settlements concluded between consumers and banks aiming at amicable settlement of disputes arising from FX housing loans is steadily increasing. Settlements are offered on terms developed either by particular banks or structured along the lines of the proposal by the KNF Chairman.[31] As of end-December 2022, more than 45,000 settlements have been reached concerning loans with the value of approx. PLN 8 billion.

Financial aspect of legal risk

Banks with portfolios of FX housing loans are systematically increasing the value of provisions covering related legal risks. As of end-December 2022, the accumulated provisions, recognised mainly for active loan agreements, amounted to, on average, around 45% of the value of Swiss franc loans (see Figure 2.18). The majority of banks also held capital to fulfil the requirement stemming from the higher risk weight assigned to FX loans (150%), as well as an additional regulatory capital requirement under Pillar 2 (P2R).

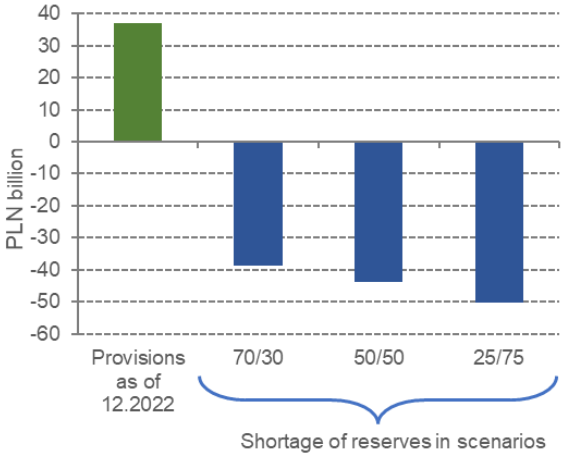
[31]More about the proposal of the KNF Chairman: See "Financial Stability Report. June 2021", NBP.

Figure 2.18. Provisions for legal risk of FX housing loans



Source: NBP estimates based on UKNF non-standard reporting data.

Figure 2.19. Provisions for legal risk and the estimated shortfall for scenarios of the proportion of out-of-court settlements vs litigation



Notes: the simulation was carried out at the Swiss franc exchange rate of 31 December 2022 (4.7679). It was assumed that one in four customers who had already repaid their loan would bring an action against the bank.

Source: NBP estimates based on UKNF non-standard reporting surveys.

The legal risk of FX housing loans will continue to be one of the most important factors shaping the situation of banks in the coming years. The scale of additional provisions needed may range from about PLN 40 bn, in a scenario of predominance of out-of-court settlements, to around PLN 50 bn, in a scenario of predominance of litigations[32] (see Figure 2.19). It can be estimated that a 5-point increase in the share of litigation, in the total number of settlements and litigations, increases the need for provisions by approximately PLN 1.5 bn, on average. These estimates are based on the assumption that the legal risks associated with the active CHF housing loans are to be completely eliminated (the entire portfolio will be subject to either a settlement or a litigation), and that 25% of borrowers who have already repaid their loan would file a lawsuit against a bank.

The consequences of the Advocate General's opinion and of the expected CJEU ruling in Case C-520/21, if it coincides with that opinion, will be unfavourable for banks and may increase banks' provisions covering legal risks. It can be expected that borrowers' preferences change, i.e. the interest in initiating a litigation increases further and the share of passive customers taking no action drops. On the other hand, elevated borrowers' interest in settlements may require banks to offer better terms. In

[32] Moreover, the simulation was carried out at the Swiss franc exchange rate of 31 December 2022 (4.7679). It should be noted that the costs of legal risk are strongly influenced by the exchange rate at which the loan is written off the balance sheet or converted into PLN. It can be estimated that a 1% depreciation of the PLN against the CHF increases the banks' costs by approx. PLN 0.6 bn, depending on the scenario considered for the proportion of out-of-court settlements vs litigation.

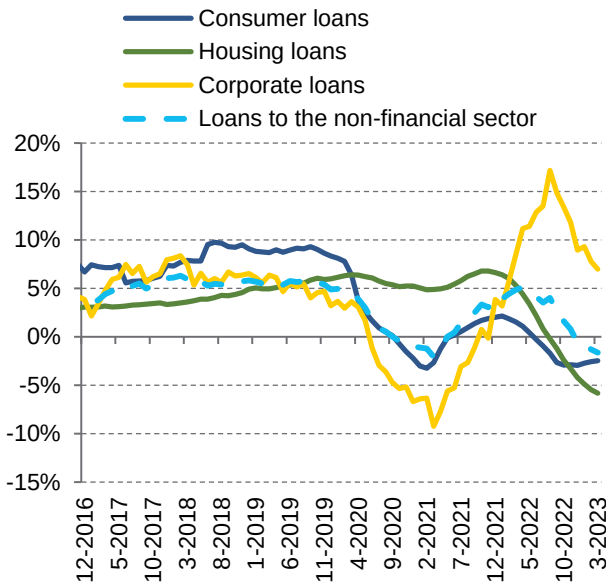
this context, it should be mentioned that the average costs of settlement have been gradually increasing for banks for sometime already and are levelling with the costs of adhering to court judgements. The final ruling in Case C-520/21 may only amplify these adjustments.

The provisions for legal risk will also increase as a result of the likely need to change model parameters when calculating expected costs of settlements and unfavourable judgments. Among others, banks will have to revise their assumptions regarding the likelihood of receiving remuneration from a borrower for using capital in the event of a court judgment invalidating a loan agreement. However, the pace of booking further provisions remains unknown, although it can be expected to accelerate and weigh on banks' financial results more than indicated by the past experience.

2.3. Lending

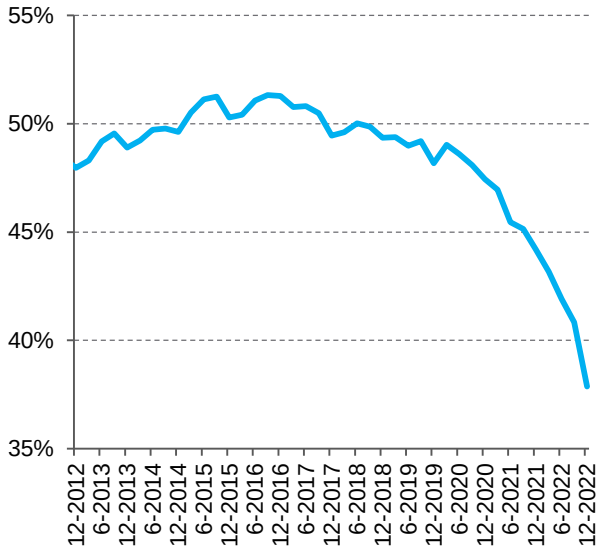
In the second half of 2022, lending clearly slowed down under the influence of the deteriorating economic conditions. The growth rate of loans to the non-financial sector declined and became negative in December (Figure 2.20). Growth in loans to non-financial enterprises has slowed down and ceased to offset the deepening decline in loans to households. As a consequence, the *non-financial sector loan-to-GDP* ratio fell to the level recently recorded before 2008 (Figure 2.21).

Figure 2.20. Growth rate of selected categories of loans to the non-financial sector, y/y



Source: NBP.

Figure 2.21. Ratio of loans to the non-financial sector to Poland's GDP



Source: NBP and Statistics Poland.

Housing loans

The annual growth rate of housing loans, both in zloty and in foreign currency, was negative and showed a decline (Figure 2.22). On the one hand, this was due to the persistent low value of new loans and, on the other hand, it resulted from the high value of overpayments and early repayments of loans. For the entire 2022, their value was over twice as high than in 2021[33], affected primarily by interest rate increases in the first half of the year and, in addition, by loan repayment holidays in the second half[34], which left surplus funds to borrowers.

In the second half of 2022, demand for housing loans stabilised at a low level as a result of continuing relatively high interest rates, the guidelines of the Polish Financial Supervision Authority (UKNF)[35] affecting the manner in which banks calculate minimum creditworthiness[36], as well as the decline in real disposable income of households and their concerns about the future economic situation. According to BIK data, approximately 66% fewer loan applications were submitted from July to December 2022 than in the same period of the previous year when the demand for housing loans was very high (Figure 2.23). The banks surveyed by NBP also indicated a strong decline in demand in 2022 Q3 and significantly lower demand in 2022 Q4.[37]

[33] See "Podsumowanie 2022 roku na rynku kredytów i pożyczek" ["Loan market. Summary of 2022"], 26 January 2023, BIK, available at: BIK podsumowuje 2022 r. na rynku kredytów i pożyczek oraz prognozuje 2023 r.

[34] According to the UKNF non-standard reporting data, by the end of February this year, the total value of capital overpayments for loans covered by loan repayment holidays amounted to approximately 12 billion zlotys.

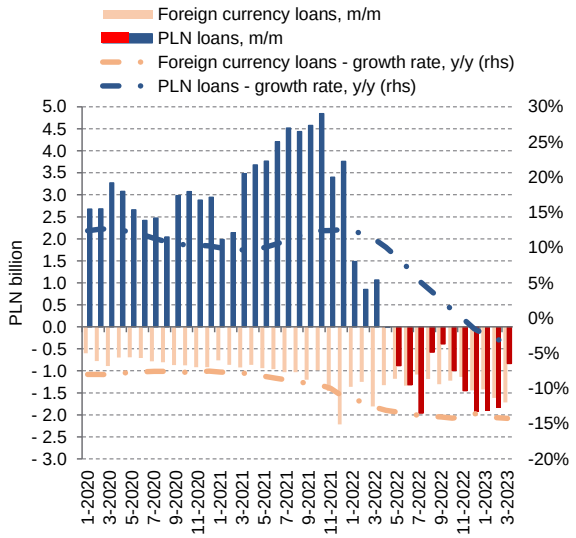
[35] "Stanowisko UKNF skierowane do Prezesów Zarządów Banków oraz Dyrektorów oddziałów instytucji kredytowych ws. działań mających na celu ograniczenie poziomu ryzyka kredytowego" ["Position of the UKNF addressed to Presidents of the Management Boards and directors of branches of credit institutions on measures aimed at reducing the level of credit risk"], 7 March 2022, available at: https://www.knf.gov.pl/knf/pl/komponenty/img/Stanowisko_UKNF_do_bankow_ws_ryzyka_kredytowego.pdf.

[36] As of April 2022, banks were obligated to adopt a minimum interest rate change of 5 p.p. in the creditworthiness assessment process, regardless of the type of housing loan interest rate. Combined with an increase in interest rates, this has significantly affected the availability of housing loans.

[37] Unless another source has been indicated, information concerning changes in banks' lending policies and their opinion on the direction of changes in loan demand, as well as reasons for such changes is derived from the following studies: "Senior loan officer opinion survey on bank lending practices and credit conditions", January and April 2023, NBP, available at www.nbp.pl.

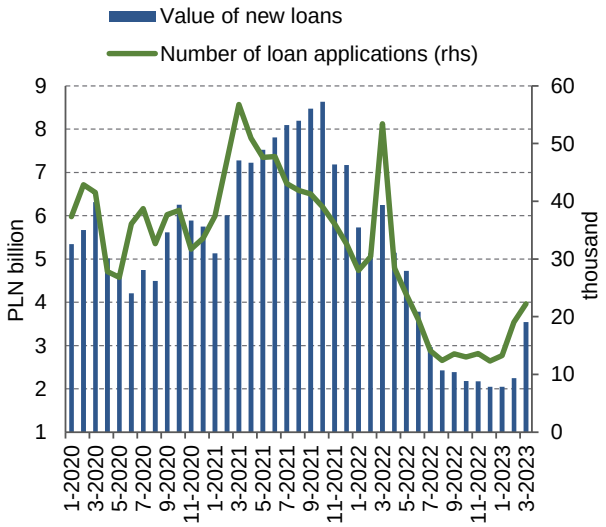
The situation began to change in February 2023, when a significant increase (in m/m terms) in the number of housing loan applications was recorded (almost 43% compared to January 2023). It was probably the result of a change in the UKNF recommendations concerning creditworthiness assessment**.** In February 2023[38] the UKNF restored the possibility of applying the lowest level of the interest rate buffer provided for in Recommendation S, i.e. 2.5 p.p., but only for fixed interest rate loans. For floating interest rate loans, a buffer of 5 p.p. has been waived, however, without setting a specific level and leaving its determining to the banks' decisions. As a result of the introduced changes, the creditworthiness of applicants for a housing loan has increased significantly at the beginning of this year, which is reflected in the increase in the average amount of a loan granted in March 2023.

Figure 2.22. Growth rate (y/y) and changes (m/m) in the value of housing loans on the balance sheet of the banking sector



Source: NBP.

Figure 2.23. Value of new housing loans and number of loan applications



Source: BIK.

As a consequence of the persistently low demand for loans, in the second half of 2022 the value of new housing loans granted in zloty continued to decline. In y/y terms, in December 2022 this decline reached 71%. The decline rate of the balance sheet value of FX loans remained relatively stable throughout the second half of the previous year, but was significantly higher than in 2021 (Figure 2.22), which was affected by a higher scale of loan conversions including those resulted from settlements concluded

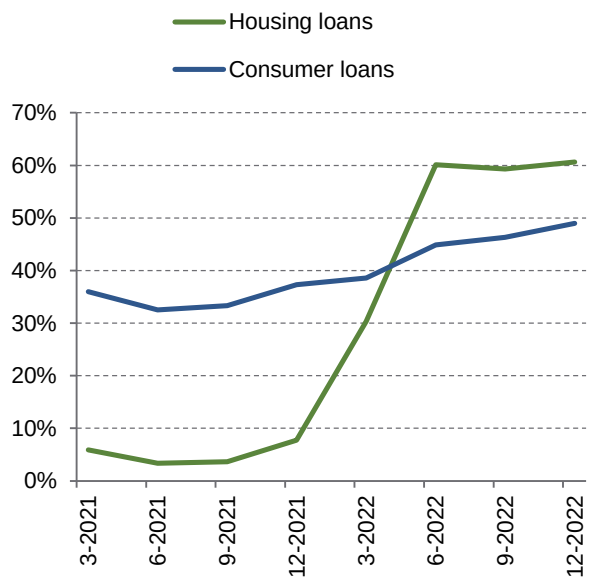
[38] „Stanowisko UKNF skierowane do Prezesów Zarządów Banków oraz Dyrektorów oddziałów instytucji kredytowych ws. oceny zdolności kredytowej przy udzielaniu kredytów oprocentowanych zmienną i okresowo stałą stopą procentową" ["Position of the UKNF addressed to Presidents of the Management Boards and directors of branches of credit institutions concerning on the assessment of creditworthiness when granting floating-rate or periodically fixed rate loans"], 7 February 2023, available at:
Stanowisko_UKNF_ws_oceny_zdolnosci_kredytowej_81068.pdf.

between banks and borrowers. Faced with concerns of further rise in interest rates, households continued to show increased interest in periodically fixed interest rate loans. In Q4, they accounted for approximately 61% of total housing loan sales in terms of value (Figure 2.24). In connection with the perspective of introducing loans based on the new WIRON reference rate[39] into their offerings, three banks have suspended lending based on floating interest rates.

Consumer loans

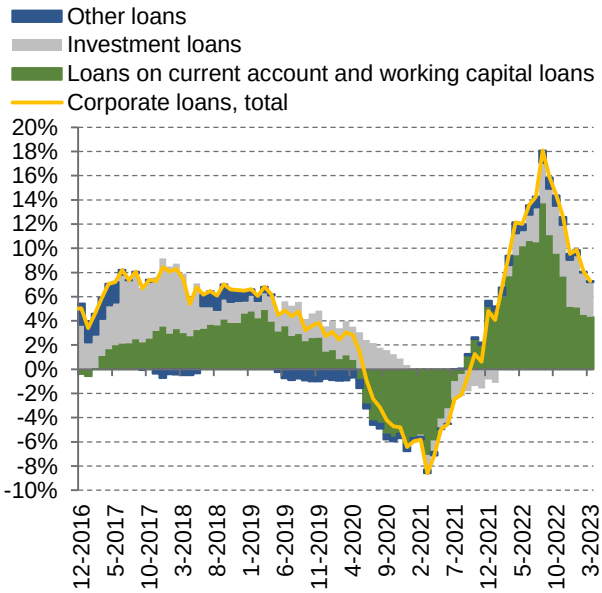
The deteriorating economic situation of households and the lending policies of banks have contributed to a decline in demand for consumer loans and an aggravation of the decrease in the value of this loan category in annual terms (Figure 2.20). At the same time, however, an increase was recorded in the annual growth rate of cash loans granted for amounts up to 5,000 zlotys. It probably resulted from the need to cover deficits in household budgets due to the rising cost of living and a decline of real income.

Figure 2.24. Share of fixed-rate or periodically fixed-rate loans in the value of loans granted by quarter



Source: NBP estimates based on UKNF non-standard reporting data.

Figure 2.25. Growth rate of loans to the corporate sector and contribution of main components, y/y



Note: The figure shows the growth rate including transactional changes only.

Source: NBP.

Banks continued to tighten the criteria and terms of granting consumer loans, above all they increased credit margins and non-interest credit costs. The reduced availability of short-term bank financing to households was accompanied by a strong growth in the number and value of non-bank

[39] More on the replacement of the WIBOR index with the WIRON index, see Box 1.2 in: "Financial Stability Report. December 2022", NBP.

loans. Throughout 2022, they grew at a rate higher than in each of the previous two years.[40] Raising financing outside of a bank is generally more expensive but quicker and easier than taking a bank loan which, despite the risks to households that this form of debt entails, may determine its attractiveness and in some cases displace bank financing.[41]

Corporate loans

The growth rate of loans to non-financial corporations in the second half of 2022 was significantly affected by their liquidity needs related, among others, to prices in commodity and energy markets. The growth rate of lending to this sector was primarily determined by changes in loans on current account and working capital loans, the growth rate of which was positive but declining since August 2022 (Figure 2.25). The corporate loan-to-GDP ratio remained one of the lowest in the EU.

Demand for loans on current account and working capital loans grew only in the segment of loans to large enterprises due to their need to finance inventories and working capital. Until August 2022, a rapid increase in gas prices was recorded. This resulted in the need for some enterprises to take out high-value loans on current account and working capital loans to respond to margin calls in gas derivative transactions and in order to finance gas purchases. Since September, gas prices have started to fall. This was followed by a reduction in the use of available credit lines and the repayment of syndicated loans. As a result of these developments, the growth rate of loans on current account and working capital loans dropped significantly by the end of 2022 (Figure 2.25). At the beginning of this year, however, it still remained above the levels recorded before 2020. This was due to an increase in the nominal value of new loans as a result of inflation, and the continuation of the post-pandemic lending recovery.

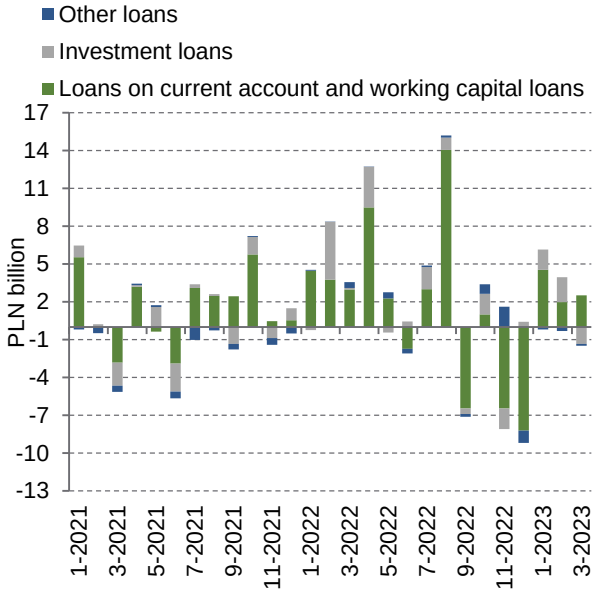
Following relatively high increases in the value of investment loans in the first months of 2022, among others, due to high-value loans granted to several large companies, the increases in investment loans were smaller in the second half of the year (Figure 2.26). As a consequence, the annual growth rate of these loans declined slightly in December 2022, but recorded a higher level than before the pandemic. This occurred in spite of the high uncertainty in the economic environment and the decrease in the demand of enterprises for financing investment from external sources, as declared by both enterprises and banks.[42]

[40] See "Podsumowanie 2022 roku na rynku kredytów i pożyczek" ["Loan market. Summary of 2022"], 26 January 2023, BIK, available at: BIK podsumowuje 2022 r. na rynku kredytów i pożyczek oraz prognozuje 2023 r.

[41] It does not apply to situations where the consumer would not be granted a loan from a bank due to insufficient creditworthiness.

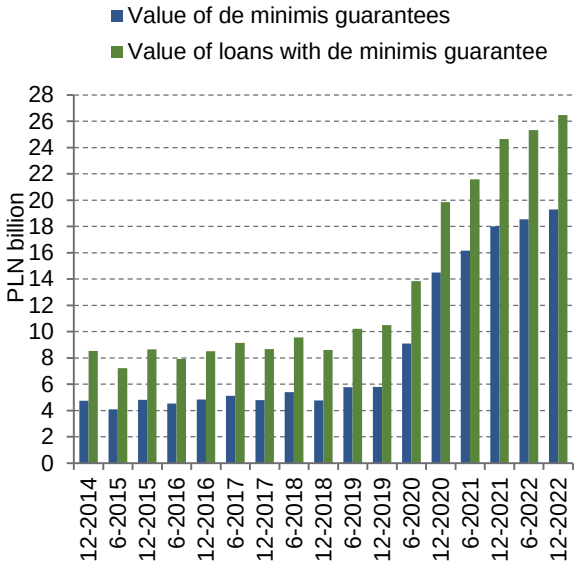
[42] Information concerning the situation of enterprises surveyed by NBP, their demand for loans and the reasons for its changes referred to in this chapter comes from: "Szybki Monitoring NBP. Analiza sytuacji sektora przedsiebiorstw" ["NBP Quick Monitoring Survey. Economic climate in the enterprise sector"], issues: January and May 2023, available at www.nbp.pl.

Figure 2.26. Changes in value of corporate loans on the balance sheet of the banking sector, m/m



Source: NBP.

Figure 2.27. Value of guarantees and loans with *de minimis* guarantee from the BGK



Note: The figure shows half-annual increases.

Source: NBP estimates based on BGK data.

The decline in corporate loan growth was accompanied by banks' tighter lending policy. Nevertheless, considering the results of the NBP Quick Monitoring, the percentage of accepted loan applications submitted by large enterprises remained relatively high. The effectiveness of SME loan applications continued to be lower than for larger entities. However, the results of the SAFE survey[43] indicate that bank loans are not a significant source of business financing for a major group of Polish SMEs. The most commonly indicated reason for not applying for a loan are sufficient own resources.

The *de minimis* guarantee programme of BGK continued to be a factor supporting the loan demand of micro, small and medium-sized enterprises. It offered a better opportunity to creditworthy enterprises which do not have adequate collateral to receive either a working capital loan or an investment loan.[44] In the second half of 2022, the stock of loans with the *de minimis* guarantee increased by approximately 26 billion zlotys, which is the highest half-annual increase in the value of these loans since the launch of the programme (Figure 2.27).

[43] "Survey on the access to finance of enterprises (SAFE). Analytical Report 2022", EC, December 2022, available at: https://single-market-economy.ec.europa.eu/system/files/2023-01/SAFE%20Analytical_Report%202022.pdf.

[44] The programme has been operating since 2014, but its rules were changed in favour of companies to reduce the impact of COVID-19 and Russia's armed aggression against Ukraine. The changes of the rules are valid until 30 June 2023.]

Outlook

The prevailing uncertainty in the economic environment, the projected low GDP growth rate in the coming quarters and the continuing relatively high interest rates will not be conducive to lending growth.

A number of factors of different directions and strengths of impact will affect the rate of housing loan growth. Factors limiting a further decline in households demand for credit will include the increased creditworthiness of potential borrowers as a result of the change in the UKNF recommendations and the entry into force of the "2% Safe Credit" programme announced by the Polish government.[45] The terms and conditions of the programme appear attractive to potential borrowers and may increase demand for loans. Nevertheless, the outlook for the economic situation of households is still not favourable. The cost of living will continue to rise, although probably less rapidly than before. The number of people working in the economy is projected to fall and wages are expected to rise only slightly faster than prices.[46] In addition, the uncertainty of the geopolitical situation may still be high. These factors will negatively affect decisions on incurring debt, especially for longer periods. Statistically, the growth in housing loans is likely to remain undermined by overpayments of loans from funds released through loan repayment holidays and loan conversions as a result of settlements concluded between banks and customers (see Chapter 2.2).

The growth rate of consumer loans can be expected to develop at slightly negative levels in the short term and then to slowly increase. Consumer sentiment is improving, however, there is still a prevalence of respondents who are pessimistic about future consumption conditions.[47] It does not have a positive impact on the propensity to incur debt. The exception may be low-value loans, for which the demand may increase due to the higher cost of living and the related possible problems of some households to cover deficits in their budgets from their own income and savings.

In the non-financial corporate loan segment, lending is expected to weaken, although the growth rate of loans on current account and working capital loans should remain positive, primarily due to the anticipated persistence of inflation at elevated levels and the resulting increasing demand for short-term financing. The significant and still growing amounts accumulated in corporate bank accounts may have a limiting effect on the demand for loans (see Figure 2.35). Demand for long-term

[45] Draft amendments to the Act of 1 October 2021 on guaranteed housing credit introduced by the draft Act on Savings for Housing Purposes, available at: https://orka.sejm.gov.pl/Druki9ka.nsf/0/3DCE7477A3B4C1A3C125897B004A4AB7/%24File/3096.pdf

[46] "Inflation Report", March 2023, NBP, available at: www.nbp.pl.

[47] See "Koniunktura konsumencka – marzec 2023" ["Consumer business tendency – March 2023"], Statistics Poland, available at: https://stat.gov.pl/obszary-tematyczne/koniunktura/koniunktura/koniunktura-konsumencka-marzec-2023-roku,1,121.html.

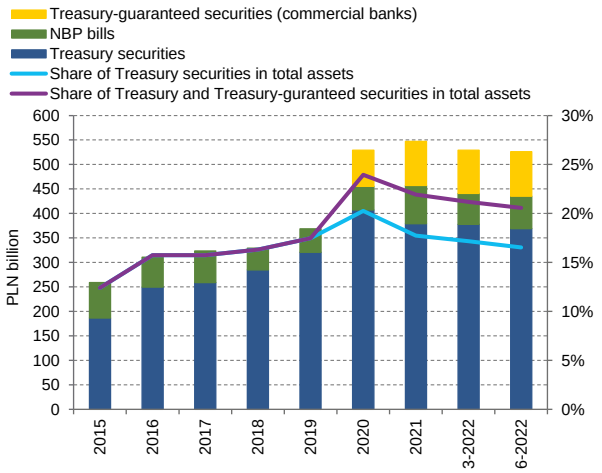
loans in the enterprise sector in general can be expected to remain low due to weak investment sentiment across the entire group of companies surveyed by NBP. Investment sentiment in large enterprises, on the other hand, is very good and improving.[48] A factor that may have a positive impact on the demand for bank financing for this group of companies in particular is the commencement of investment planned under the National Recovery and Resilience Plan and the receipt of funds to finance it from the EU Recovery and Resilience Facility. Lending in the SME segment is likely to be continually supported by the *de minimis* guarantee scheme.

A factor adversely affecting the supply of credit may be the reduction in the ability of some banks to extend a loan, resulting from the reduction in excess capital or the emergence of capital shortfalls as a result of legal and regulatory events in 2022 and at the beginning of 2023 (see Chapter 2.5).

2.4. Liquidity risk and funding

The liquidity position of the banking sector was favourable and the ratio of liquid asset portfolio to the balance sheet total was high. Since November 2022**,** the portfolio of liquid assets has had increased in most banks, mainly as a result of higher exposure to NBP money bills (see Figure 2.28 and Figure 2.29). As of end-March 2023, over a quarter of the banking sector's balance sheet (excluding BGK) consisted of Treasury securities, securities guaranteed by the Treasury and NBP bills (representing around 16%, 4% and 6% of the sector's assets, respectively). Almost half of the banks' bond portfolio was measured at fair value through other comprehensive income, therefore changes in its value were being immediately reflected in the banks' capital.

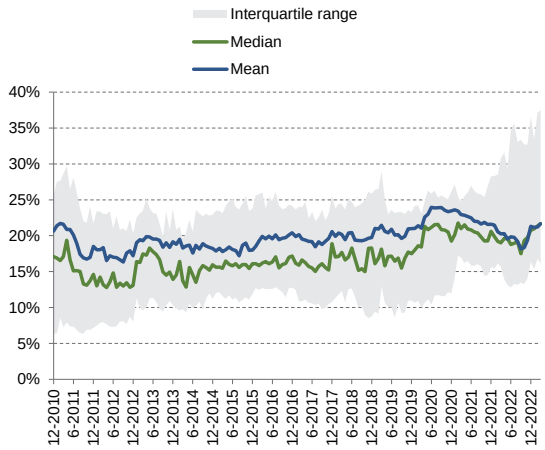
Figure 2.28. NBP bills and Treasury/Treasury-guaranteed securities in total assets of banking sector



Note: Data excluding BGK.

Source: NBP.

Figure 2.29. Share of domestic Treasury securities and NBP bills in total assets of domestic commercial banks



Note: Data excluding BGK.

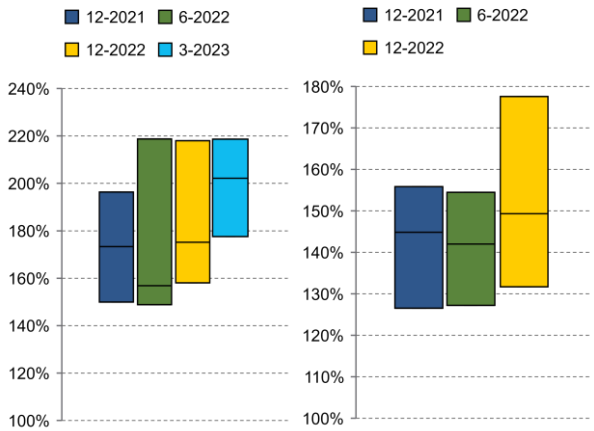
Source: NBP.

[48] See NBP Quick Monitoring Survey. Economic climate in the enterprise sector, May 2023, available at www.nbp.pl.

Short-term liquidity ratio (LCR), which all banks in Poland are required to observe[49], stood significantly above the supervisory minimum requirements. As of end-March 2023, the average LCR for commercial banks amounted to 201%, for non-IPS cooperative banks – to 531%, while for the Institutional Protection Schemes (IPS-BS) – 376% and 344% (see Figure 2.30). Liquidity shortages in some currencies were limited, however the surplus of liquid funds in zloty was ample enough to enable banks to cover potential liquidity needs in these currencies.

The estimated liquidity surplus, defined as the excess of liquid assets over net outflows[50] while meeting the LCR requirement of 100%, increased from 150 billion zlotys in June 2022 to almost 255 billion zlotys in March 2023 (13% of assets) (see Figure 2.31). Since the start of the NBP's interest rate increase cycle in October 2021, the value of liquid assets and the level of the LCR had been negatively affected by the fall in the market value of debt securities (see Figure 2.49). For the purposes of calculating the LCR, debt securities are reported at market value regardless of which portfolio they are classified to.

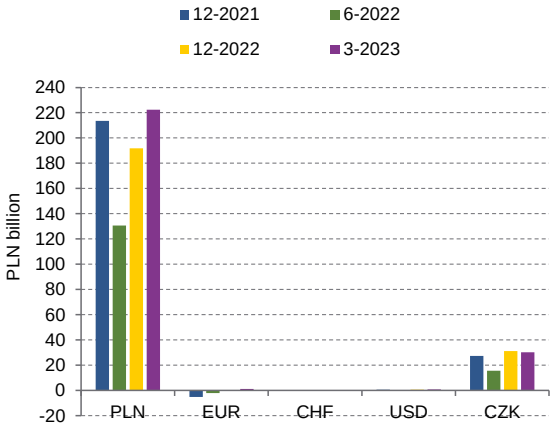
Figure 2.30. The LCR ratios of domestic commercial banks (left-hand panel) and NSFR (right-hand panel)



Notes: The horizontal lines indicate individual quartiles while the height of the box indicates the interquartile range. Banks with high LCRs were excluded from the sample: for commercial banks – over 500%. Data excluding BGK and associating banks.

Source: NBP.

Figure 2.31. Excess /shortage of liquid assets by individual currencies at domestic commercial banks



Notes: Excess/shortage of liquid assets understood as excess of liquidity assets under the condition that LCR=100%. Data exclude BGK and associating banks.

Source: NBP.

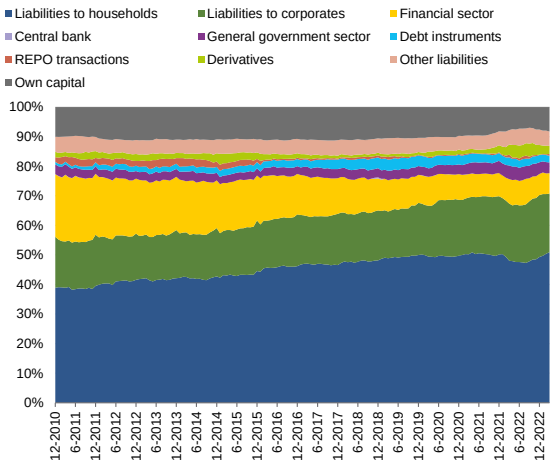
Significant divergencies among banks as regards the size and composition of their liquid asset portfolios persist. The structure of liquid assets in large banks, where most of the liquidity surplus, understood as the excess of liquid assets over net outflows while maintaining the LCR of 100%, is accumulated, is more diversified. On the other hand, smaller and specialised banks exhibit higher LCR and the

[49] Excluding BGK (state-owned bank)
[50] Net liquidity outflows represent the sum of outflows less the sum of inflows over 30 calendar days.

structure of their liquid assets is more homogeneous and usually comprises Treasury bonds. As a consequence, these banks may be more prone to changes in the valuation of debt instruments.

The structure of bank funding was stable and similar to that observed in the recent past (see Figure 2.32). Deposits of the non-financial sector remain the main source of funding for banks in Poland (representing 71% of the balance sheet as of end-March 2023). At the same time, the next most important source of bank funding – funds raised from financial sector entities – has been declining since the global financial crisis (to 7% of the balance sheet). The role of other funding sources has remained limited (2-5%).

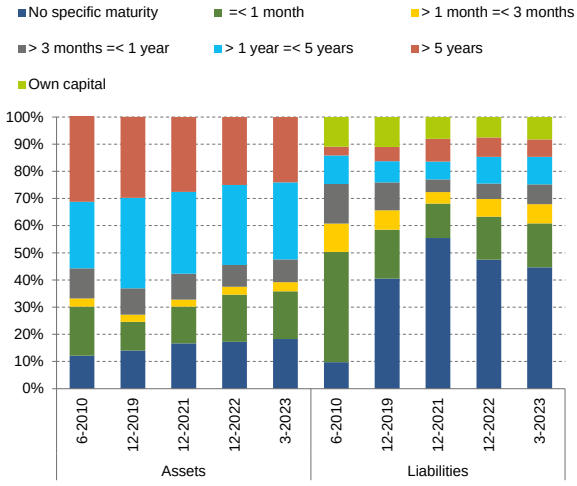
Figure 2.32. Structure of liabilities of the banking sector



Note: excluding BGK.

Source: NBP.

Figure 2.33. Term structure of assets and liabilities of the banking sector



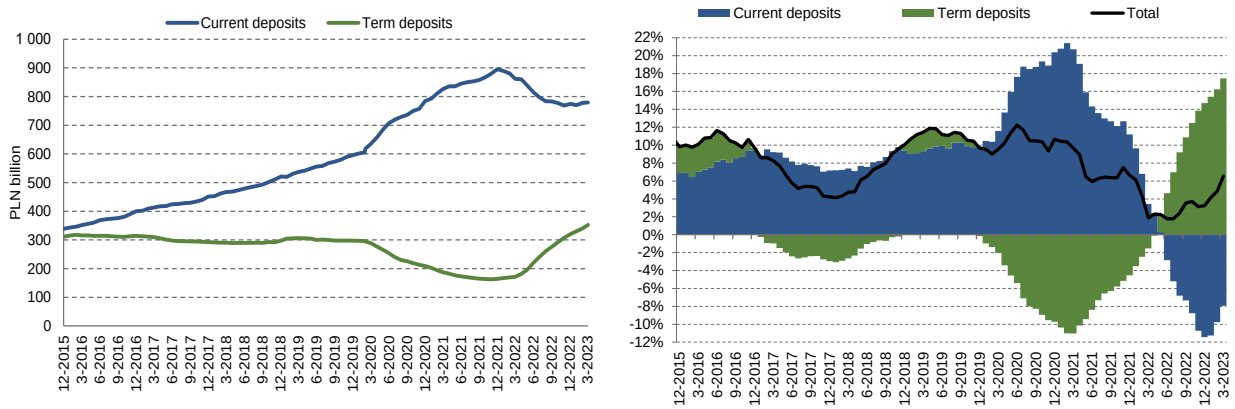
Note: The item "no maturity defined" on the liabilities side recognises amounts that cannot be attributed to the specific maturity, mainly current accounts (ROR) and savings accounts and smaller items (e.g. income tax liabilities, provisions).

Source: NBP.

Since December 2022, the growth rate of non-financial sector deposits has been accelerating noticeably (see Figure 2.34). In March 2023, the growth rate of household deposits stood at 9.4% y/y and that of corporate deposits at 12.3%. The increase in household deposits was supported by the pay-out of bonuses and annual awards at the beginning of the year, decreasing loan demand and a decline in consumer spending. The growth in interest rates over the past year has led to an accelerated shift in the term structure of household deposits in favour of term deposits. As of end-March 2023, fixed-term deposits accounted for 31% of household deposits (16% a year earlier). Similar trends occurred in corporate deposits (see Figure 2.35). The end of pay-outs of financial support under the anti-crisis shields was accompanied by a decline in current deposits from enterprises. At the same time, the value of new corporate term deposits increased gradually. As of end-March 2023, term deposits of enterprises accounted for 34% of deposits (19% a year earlier). The value of corporate deposits continued to exceed the loans (as of end-March 2023, by 83 billion zlotys). This unusual setting had begun to occur in the pandemic due to disbursement of government support measures.

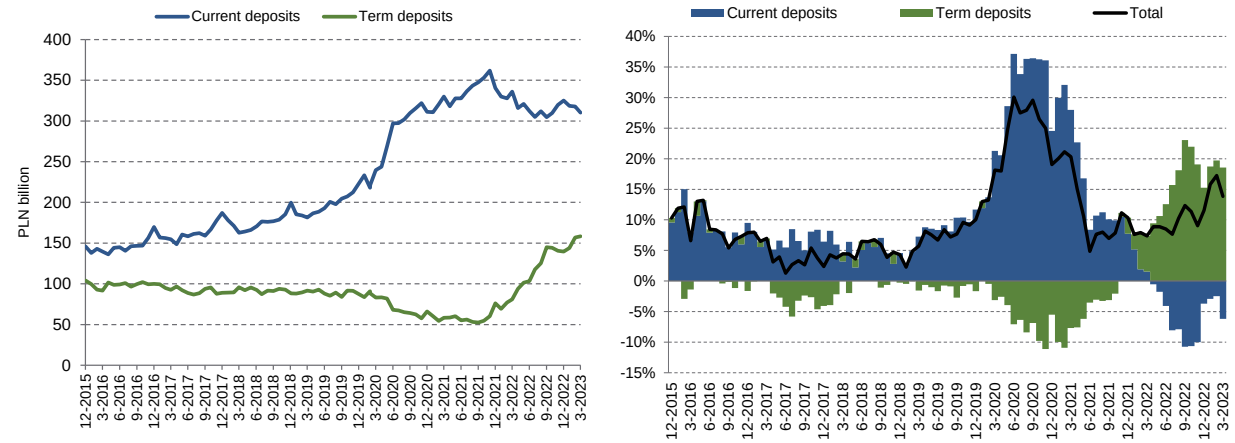
Banks in Poland meet the Net Stable Funding Ratio (NSFR)with a surplus, however the maturity mismatch between assets and liabilities has persisted (see Figure 2.33). The increase in this mismatch has resulted mainly from the build-up of long-term assets, mainly housing loans and debt securities, and financing them with short-term liabilities(deposits). To a certain extent, such a mismatch is a natural consequence of the maturity transformation function performed by banks, however, when it is too high, it exposes banks to liquidity risks, especially when banks finance their assets with unstable funds, e.g. from the wholesale market – although, such practices in the Polish banking sector remain indiscernible.

Figure 2.34. Value (left-hand panel) and growth rate of households deposits (y/y) and contribution of individual components to deposit growth (right-hand panel) – term structure



Source: NBP.

Figure 2.35. Value (left-hand panel) and growth rate of corporates deposits (y/y) and contribution of individual components to deposit growth (right-hand panel) – term structure

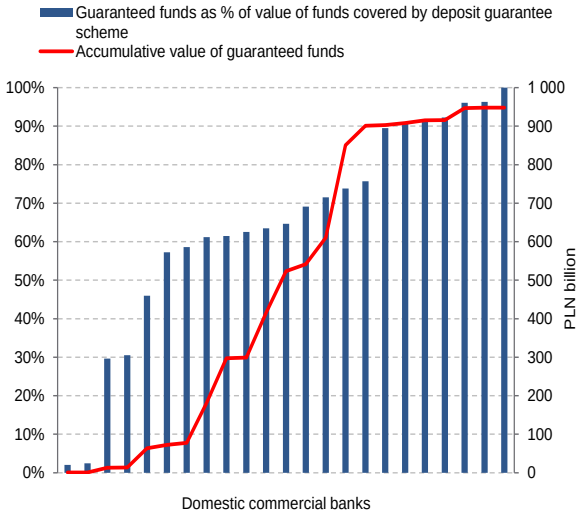


Source: NBP.

Household deposits exhibit a high degree of fragmentation, which, combined with BFG guarantees (see Figure 2.36), tends to render them less susceptible to mass outflows. In Poland, deposits held in

banks (commercial and cooperative) and in credit unions are covered by the guarantee scheme.[51] As of end-December 2022, almost 66% of household and corporate bank deposits were protected by the BFG (see Figure 2.37). Over recent years, the share of BFG-protected deposits in banks' liabilities had increased, which could be attributed to the dynamic growth of household and corporate deposits, while other forms of saving/investing remained relatively less popular. In the current high interest rate environment, the propensity of households to withdraw term deposits may be lower. Nevertheless, the widespread access to electronic distribution channels for financial services increases the risk of a sudden outflow of deposits in case of a negative "media hype" concerning the standing of a given bank. This increases the importance of maintaining an adequate level of liquid assets by banks.

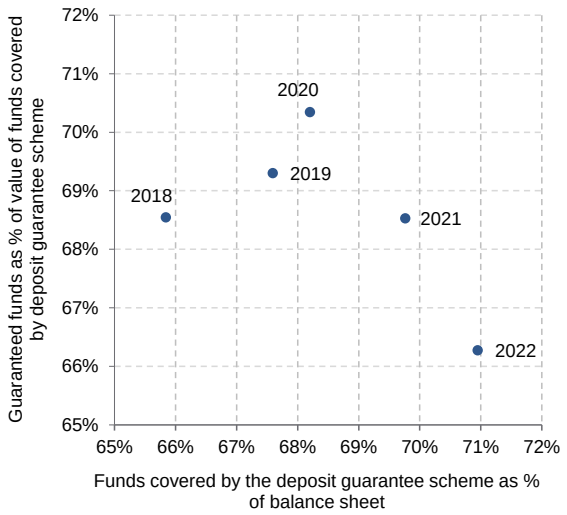
Figure 2.36. Guaranteed funds in individual commercial banks, December 2022



Notes: The bars represent individual domestic commercial banks. The guaranteed funds do not exceed the equivalent of 100,000 euro in zloty. Funds covered by guarantee protection include the funds and receivables of natural persons and, in the case of a bank or a branch of a foreign bank – legal persons, organisational units which are not legal persons to which a separate act confers legal capacity, school savings unions, savings and loan associations and parents' councils.

Source: BFG.

Figure 2.37. Guaranteed funds in the banking sector



Note: Data excluding BGK. Definition of variables under Figure 2.36.

Source: BFG.

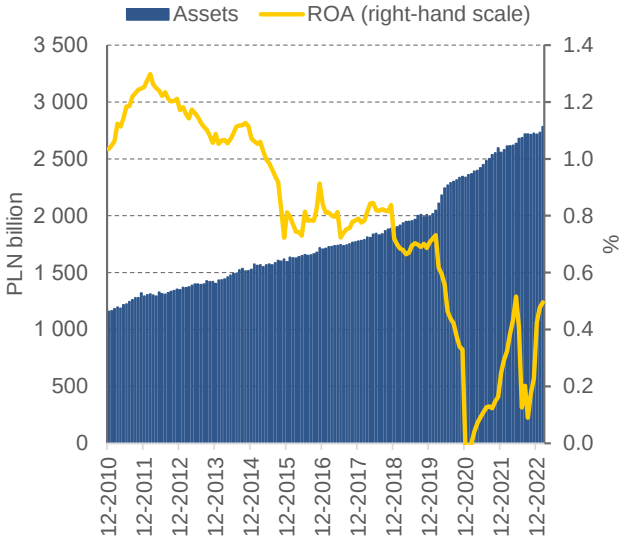
2.5. Earnings and capital adequacy

The profitability indicators of the banking sector remained at levels significantly lower than in the period before 2020, although they have recently been gradually increasing. Compared to the scale of banking activities, the sector's average earnings were significantly lower than in 2011-2014 (see Figure 2.38). The reasons for the lower profitability – despite increasing net interest margin – included the

[51] The deposit guarantee rules applicable in Poland are set out in the Act of 10 June 2016 on the Bank Guarantee Fund, the Deposit Guarantee Scheme and Resolution. Cash and receivables of natural persons up to the equivalent of 100.000 euro in zloty are fully guaranteed.

additional statutory burdens (e.g. the introduction of the tax on certain financial institutions in 2016, the costs of statutory loan repayment holidays recognised in 2022), as well as the creation of high provisions for the legal risk of FX housing loans (from 2020). In addition, some of the banks' financial burdens are not recognised as tax-deductible costs when determining the CIT base, so that the effective tax rate has increased significantly (from around 19% before 2016 to 28% at the end of 2022[52]). As a result of additional costs incurred by the Polish banking sector, its position in the ranking of profitability of the banking sectors of the European Union countries has fallen noticeably (see Figure 2.39).

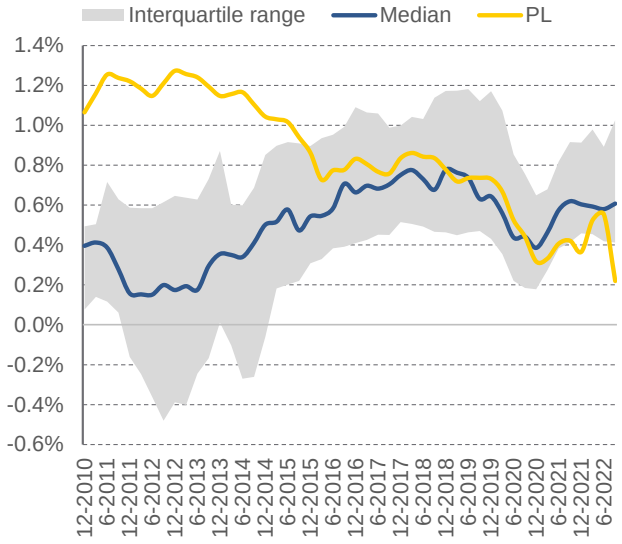
Figure 2.38. Assets and return on assets of the banking sector in Poland



Note: ROA – annualized data.

Source: NBP.

Figure 2.39. Return on assets of the banking sector in Poland compared to EU countries



Note: last observation as at the end of 2022 Q3.

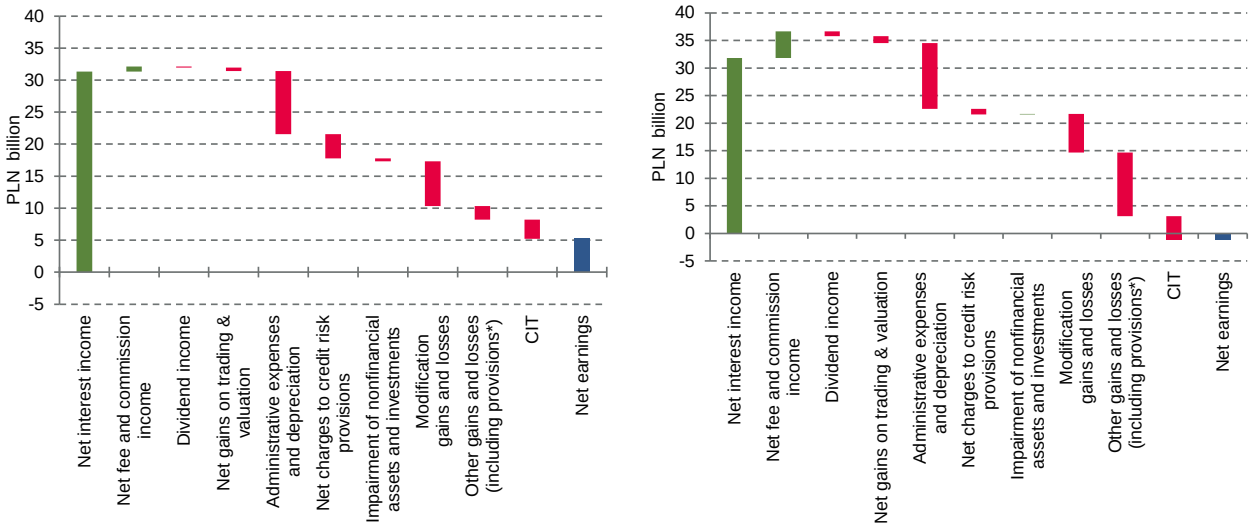
Source: NBP calculations based on ECB data.

The low profitability of the Polish banking sector continues despite significant growth in interest income (see Figure 2.40) and the net interest margin associated with the NBP interest rate increases performed from October 2021 to August 2022. Interest rates on the majority of bank assets (particularly loans) are contractually linked to WIBOR reference rates and updated several times a year. On the other hand, interest rates on most liabilities are not contractually linked to money market rates. The vast majority of the impact of the increase in money market rates[53] has already been factored into the interest rates on financial assets held by banks, therefore no further related increase in interest margins should be expected. Banks' interest margins may decrease in the coming quarters if debt instruments would be issued in order to increase own funds or to cover the MREL requirement, since the interest rate on such instruments is significantly higher than the interest rate on customer deposits.

[52] Estimate for banks with positive net earnings.

[53] Some commercial banks use strategies to hedge part of their interest income against the impact of interest rate changes by means of derivatives, making the earnings of these banks lower in the current environment than in the absence of such hedging.

Figure 2.40. Change in net earnings of the banking sector and decomposition of the change – amounts for 12 months until February 2023 against the corresponding periods: a year earlier (left-hand panel) and until February 2020 (right-hand panel)



* including provisions for legal risk of FX housing loans – except for banks which recognised them jointly with the provisions for credit risk.

Notes: The height of the green and red bars indicates a change in the relevant P&L position relative to the level for the preceding 12 months (left-hand panel) or for the period from March 2019 to February 2020 (right-hand panel). A negative change in cost items indicates increasing cost, which translates into lower earnings. "Modification gains and losses" (comprising the majority of loan repayment holiday costs) and "Other gains and losses (including provisions)" may take both positive and negative values, so it can only be inferred from the figure whether a change in this item had a positive or negative effect on the earnings.

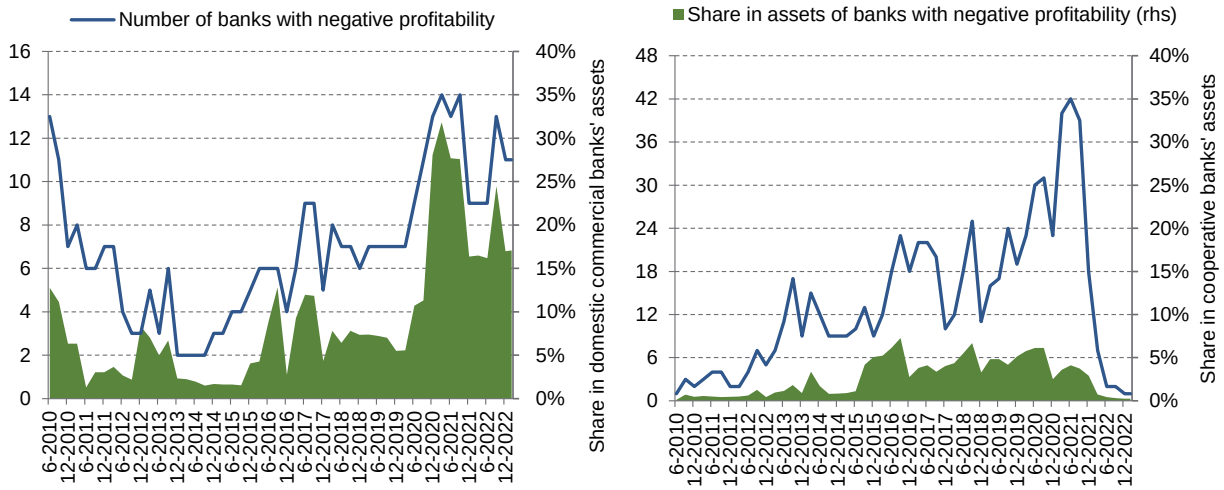
Source: NBP.

The profitability of the sector was particularly negatively affected by the high costs of loan repayment holidays and the provisions for legal risk of FX housing loans as well as – to a lesser extent – contributions to protection schemes, payments to the Borrower Support Fund and the reimbursement of margins charged during the period of waiting for the mortgage to be entered in the land and mortgage register. The costs of loan repayment holidays introduced on a statutory basis[54] (approximately PLN 13 billion), primarily charged to the sector's results in July 2022, reflected the banks' expectations on how customers would use the loan repayment holidays over their entire effective term (2022-2023). Banks reported these costs as a loan modification loss (see Figure 2.40) or as a decrease in interest income. According to UKNF data, more than 50% of eligible borrowers used the loan repayment holidays by January 2023, and the share of loans covered by the holidays in the total value of the

[54] Pursuant to the Act of 7 July 2022 *on Crowdfunding for Business Ventures and Aid to Borrowers* (Journal of Laws 2022, item 1488), effective from 29 July 2022, the "loan repayment holidays" in the case of zloty housing loans may be taken for two months in the third quarter and for two months in the fourth quarter of 2022, and for one month in each quarter of 2023. The existing accounting and financial reporting regulations impose an obligation on banks to recognise the total expected costs of loan repayment holidays upfront on a one-off basis and to verify the amount recognised accordingly as new information becomes available.

portfolio of loans meeting the statutory criteria exceeded 70%. Customers who have not yet used the loan repayment holiday are still eligible to suspend one instalment in each of the subsequent quarters of 2023. On the other hand, the provisions for legal risk are likely to continue their significant rise in the future (see Chapter 2.2). Contributions to protection schemes and the Borrower Support Fund may be required in the subsequent years if the funds collected so far have been used and the need arises to replenish them. On the other hand, after the resolution process of Getin Noble Bank S.A. had been supported with SOBK funds, the target level of the deposit guarantee fund under the BFG was reduced. According to the decision of the BFG Council[55], in 2023 banks will not pay any contribution to the deposit guarantee fund, which will reduce their costs *ceteris paribus*.

Figure 2.41. Number of domestic commercial banks (left-hand panel) and cooperative banks (right-hand panel) with negative profitability and their share in assets of the respective group of banks



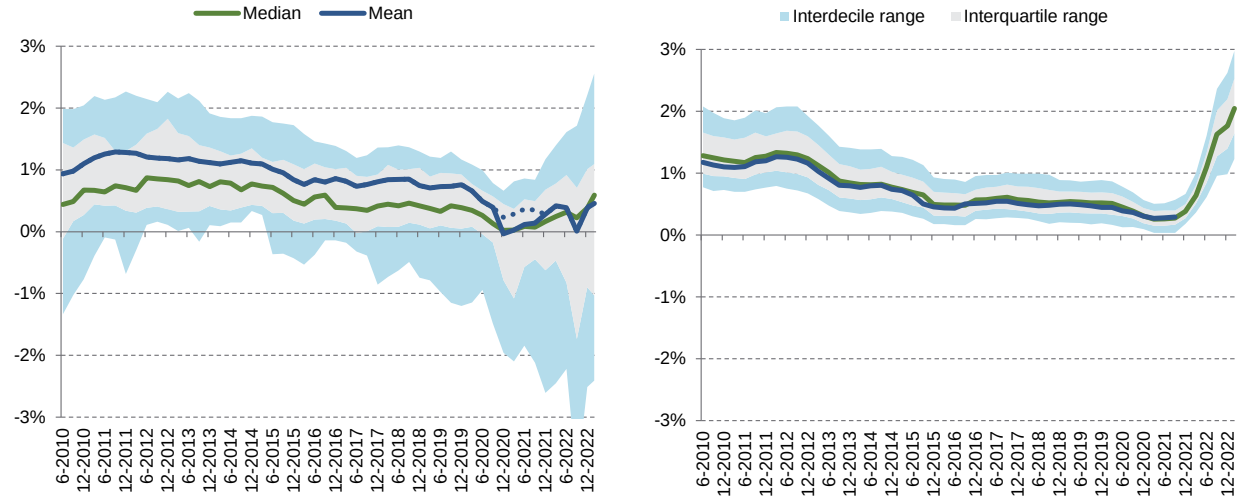
Note: profitability over a 12-month horizon.

Source: NBP.

The burden of other operating costs and credit losses on the banks' earnings has also increased (see Figure 2.40). Inflation-related wage pressures contributed to the increase in banks' operating costs, with employee costs for the 12 months until February 2023 increasing by 15% y/y, against a stable overall number of employees in the banking sector. On the other hand, the cost of credit risk increased very rapidly (almost 50% in analogical terms), although from a low level (more on this subject in Chapter 2.1). Further increases in operating costs and credit losses can be expected in the coming quarters due to continued high (albeit declining) inflation and the expected deterioration in the economic situation.

[55] See Resolution No. 3/2023 of the Council of the Bank Guarantee Fund of 27 February 2023 on the *non-collection of contributions to the banks' guarantee fund for 2023*, available at bfg.pl

Figure 2.42. Return on assets in domestic commercial banks (left-hand panel) and cooperative banks (right-hand panel)



Notes: Annualized data. The dashed line presents the value of the ratio excluding the change in the PKO BP earnings for 2020 as a result of the decision to offer settlements to borrowers with FX housing loans.

Source: NBP.

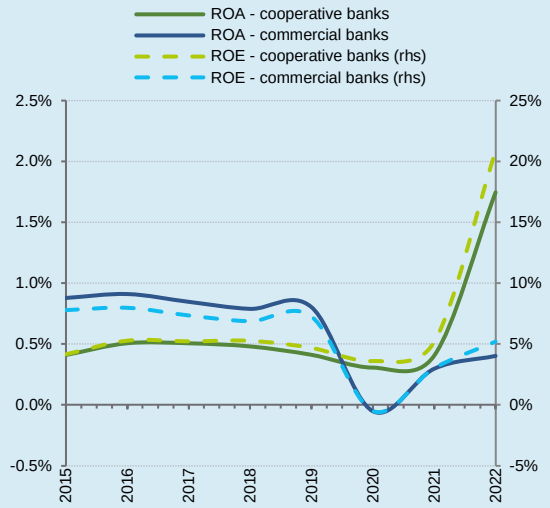
The profitability of commercial banks remained strongly diversified (contrary to the situation of cooperative banks), with many of them incurring losses as a result of legal risk costs and loan repayment holidays. The number and share of assets of banks with negative profitability, most of which were domestic commercial banks, were relatively high (see Figure 2.41). The losses of many of these institutions materially affected their capitals – for half of them the ROE was below -20%. Charges for legal risk of FX housing loans have remained the main reason for the banks' negative profitability since 2020. In addition, losses were caused or exacerbated by the cost of loan repayment holidays – this was particularly true for mortgage banks (for which housing loans represent a prevailing part of the assets) and for some commercial banks with significant portfolios of zloty housing loans relative to the value of assets. Cooperative banks, on the other hand, significantly improved their profitability ratios, albeit at a slower pace than in the first half of 2022 (see Figure 2.42). The situation of cooperative banks is more broadly described in Box 2.1.

Box 2.1. Cooperative banks – the opportunity to strengthen stability through high earnings

The earnings of the cooperative banking sector have improved markedly over the recent period. The cooperative banks' profit for 2022 amounted to PLN 3.2 billion and accounted for nearly 30% of the result of the banking sector as a whole, with around 8.5% of its assets. The consequence of the cooperative banks' good results was a significant improvement in their performance indicators. At the end of 2022, both the return on assets (1.7%) and the return on capital of cooperative banks (exceeding 20%) were several times higher than the values of these indicators for commercial banks (see Figure 2.43). Thanks to the strong growth in banking earnings, the sector's cost efficiency also increased markedly and was slightly better than that of commercial banks, with a C/I ratio of 46.6% at

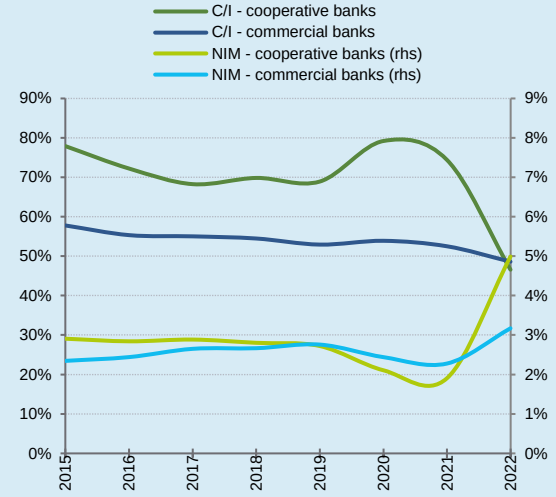
the end of 2022 compared to 48.6% at commercial banks (see Figure 2.44).

Figure 2.43. Return on assets and equity ratios in cooperative banks and domestic commercial banks (excluding BGK).



Source: NBP.

Figure 2.44. Effectiveness and net interest margin in cooperative banks and domestic commercial banks (excluding BGK).



Source: NBP.

The record high (over recent years) profit of cooperative banks was mainly due to the increase in interest income. The structure of the balance sheet in terms of the interest method applied and the higher share of interest income in the performance of cooperative banks makes them more sensitive to interest rate changes than in the case of commercial banks (see Figure 2.45).

At the same time, cooperative banks were significantly less charged with regulatory and legal costs compared to commercial banks. Due to the lack of FX housing loans on their balance sheets, cooperative banks do not bear the associated legal risk costs. They were also not obliged to contribute to the Polish Commercial Banks' Protection System (SOBK). Cooperative banks were also charged with the costs of loan repayment holidays to a lesser extent. On the one hand, the share of zloty housing loans in assets of cooperative banks is lower (25% vs. 37% in commercial banks) and, in addition, it is likely that the degree of using loan repayment holidays by borrowers of cooperative banks was also lower.[56]

The good performance of the cooperative banks was conducive to measures increasing the stability of their operations. A significant increase in provisions for impaired loans was visible in 2022, which may limit the adverse effects of the potential materialisation of credit risk in the future. The relatively low coverage ratio of impaired loans by charges so far increased by more than 10 percentage points to 59% and was higher than the average for commercial banks.

[56] Precise data on the scale of use of the so-called loan repayment holidays by customers of cooperative banks is not available. Moreover, the differences in the burden of this regulation on banks' earnings also result from different accounting rules between the two sectors.

Figure 2.45. Financial result of cooperative banks and commercial banks (excluding BGK) and the share of cooperative banks' earnings in the earnings of the entire banking sector.

Source: NBP.

Additional funds have been injected into the contributory part of the aid funds of institutional protection schemes.[57] Following the KNF recommendation, cooperative banks participating in Institutional Protection Schemes (IPS) were obliged to replenish the contributory part of the assistance funds (the total contributions amounted to 655.2 million zlotys), which translated into a significant increase in their operating costs. As a consequence, the sector's monthly result was negative for December 2022 (-157 million zlotys) and 319 cooperative banks recorded a monthly net loss. Despite that, at the end of the year the sector recorded a profit, while the change in the structure of the funds by the additional injection of the contributory part fostered the strengthening of the aid capacity of the IPS as such. The value of assistance funds available to the IPS at the end of 2022 amounted to: 672.5 million zlotys for the IPS BPS Security Fund and 482.8 million zlotys for the IPS SGB Assistance Fund.

Merger processes in the sector continued. At the end of 2022, 496 cooperative banks operated in Poland (10 of which outside the IPS – their assets accounted for more than 7% of assets of the cooperative bank sector). Over the year, 15 merger processes were finalised in the IPS group of banks[58] (see Figure 2.46). However, the improved profitability of cooperative banks has translated into a reduction in the number of merger processes performed over the recent period – in 2023 Q1, one process was completed. Indeed, the improved situation of the banks does not indicate the need to merge with a stronger bank for prudential reasons. From the point of view of the sector's long-term development capacity, however, it is reasonable that mergers should also continue for banks with a satisfactory current position.

Figure 2.46. Number of banks operating and acquired in the sector of cooperative banks in the years 2015-2022.

Source: NBP.

Figure 2.47. Annual growth in the loan portfolio in cooperative banks and domestic commercial banks (excluding BGK).

Source: NBP.

[57] On 2 December 2022, the KNF recommended to the IPS management entities to increase the assistance funds referred to in Article 22g of the Act of 7 December 2000 on the Functioning of Cooperative Banks, their Associations and Associating Banks. In its recommendation, the KNF introduced a condition requiring that the entire aforementioned amount should be accumulated in the form of contributions from scheme participants.

[58] The assets of these banks amounted to a total of 1.8 billion zlotys (as at the last reporting date) and accounted for less than 1% of the cooperative bank sector's assets (reported at the end of 2022).

At the same time, lending in cooperative banks slowed down more than in commercial banks (see Figure 2.47). During the year, the value of the loan portfolio decreased by PLN 2.7 bn zlotys (to 66.3 bn zlotys), of which 1.8 bn zlotys were loans to individual farmers. The decline in the value of this portfolio may have been the result of a deterioration in the profitability of agricultural production and the situation of farms. It can be assessed that, in an environment of markedly improved profitability and a satisfactory capital position for cooperative banks, the main factor determining the low level of lending and loss of market share was the lack of demand.

Solvency

Changes in banking sector's own funds and capital ratios in 2022 were mostly affected by adjustments concerning instruments measured at fair value through other comprehensive income (FVOCI) (see Figure 2.48). The decline in the value of debt securities (mainly Treasury bonds) in FVOCI portfolio, recognised directly in the own funds in 2022, amounted to approximately PLN 2.8 bn. Nevertheless, in 2022 Q4, banking sector's own funds and average capital ratios increased (TCR to 18.6% and Tier I/CET1 to 16.6%) owing to, among others, the increase in the value of the FVOCI portfolio (see Figure 2.49) and the recapitalisation of the bank established due to the resolution of Getin Noble Bank S.A.

Relatively few banks exercised the option to reduce the unrealised losses on valuation of the FVOCI portfolio, therefore the expiry of the provisions allowing the reduction [59] should not materially undermine the sector's capital standing. From the start of 2023, all unrealised losses should be reported by banks in OCI, whereas pursuant to the transitional provisions in 2022, they had a possibility to reduce these losses by 40%. Furthermore, the gradual increase in the valuation of debt instruments observed in 2023 Q1 is likely to offset the negative impact of the expiry of the transitional provisions.

The entry into force of the new CRR provisions[60], which affect the capital requirements and ratios, is also not expected to have a significant impact on the Polish banking sector. These provisions introduce (i) concentration limits relative to Tier 1 capital (no more than 100%) for exposures to central governments (among others, for Treasury securities) in currencies of another EU Member State and (ii) a higher, i.e. 20%, scaling factor when assigning risk weight to these exposures[61] (which translates into

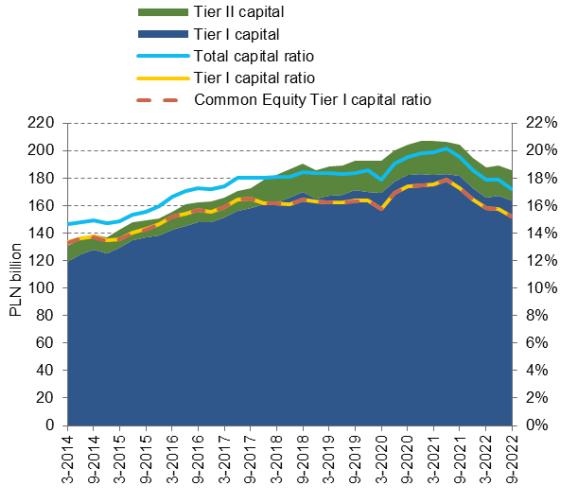
[59] The transitional provisions, introduced in connection with the COVID-19 pandemic, relating to the temporary treatment of unrealised gains and losses on a portfolio of debt instruments measured at fair value through other comprehensive income have expired. See Article 468 of the CRR "Temporary treatment of unrealised gains and losses measured at fair value through other comprehensive income in relation to the COVID-19 pandemic".

[60] See Article 500a of the CRR "Temporary treatment of government debt issued in a currency of another Member State".

[61] Pursuant to Article 114(2) of the CRR, exposures to central governments with an investment grade rating of A- (Poland's current rating) are classified in the second credit quality group with an assigned risk weight of 20%.

the risk weight of 4%). Further amendment, which will enter into force in 2024, reduces the concentration limit for FX Treasury and Treasury-guaranteed exposures to 75% of the institution's Tier 1 capital and increases the risk-weight scaling factor to 50% (the risk weight will then amount to 10%). The value of these debt instruments, denominated in a currency other than PLN in banks' balance sheets is low. It follows that any potential adjustments to banks' balance sheets will therefore be negligible.

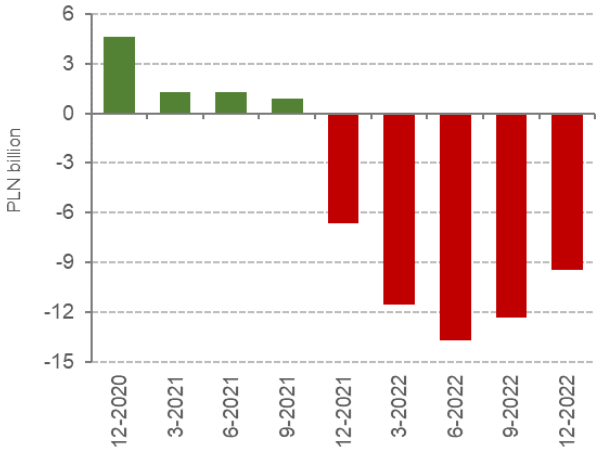
Figure 2.48. Own funds and solvency ratios



Note: exclusive of BGK.

Source: NBP.

Figure 2.49. Accumulated other comprehensive income (financial assets measured according to FVOCI)



Note: exclusive of BGK. Data adjusted for provisions for cash flow hedging instruments.

Source: NBP.

In most banks, own funds continued to significantly exceed overall capital requirements. At the beginning of 2023, the domestic banking sector's capital surplus over Pillar I and Pillar II requirements amounted to approximately PLN 100 bn. The surplus over the combined regulatory requirements, including the MREL transitional requirement and the combined buffer requirement, totalled approximately PLN 43 bn (see Figure 2.50). Capital shortfalls (PLN 2.3 bn) were observed in a limited number of banks, mainly in cooperative ones. From 1 January 2024, the full MREL target will become applicable, higher – *ceteris paribus* – by around PLN 40 bn compared to the intermediate target(see Figure 2.53). If the full MREL target were to be met solely with own funds, this would significantly decrease current surpluses and could impede banks' lending capacity.

Meeting the full MREL target without depleting available own funds would require the issuance of debt securities. Debt securities eligible for fulfilling MREL (eligible instruments) have so far been issued by eight banks. Most of the funds (more than 90% of the PLN 15 bn) was raised by three large banks that were already active in the international financial markets or are owned by a major European

bank. The EBRD is also an important investor.[62] These issuances allowed banks to cover, on average, approximately 60% of the recapitalisation amount of their 2023 MREL target. However, large-scale debt issuances may be hampered in the coming quarters due to developments in global financial markets concerning the bankruptcies or restructuring of several US banks and the forced acquisition of Credit Suisse by UBS including the write-down of AT1 instruments. For banks with Single Point of Entry (SPE) resolution strategy[63], eligible instruments may be acquired by parent banks.[64] Recently, the Sejm amended the Act on Bonds[65], introducing a new financial instrument, so-called capital bond, which offers new possibilities to meet MREL targets. These bonds, which offer a higher yield compared to ordinary bonds, will be classified as equity and could be written down upon bankruptcy of the financial institution (so-called AT1 bonds). Banks have long sought the introduction of such provisions to the Polish legal framework, which allows to that parent entities of Polish banks may be interested in acquiring these instruments.

The prospect of banks' own funds surpluses declining as a result of the full MREL target becoming binding and the uncertainty with respect to sufficient market demand for debt instruments, including eligible liabilities, raise the importance of retained profits for the build-up of capital resources. The current higher interest rate environment fosters banks' profitability. However, the outlook for the banking sector appears uncertain due to, among others, the lack of clarity regarding the extension of mortgage loan holidays which are very costly for bankswidespread take-up. Adding to this, the magnitude of potential increase in legal risk costs will be contingent on the CJEU ruling in Case C-520/21 and the pace of provisioning may accelerate significantly compared to previous years (see Chapter 2.2). In view of the above, it is therefore very important from the financial stability perspective that no additional financial burdens, which are not of a prudential nature, are imposed on banks.

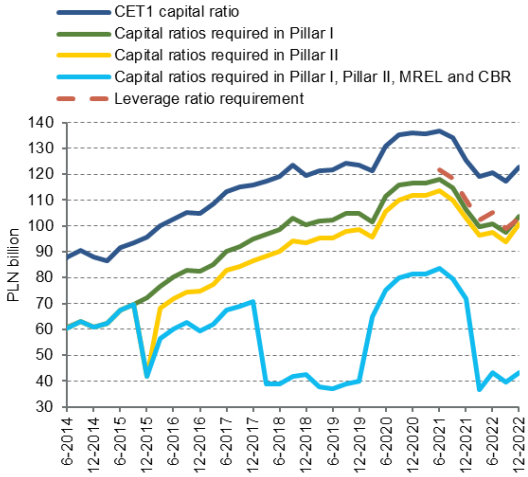
[62] The EBRD supports the banks of many countries by participating in the purchase of eligible instruments, up to 20-30% of the issue (or less if there is sufficiently high demand). In 2023, the EBRD invested in instruments issued by Bank Pekao, PKO BP and Santander. https://biznes.pap.pl/pl/news/all/info/3410589,ebrd-ready-to-participate-in-further-mrel-bond-issues-by-polish-banks.

[63] SPE – a forced restructuring (resolution) strategy assuming that the resolution instruments are only applied to the parent entity in the group subject to resolution, which is the only entity subject to resolution in the entire group.

[64] A Multiple Point of Entry (MPE) strategy is envisaged for most banks in Poland. The share of assets in the sector of banks with an SPE strategy is around 15%.

[65] Act of 9 March 2023 amending the Act on Investment Funds and Management of Alternative Investment Funds, the Act on Bonds, the Act on the Bank Guarantee Fund, the Deposit Guarantee System and Resolution and certain other acts. Most of the provisions are due to come into force on 1 October 2023 (including those relating to the capital bond).

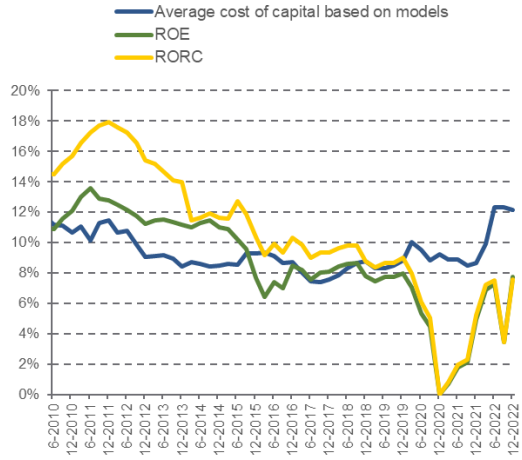
Figure 2.50. Excess of Common Equity Tier 1 capital over capital, MREL, and leverage requirements



Note: exclusive of BGK.

Source: NBP estimates

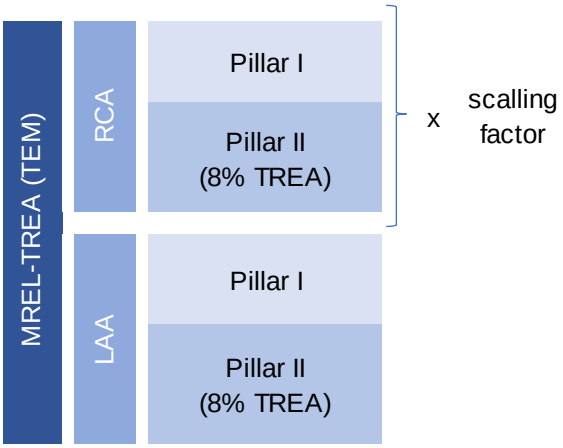
Figure 2.51. Estimated cost of capital of WSE-listed banks against their profitability



Source: NBP estimates based on NBP, Bloomberg and Refinitiv data.

Financial markets and rating agencies notice these pockets of uncertainty, which impedes the ability of and costs for banks to raise funds in the capital markets (see Chapter 2.7). The average cost of equity of a group of WSE-listed banks remains clearly above their profitability, which may hinder the potential issuance of new shares (see Figure 2.51).

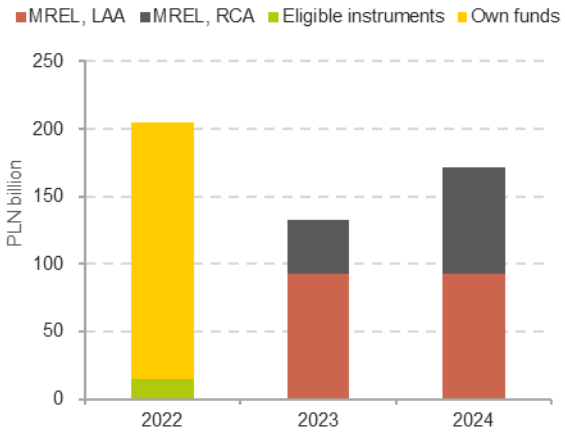
Figure 2.52. MREL requirement scheme



Note: banks calculate the requirements on the basis of TREA and TEM; they meet the higher of these requirements.

Source: BFG.

Figure 2.53. Estimated MREL requirements against funds and eligible liabilities



Notes: MREL estimates based on data at the end of 2022. 2023 – MREL interim level, 2024 – MREL target level.

Source: NBP estimates

2.6. Stress tests

Top-down stress tests were conducted to assess the resilience of domestic commercial banks[66] to an impact of adverse macroeconomic and market shocks and the costs of legal risk of FX housing loans. Two scenarios of economic developments over the period from the first quarter of 2023 to the end of 2025 were considered. The stress tests and other analyses described in this chapter aim at identifying and assessing vulnerable areas of banking sector activity. Therefore, the results of the stress tests conducted should not be treated as a forecast of the situation of the banking sector.

Main assumptions adopted in the stress tests

The analysis was carried out for two scenarios – **the reference scenario and the adverse scenario**. The central path of the NBP macroeconomic projection from the "Inflation Report, March 2023", prepared under the assumption of fixed interest rates, was used as the **reference scenario**. The **adverse scenario** was developed on the basis of the model used for the NBP macroeconomic projections and the historical developments of macroeconomic variables for periods of financial downturns in other countries. The paths of selected macroeconomic variables in both scenarios are presented in Figure 2.54 and Table 2.1. In addition, the adverse scenario assumed that, due to an increase in risk aversion, a lasting depreciation of the zloty by 30% may occur as well as an immediate increase in the credit spread of Treasury bonds by 300 basis points (gradually easing in subsequent quarters of the simulation to 120 basis points at the end of 2025). It was also assumed that banks' capital – as a result of Treasury bonds measured at *fair value through other comprehensive income* maturing over the period analysed – would no longer be diminished by the negative valuation of maturing instruments accumulated prior to the beginning of the period analysed.

Table 2.1. Major economic indicators in the macroeconomic scenarios considered

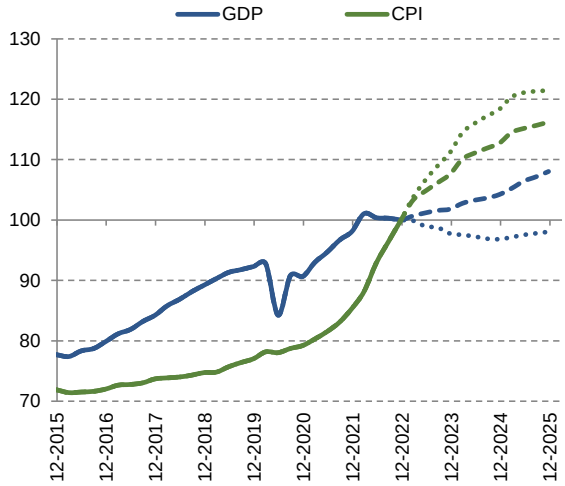
Scenario	2022	2023	2024	2025
GDP (y/y, %)				
Reference	4.9	0.9	2.1	3.1
Adverse	4.9	-2.2	-1.7	0.5
CPI (y/y, %)				
Reference	14.4	11.9	5.7	3.5
Adverse	14.4	14.0	8.2	3.9
Employment (y/y, %)				
Reference	0.5	-0.6	-1.2	-0.4
Adverse	0.5	-0.9	-2.3	-1.9
Real wages (y/y, %)				
Reference	-2.0	0.2	2.3	2.8
Adverse	-2.0	-1.1	0.3	1.5

Source: NBP.

[66] Banks active at the end of 2022, excluding BGK and Velobank. The analysis covered 28 commercial banks with a combined share of 72% in the banking sector's assets at the end of 2022.

Projections from the VECM model[67], performed under the reference or adverse scenario, were used to determine the paths of possible lending growth for each bank. A decrease in the value of the loan portfolio was also admitted, if indicated by the projection from the VECM model. The possible growth rate of other assets was determined as half the nominal GDP growth rate. The assumption is that a bank can only expand lending and increase volume of other asset portfolios until its capital levels allow it to cover the capital requirements of Pillars 1 and 2, the MREL requirement at the fully-loaded level (satisfied only with capital and retained earnings[68] – excluding eligible liabilities issued before the end of 2022 and excluding the recapitalisation portion of the requirement in banks with SPE strategies) and the combined buffer requirement. It has been assumed that undistributed profits and new profits generated in subsequent years of the analysis increase own funds after payment of the dividend determined on the basis of *the KNF Position on dividend policy in 2023*[69].

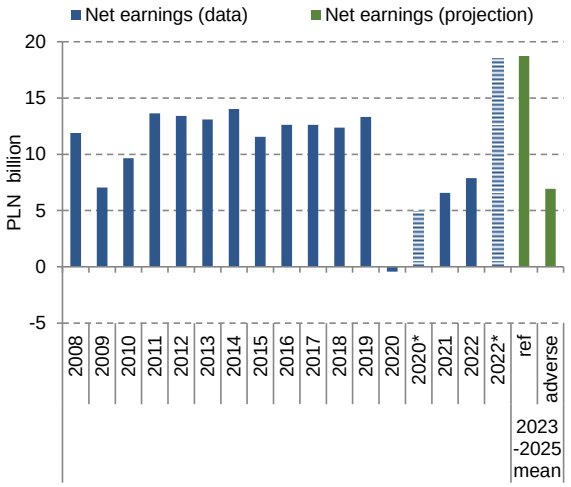
Figure 2.54. Real GDP level and CPI inflation in macroeconomic scenarios



Notes: The dashed line indicates the reference scenario and the dotted line indicates the adverse scenario. GDP and CPI level normalised to 100 in December 2022.

Source: NBP calculations based on GUS data.

Figure 2.55. Net earnings of the analysed group of banks



Notes: Green bars show the average annual value of net earnings in 2023-2025 in the reference and adverse scenarios for 28 banks covered by the analysis.
Two values are presented for 2020 and 2022. For 2020 – the bar with an asterisk represents the data excluding the effects of the resolution of the PKO BP EGM offering the settlements in disputes concerning FX housing loans. 2022 – the bar with an asterisk represents the net earnings increased by the cost of the loan repayment holiday.

Source: NBP.

[67] The model is described in the annex to Chapter 6 of "Financial System in Poland 2020", NBP, Warsaw, 2021. (https://www.nbp.pl/systemfinansowy/rozwoj2020.pdf).
[68] In compliance with the law, banks may cover the MREL requirement with available surplus own funds, with retained earnings, by increasing own funds with funds raised from investors (including by issuing subordinated debt instruments) or by raising additional eligible liabilities.
[69] https://www.knf.gov.pl/knf/pl/komponenty/img/Stanowisko_KNF_dot_polityki_dywidendowej_w_2023_80488.pdf.

The future cost of legal risk was estimated assuming that within 3 years the provisions for this risk would reach a level allowing to cover the costs of voluntary settlements for 25% of the existing portfolio of Swiss franc housing loans and the costs of the remaining active Swiss franc loan agreements and of 25% of the repaid loans pronounced invalid by the courts. The adverse scenario assumes an additional increase in the value of these provisions as a result of the depreciation of the zloty against the Swiss franc and an increase in the share of repaid loans pronounced invalid in court to 50%. **The estimate of legal risk costs included in the two stress test scenarios should not be considered as a forecast or as the most likely option, but only as an assumption for simulation** (for more on the legal risk of FX housing loans, see Chapter 2.2).

In the adverse scenario, banks were additionally charged with higher loan repayment holiday costs (it was assumed that from 2023 Q2, all borrowers will use loan repayment holidays), while there are no related additional costs in the reference scenario (exceeding the costs recognised by banks in 2022). It was also assumed that in the analysis horizon, no new contributions will occur to the BFG deposit guarantee fund due to the lowering of the target level of this fund (see Chapter 2.5) or for the Borrower Support Fund.

Stress test results

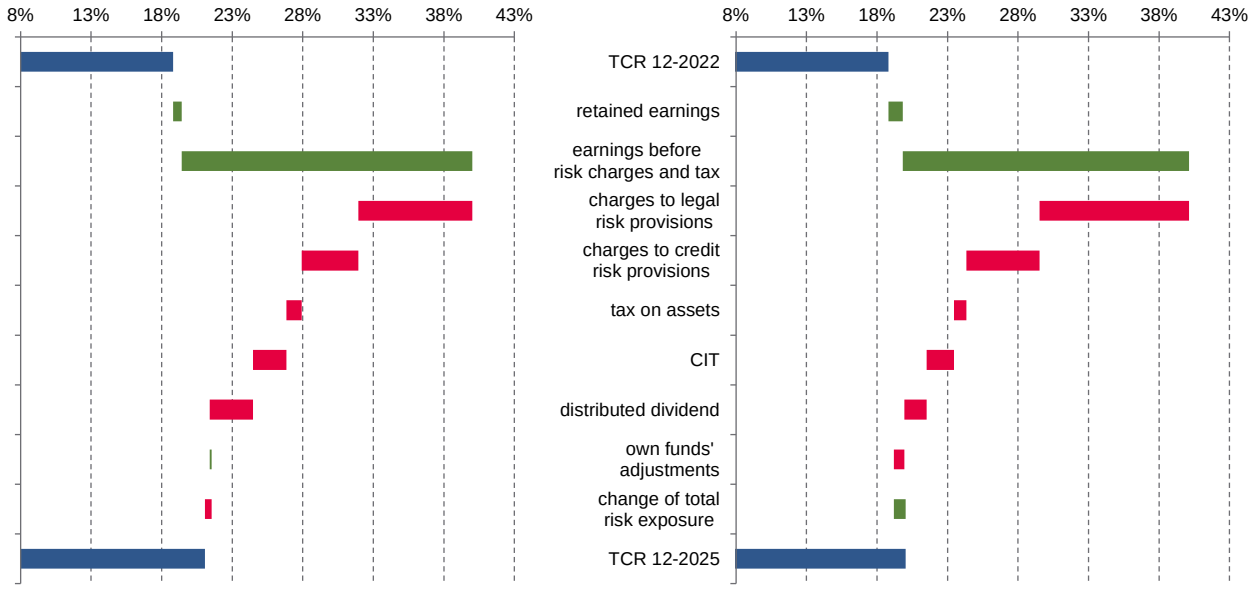
In the case of the adverse scenario and legal risk costs materialising at the assumed amount, the total average net earnings of the analysed banks in 2023-2025 would be at a level similar to the last two years (see Figure 2.55). Financial losses in this period would be incurred by banks having a 15% share in the sector's assets, as in 2022. By comparison, in the reference scenario the annual average net earnings – in the absence of additional loan repayment holiday costs and other extraordinary charges (apart from the increased provisions for legal risk of FX housing loans) – would be more than twice as high as in 2022, while the share of banks with a negative profitability would only amount to 3%. It is worth noting that banks' profits in 2022 would have been significantly higher (close to those in the reference scenario) if they had not been burdened by the introduction of loan repayment holidays (reducing the gross profit of the banks analysed by around 13 bn zlotys).[70]

The key factor that continues to have a positive effect on the banks' earnings over the period analysed would be higher net interest income The level of net interest income over the simulation period is linked to the assumed fixed interest rates over the horizon of the macroeconomic scenario. The current level of interest rates has a favourable impact on net interest income and margins. Banks' profitability would also be supported by higher earnings from commissions and fees, albeit to a much lesser extent.

[70] In the absence of loan repayment holidays in 2022-2023, banks would incur a higher cost of credit risk, which would reduce their earnings over the simulation period (although this reduction would be much lower than the cost of the loan repayment holiday).

High costs of legal risk of FX housing loans and credit losses would have a negative impact on banks' earnings. Charges to provisions for the legal risk would still be high – in the adverse scenario banks would have to increase the provisions already created by 180% and in a reference scenario by 130%. Due to the projected economic slowdown, average annual credit losses in the adverse scenario would be more than double (in the reference scenario 89% higher) compared to 2022. This increase would start from a low level, but the average annual ratio of credit losses to assets in the adverse scenario would be one of the highest against the historical distribution of this ratio (in the reference – around the third quartile). At the same time, the analysis assumed the absence of contributions to the BFG deposit guarantee fund and other irregular charges (such as contributions to protection schemes, the Borrower Support Fund or other borrower support programmes), which generated high costs in 2022.

Figure 2.56. Total capital ratio of domestic commercial banks in the reference scenario (left-hand panel) and the adverse scenario (right-hand panel) and decomposition of its changes



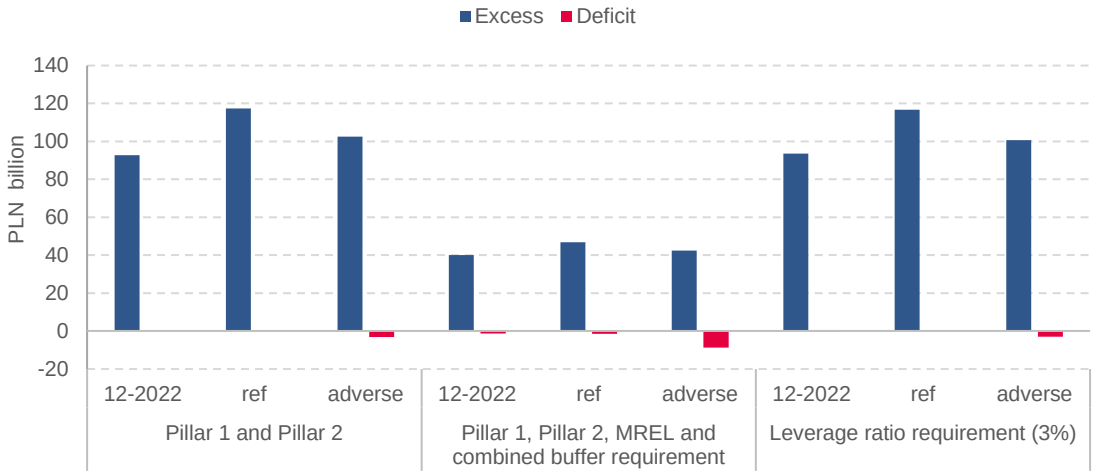
Notes: Blue bars represent the total capital ratio of 28 banks analysed at the beginning and the end of the simulation period. Factors positively influencing the average total capital ratio over the simulation period are marked with green bars and those adversely influencing it – with red bars. The impact of these factors is presented in percentage points. "Retained earnings" is an increase in banks' capital by the undistributed profit (as of the end of 2022) generated before the simulation period, arising from the adopted assumptions. "Earnings before credit risk charges and tax" is equivalent to net income from banking activity, less, among others, operating costs. "Tax on assets" is the estimated amount of the tax on certain financial institutions that banks would pay during the simulation period. It is assumed that a bank that records a loss in two consecutive quarters shall be subject to the recovery plan, which relieves it from paying tax for the rest of the projection period. The "Change of risk exposure" mainly results from changes in the balance sheet total and structure of assets (including granting new loans and changes in the value of FX housing loans).

Source: NBP.

If the adverse scenario materialised, the average capital ratios and total excess of capital would increase slightly due to the retention of most of the undistributed profits[71] and a part of the profits made over the simulation period, as well as due to a decrease in risk exposure. In particular:

- **the profit would strengthen the banks' capitals.** Under the assumption that the rules resulting from *the KNF Position on dividend policy in 2023* are applied throughout the simulation period, more than 70% of the undistributed profit made before the analysis period and more than half of the profits made during the simulation period would be allocated to increasing regulatory funds (in the reference scenario, almost a half, see Figure 2.56).
- **capital requirements would decrease as a result of a decline in the total risk exposure amount (TREA).** Lending projections in respective portfolios indicate that only the portfolio of loans to households other than housing loans would record growth (also in the adverse scenario), whereas the other loan portfolios would see stagnation in the reference scenario and repayments would exceed the value of new lending in the adverse scenario. The banks' risk exposure would also decrease as a result of systematic repayments of FX housing loans or their potential conversion into zloty loans (e.g. when a loan agreement is declared invalid). In total, the TREA of the banks analysed in the adverse scenario would decrease by 4% compared to the end of 2022.

Figure 2.57. Total excess and deficit of Common Equity Tier 1 capital after meeting the regulatory requirements at the end of 2022 and at the end of the simulation period (2025)



Notes: Excess and deficit for 28 banks analysed. Data for December 2022 relate to coverage of the transitional MREL requirement level including eligible liabilities. The excess and shortfalls in the reference and adverse scenarios were estimated under the assumption that the MREL requirement (calculated on a stand-alone basis) at the target level (less eligible liabilities issued by the end of 2022) is covered by the banks analysed with their capital only (except for subsidiary banks belonging to capital groups, to which the SPE resolution strategy would be applicable).

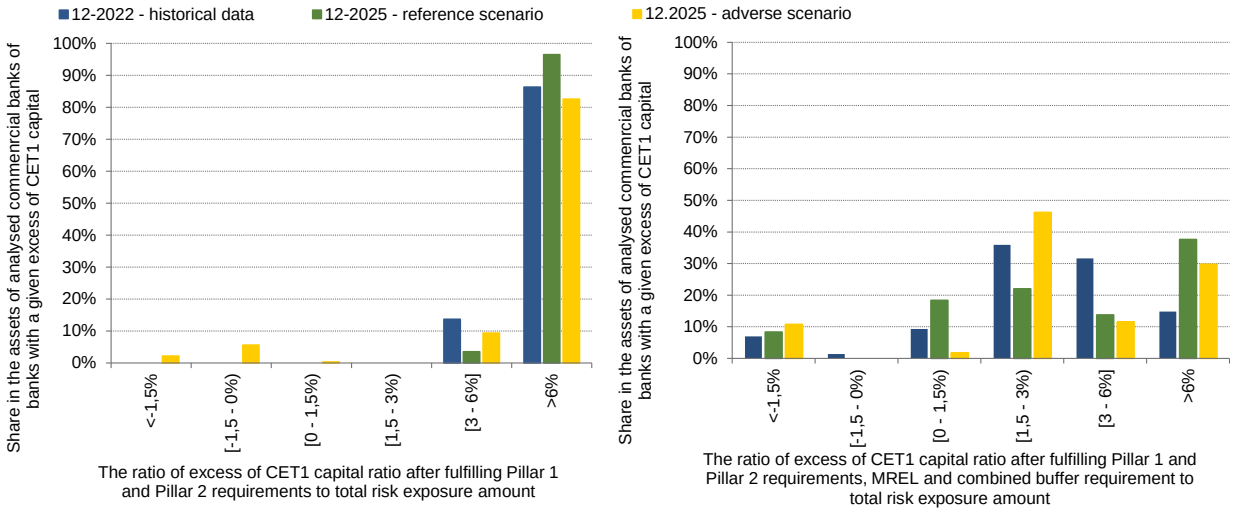
Source: NBP.

[71] As at the end of 2022.

As a result of covering the incurred losses with capital, some banks would cease to meet capital requirements. At the end of 2025 (see Figure 2.57 and Figure 2.58):

- commercial banks with a total share of 6% of the sector's assets would fail to meet the Pillar 1 and Pillar 2 capital requirements in the case of the adverse scenario and the total capital shortfall would be around 3.1 bn zlotys (in the reference scenario, all banks analysed would meet these requirements),
- commercial banks with a total share of 8% in the sector's assets would fail to meet the Pillar 1 and Pillar 2 capital standards, the MREL target requirement and the combined buffer requirement in the event of the adverse scenario materialisation, with the total Common Equity Tier 1 capital deficit amounting to approximately 8.8 bn zlotys (6% and 1.4 bn zlotys, respectively, in the reference scenario),
- banks with a share of 6% in the sector's assets would fail to meet the leverage requirement under the adverse scenario, while the associated capital shortfall would amount to 3.1 bn zlotys. In the reference scenario, all banks analysed would meet the Pillar I and Pillar II requirements and the leverage requirement.

Figure 2.58. Distribution of assets of the analysed commercial banks by excess of Common Equity Tier 1 capital after fulfilment of Pillar 1 and Pillar 2 requirements (left-hand panel) and the combined buffer requirement (right-hand panel)



Notes: see Figure 2.57.

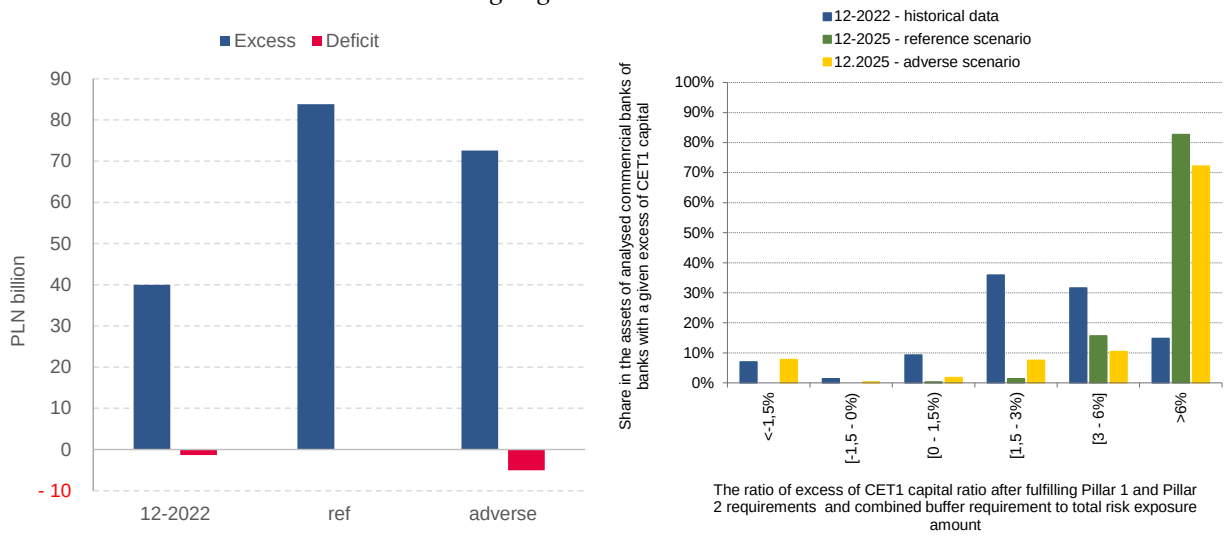
Source: NBP.

The stabilisation of banks' excess of capital at relatively low levels in both scenarios could be a limiting factor for flexibility in lending in the longer term(beyond the stress-testing horizon). Over the simulation period, low credit growth can be expected due to the deterioration of the economic conditions. On the other hand, over the longer horizon, in the event of a faster economic recovery and an

improvement in the creditworthiness of real sector entities, low excess capital after meeting the combined buffer requirement could become a constraint on lending expansion. However, should the banks analysed comply with the MREL requirement by issuing eligible debt instruments, retaining part of their earnings could significantly increase excess capital over the simulation period and the share of banks with relatively high surpluses, even if the adverse scenario materialised (see Figure 2.59), which would also improve the outlook for lending in the longer term.

Figure 2.59. Total excess and deficit of Common Equity Tier 1 capital (left-hand panel) and the distribution of assets of the analysed commercial banks by excess of Common Equity Tier 1 capital (right-hand panel) at the end of 2022 and at the end of the simulation period (2025)

Excess/deficit after meeting the combined buffer requirement assuming that the MREL requirement is met by issuing eligible debt instruments



Notes: Excess and deficits for 28 banks analysed. Figures for December 2022 relate to coverage of the transitional MREL requirement level including eligible liabilities issued. The excess and deficits in the reference and adverse scenarios were estimated under the assumption that the banks analysed would cover the MREL requirement (calculated based on stand-alone data) at the target level by issuing eligible debt instruments only from 2023 Q4 onwards – unlike the other figures in this chapter.

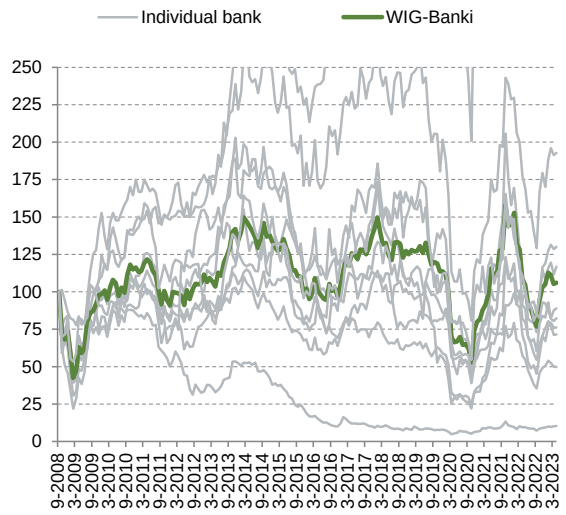
Source: NBP.

2.7. Market assessment of banks

Announcements regarding the introduction of legal and regulatory burdens, i.e. loan repayment holidays and the publication of the CJEU Advocate General's opinion on the FX loan portfolio have decreased investors' assessment of banks' ability to generate profits in the future. The considerations concerning the extension of the loan repayment holidays and the increase in legal risks triggered by the publication of the CJEU Advocate General's opinion in February have, in the opinion of investors, postponed the outlook of dividend payments for 2023. These risks reinforced the pessimism coming from global markets and resulted in a slump in the share prices of Polish banks (see Figure 2.60) and the market valuation in relation to book value (see Figure 2.61). The "price to book value" ratio for Polish

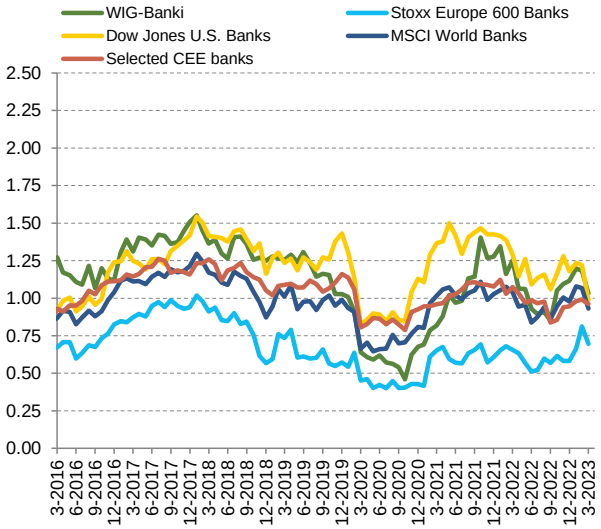
banks still remained higher than the average for European banks; however, this advantage has decreased significantly over the last six months. Maintaining the profitability of the banking sector at a level lower than the non-financial corporate sector (ROE of 6.2% and 15.3%, respectively, at the end of 2022) and the estimated implied cost of capital (see Figure 2.51) may further limit the demand for bank shares and their ability to raise capital through new issues.

Figure 2.60. Prices of WIG-Banki index and shares of individual banks



Source: NBP calculations based on Refinitiv data.

Figure 2.61. "Price to book value" ratio for selected groups of banks



Note: selected CEE banks – the arithmetic mean of the "price to book value" ratio for the ten largest listed banks in CEE countries, excluding Poland.

Source: NBP calculations based on Refinitiv data.

Rating agencies downgraded the overall rating of the banking sector and banks with significant FX loan portfolios. The downgrading of the outlook for the Polish banking sector to negative was influenced by the deterioration of the growth outlook for the economy and high inflation, as well as a significant increase in funding costs and losses on FX loan portfolios. The rating agencies downgraded the ratings of mBank and Bank Millennium and affirmed the ratings of the majority of listed banks, in some cases, however, leaving the rating outlook negative. In February 2023, Moody's agency declared that the CJEU Advocate General's opinion would have a negative impact on banks' credit ratings, due to the opinion's impact on an increase in lawsuits and a higher likelihood of material losses for banks. On the other hand, Moody's agency noted that litigation could be extended over time, allowing banks to create additional provisions and strengthen capital by retaining earnings.

2.8. Selected indicators describing the situation of the banking sector

Table 2.2. Banking Sector

in %	12-2021	3-2022	6-2022	9-2022	12-2022
Return on assets (ROA) *	0.25	0.38	0.41	0.09	0.42
Return on Tier 1 capital (RORC) *	3.4	5.3	5.4	0.8	6.2
Return on accounting capital (ROE) *	3.2	5.0	5.2	0.8	6.4
Net interest margin (NIM) *	1.89	2.08	2.40	2.57	2.89
The share of net interest income in net income from banking activity *	67.0	69.6	73.3	75.0	77.4
The share of net noninterest income in net income from banking activity *	33.0	30.4	26.7	25.0	22.6
Operating costs to net income from banking activity (CTI) *	57.7	55.3	54.7	53.7	50.6
Net charges to credit risk provisions to net income from banking activity *	9.8	8.7	8.2	9.4	9.9
Loan grow th rates (y/y)					
- nonfinancial sector	4.2	4.9	4.2	2.6	-0.6
- households	4.4	3.3	0.5	-2.4	-4.6
- consumer loans	2.0	1.5	-0.3	-2.7	-2.9
- housing loans	6.6	5.3	2.2	-1.2	-4.2
- enterprises	3.8	8.5	12.8	14.8	9.0
Impaired loan ratios					
- nonfinancial sector	5.8	5.7	5.7	5.7	5.6
- households	5.1	5.1	5.1	5.4	5.1
- consumer loans	9.5	9.6	9.3	9.4	8.7
- housing loans	2.4	2.3	2.4	2.5	2.3
- enterprises	7.4	7.0	6.7	6.4	6.5
Net charges to credit risk provisions to net value of loans *					
- nonfinancial sector	0.58	0.55	0.55	0.67	0.71
- households	0.60	0.64	0.64	0.76	0.76
- consumer loans	1.59	1.56	1.68	1.79	2.07
- housing loans	0.05	0.09	0.08	0.21	0.13
- enterprises	0.55	0.38	0.37	0.51	0.61
Funding gap	-17.0	-16.4	-18.0	-18.6	-21.9
Total capital ratio	18.6	17.9	17.9	17.2	18.6
Tier 1 capital ratio	16.5	15.8	15.8	15.2	16.6
Core Equity Tier 1 capital ratio	16.5	15.8	15.8	15.2	16.6
Financial leverage (multiple)	12.0	12.9	13.0	13.5	13.1
Leverage ratio according to CRDIV/CRR	8.1	7.6	7.7	7.3	7.6

Note: annualized data are marked with an asterisk. Capital ratios and returns on equity calculated for domestic banks excluding BGK. Growth rate of loans after adjusting for foreign exchange rate changes.

Source: NBP.

Table 2.3. Domestic commercial banks

in %	12-2021	3-2022	6-2022	9-2022	12-2022
Return on assets (ROA) *	0.28	0.42	0.39	0.01	0.39
Return on Tier 1 capital (RORC) *	3.2	5.1	4.7	-0.9	4.7
Return on accounting capital (ROE) *	3.0	4.8	4.5	-0.9	4.9
Net interest margin (NIM) *	1.91	2.09	2.38	2.50	2.77
The share of net interest income in net income from banking activity *	67.1	69.6	73.1	74.5	76.8
The share of net noninterest income in net income from banking activity *	32.9	30.4	26.9	25.5	23.2
Operating costs to net income from banking activity (CTI) *	52.0	50.2	50.8	50.6	47.3
Net charges to credit risk provisions to net income from banking activity *	10.3	9.0	8.5	9.5	10.0
Loan grow th rates (y/y)					
- nonfinancial sector	4.0	4.6	3.8	2.4	-0.4
- households	4.1	2.9	0.1	-2.8	-4.8
- consumer loans	1.4	1.0	-0.8	-3.1	-3.3
- housing loans	6.6	5.1	1.8	-1.6	-4.4
- enterprises	3.8	8.7	13.3	15.6	10.5
Impaired loan ratios					
- nonfinancial sector	5.8	5.7	5.6	5.7	5.5
- households	5.1	5.2	5.1	5.4	5.0
- consumer loans	9.8	10.0	9.6	9.8	9.0
- housing loans	2.4	2.3	2.4	2.5	2.3
- enterprises	7.4	6.9	6.6	6.3	6.4
Net charges to credit risk provisions to net value of loans *					
- nonfinancial sector	0.61	0.57	0.55	0.65	0.67
- households	0.63	0.66	0.67	0.78	0.77
- consumer loans	1.67	1.63	1.76	1.87	2.14
- housing loans	0.04	0.09	0.12	0.25	0.18
- enterprises	0.59	0.39	0.32	0.41	0.50
Funding gap	-14.7	-14.8	-16.9	-17.2	-20.1
LCR	176.5	153.6	154.2	159.6	179.9
Total capital ratio	18.6	17.8	17.7	17.1	18.6
Tier 1 capital ratio	16.3	15.6	15.6	14.9	16.4
Core Equity Tier 1 capital ratio	16.3	15.6	15.6	14.9	16.4
Financial leverage (multiple)	11.8	12.8	13.0	13.5	13.0
Leverage ratio according to CRDIV/CRR	8.1	7.5	7.6	7.2	7.5

Note: annualized data are marked with an asterisk. Capital ratios and return on equity calculated for domestic commercial banks excluding BGK, LCR additionally excluding the associating banks. Growth rate of loans after adjusting for foreign exchange rate changes.

Source: NBP.

Table 2.4. Cooperative banks

in %	12-2021	3-2022	6-2022	9-2022	12-2022
Return on assets (ROA) *	0.40	0.65	1.07	1.57	1.75
Return on Tier 1 capital (RORC) *	5.5	8.9	14.7	21.6	24.1
Return on accounting capital (ROE) *	5.2	8.4	13.6	19.4	20.9
Net interest margin (NIM) *	1.90	2.35	3.16	4.13	4.99
The share of net interest income in net income from banking activity *	73.6	77.8	82.3	85.8	88.1
The share of net noninterest income in net income from banking activity *	26.4	22.2	17.7	14.2	11.9
Operating costs to net income from banking activity (CTI) *	74.4	65.1	53.9	45.5	46.6
Net charges to credit risk provisions to net income from banking activity *	6.9	8.3	10.6	12.3	13.1
Loan grow th rates (y/y)					
- nonfinancial sector	6.6	5.3	1.7	-1.6	-4.2
- households	7.4	5.7	1.3	-2.6	-6.1
- consumer loans	6.6	2.4	-1.5	-5.1	-6.6
- housing loans	19.1	18.5	13.2	6.7	0.3
- enterprises	4.5	4.2	2.6	1.0	0.7
Impaired loan ratios					
- nonfinancial sector	8.3	8.2	8.3	8.2	8.3
- households	4.9	5.0	5.1	5.1	5.3
- consumer loans	4.7	4.7	4.7	4.8	5.0
- housing loans	1.1	1.1	1.1	1.1	1.1
- enterprises	17.5	17.1	17.0	16.1	15.8
Net charges to credit risk provisions to net value of loans *					
- nonfinancial sector	0.47	0.66	1.07	1.57	1.98
- households	0.26	0.42	0.70	1.03	1.33
- consumer loans	0.22	0.36	0.48	0.77	0.92
- housing loans	0.03	0.05	0.07	0.12	0.17
- enterprises	1.08	1.37	2.13	3.11	3.84
Funding gap	-86.7	-77.3	-74.7	-79.0	-82.8
Unconsolidated LCR	485.5	479.9	439.9	453.0	491.8
Consolidated LCR	302.3	260.9	278.9	289.9	314.7
Total capital ratio	18.5	18.6	19.6	19.6	19.2
Tier 1 capital ratio	18.0	18.1	19.0	19.1	18.7
Core Equity Tier 1 capital ratio	18.0	18.1	19.0	19.1	18.7
Financial leverage (multiple)	14.4	14.0	13.2	13.6	13.9
Leverage ratio according to CRDIV/CRR	7.7	8.5	9.0	8.8	8.6

Note: annualized data are marked with an asterisk. Unconsolidated LCR – data for cooperative banks which must comply with the LCR standard on an unconsolidated basis. Consolidated LCR – data for cooperative banks that were permitted to comply with the LCR standard on a consolidated basis and for the associating banks. Changes in the LCR remain influenced by the varying composition of respective banking groups – individual banks are subsequently permitted to comply with the LCR standard on a consolidated basis.

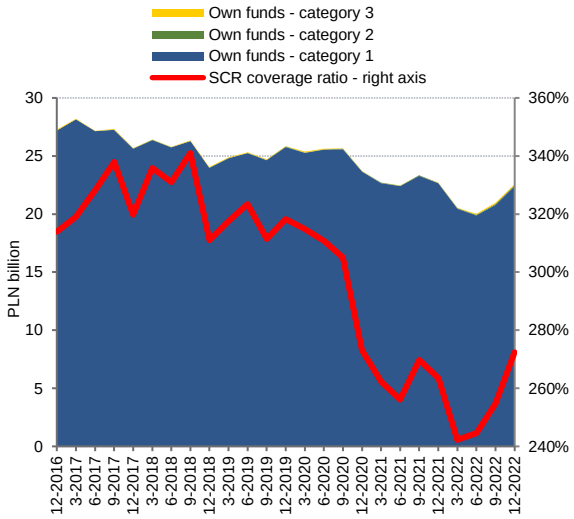
Source: NBP.

3. Main risk areas in the non-banking sector

3.1. Insurance companies

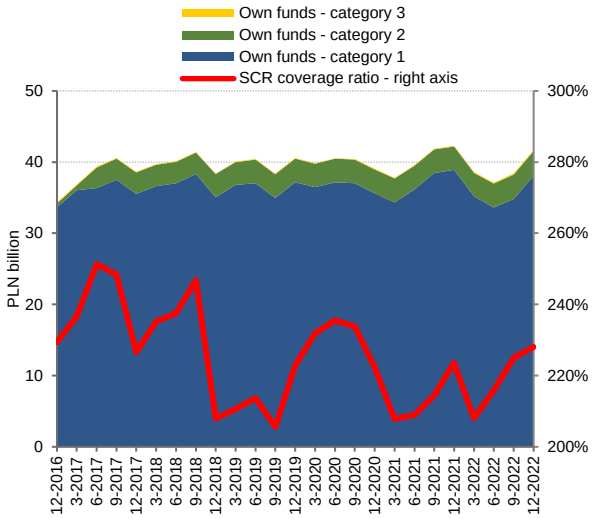
In the second half of 2022, the solvency ratios of the insurance sector improved. At the end of December, the coverage ratio of the solvency capital requirement with eligible own funds was 272% in life insurance and 228% in non-life insurance, representing an increase compared to the end of June 2022 of 28 p.p. and 12 p.p., respectively. These were the highest values observed since December 2020, but still well below the levels preceding the COVID-19 pandemic (see Figure 3.1 and Figure 3.2), particularly in life insurance. All insurance companies had own funds above the Solvency Capital Requirement (SCR) and the Minimum Capital Requirement (MCR). At the same time, they maintained certain capital surpluses – the SCR coverage ratios of all companies exceeded 130%.

Figure 3.1. Own funds and the SCR coverage ratio – life insurance



Source: UKNF.

Figure 3.2. Own funds and the SCR coverage ratio – non-life insurance



Source: UKNF.

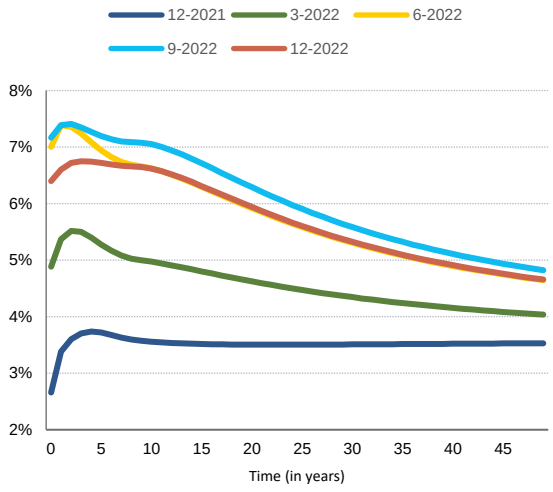
The improvement in solvency ratios was achieved by stopping the downward trend in own funds. The increase in own funds observed in the second half of 2022 offset the declines of the first half of the year restoring capital to a level only slightly lower than at the end of 2021. In the second half of 2022, the capital allocated for the SCR coverage of life insurance companies increased by 2.6 bn zlotys (to 22.6 bn zlotys) while the capital of non-life insurance companies increased by 4.6 bn zlotys (to 41.7 bn zlotys). The increase in own funds resulted mainly from the reduction in liabilities on account of unpaid dividends. The improvement of the capital position of non-life insurance companies was also influenced by an increase in the valuation of shares in subsidiaries.

In 2022, the magnitude of the risk incurred in relation to life insurance assets increased. The SCR of life insurance companies did not change significantly in the second half of the year, while it decreased by 0.3 bn zlotys compared to the end of 2021. This was accompanied by a decline in the value of assets

by almost 12 bn zlotys. The relative increase in the scale of risk concerned the market module, mainly the interest rate. Underwriting risk continued to account for more than 80% of the SCR, including a significant increase in the share of the requirement related to agreement lapses (72% of the underwriting risk requirement). Contrary to life insurance, in non-life insurance, the capital charge due to market risk decreased, especially for market risk concentration (as a result of the decline in the valuation of bank shares). Due to the increase in the scale of business, the importance of the underwriting risk on account of non-life insurance has increased.

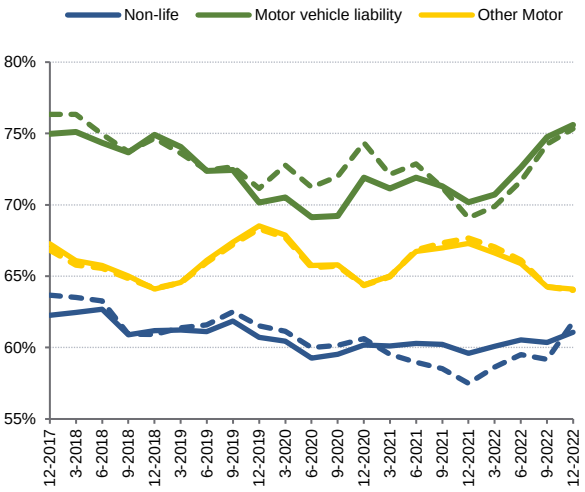
The solvency capital requirement has been significantly reduced due to risk transfer. Outward reinsurance was used in the scope of core insurance business. It had the greatest impact on reducing catastrophic risk. At the end of 2022, as a result of applying this transfer technique, the requirement on account of catastrophic risk in non-life insurance decreased from 37 bn zlotys to PLN 2.9 bn zlotys. Thus, as in 2021, 92% of unexpected catastrophic losses was passed on to reinsurers. Life insurance undertakings used the possibility of risk transfer to a much lesser extent, which resulted from the specific nature of their business. In their case, the assignment of the underwriting risk, due to the relatively low sums insured, compared to certain types of non-life insurance, did not generate such significant benefits as for non-life insurance entities. Only 2.5% of the premium was passed on to reinsurers.

Figure 3.3. Term structure of the risk-free rate



Source: EIOPA

Figure 3.4. Loss ratio in selected business lines of non-life insurance



Note: the solid line marks the indicators on a net basis while the dashed line shows indicators on a gross basis.

Source: UKNF.

The dynamic changes in interest rates in 2022 had a significant impact on the capital position of insurance companies. Compared to the end of 2021, risk-free interest rates have almost doubled. In the second half of 2022, their term structure stabilised at an elevated level (see Figure 3.3). As they increased, a much lower decline in the value of life insurance assets (excluding UFK assets) was observed compared to the decrease in the value of technical provisions. Different trends were recorded in non-

life insurance where, after the elimination of provisions for liability insurance annuity liabilities, rising interest rates contributed to a fall in the excess assets over the provisions. Alongside the change in the term structure in both sectors, the value of the capital requirement in this respect increased. Before the start of the interest rate hike cycle, at the end of September 2021, the value of this requirement was just under 1.7 bn zlotys, while by the end of December 2022 it already amounted to 3.6 bn zlotys.

The increase in interest rates did not significantly affect the financial results of insurance companies. In 2022, earnings from investment activities in both sectors (excluding UFK) increased. Only in unit-linked life insurance was a loss of 3.5 bn zlotys recorded. Financial results did not always reflect changes in the market valuation of debt instruments.[72] Indeed, a major part of the portfolio was measured at adjusted purchase price.

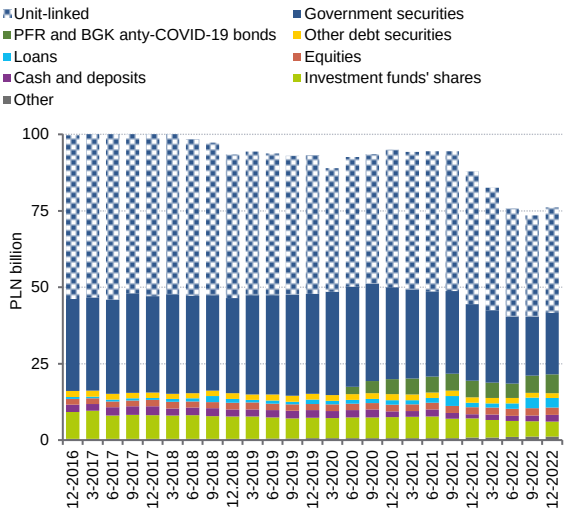
In 2022, a significant increase in claims in motor vehicle liability insurance was recorded, which, however, did not undermine the financial standing of non-life insurance companies. In the period analysed, the average value of motor vehicle liability claims increased, while their number still decreased in relation to the agreements concluded.[73] In this period, the net loss ratio of motor vehicle liability insurance increased from 70.2% to 75.6%. However, the lower efficiency in this business line was offset by lower claims in other business lines, especially in motor hull insurance. For voluntary car insurance, the loss ratio fell by 3.2 percentage points, to 64.1% (see Figure 3.4). On the other hand, the COR (combined ratio), which measures the ratio of claims paid and expenses to premium earned for non-life insurance, was 93.5%, so the efficiency of the undertakings remained at a safe level. Nevertheless, the introduction of the KNF recommendation[74] on the settlement of motor insurance claims may lead to an increase in the benefits paid and consequently to a reduction in the profitability of motor insurance. Indeed, the aim of these supervisory activities is to optimise the claim settlement process so as to ensure that beneficiaries under these agreements are duly covered.

The volatile conditions in the financial markets have affected the structure of deposits[75] of the insurance sector, especially in life insurance. In 2022, entities reduced the share of investment (excluding UFK deposits) in debt securities and increased their investment in deposits and loans granted under contingent transactions. The exposure to investment funds' shares was also reduced. However, insurance companies' deposits (apart from UFK deposits) were still dominated by debt securities, mainly fixed coupon securities issued or guaranteed by governments, central banks and international institutions. At the end of 2022, their value amounted to 26.3 bn zlotys in life insurance and 43.9 bn zlotys in

[72] Financial results are presented according to statutory reporting, under which not all instruments are measured at fair value. In the case of reporting for solvency purposes, assets are recognised at fair value.
[73] The number of claims in relation to agreements concluded remains at a lower level than before the COVID-19 pandemic.
[74] Recommendations concerning the settlement of motor insurance claims (Official Gazette of KNF of 2022, item 14); in force since 1 November 2022.
[75] Loans, real estate used for own purposes and cash is also included in the deposits.

non-life insurance (see Figure 3.5 and Figure 3.6). At the same time, the value of the PFR and BGK bonds for the COVID-19 Response Fund increased (by 1.5 bn zlotys and 1 bn zlotys in life and non-life insurance, respectively). Life insurance companies increased their exposure to these instruments at the expense of Treasury securities. BGK bonds with the longest maturities were very popular. As a result of the decrease in the value of UFK assets, the scale of links between the insurance sector and domestic investment funds also declined. The total exposure of undertakings to investment funds' shares decreased from 45.6 bn zlotys at the end of 2021 to 38 bn zlotys at the end of 2022. At that time, the insurance sector withdrew funds of over 4.4 bn zlotys from investment funds.

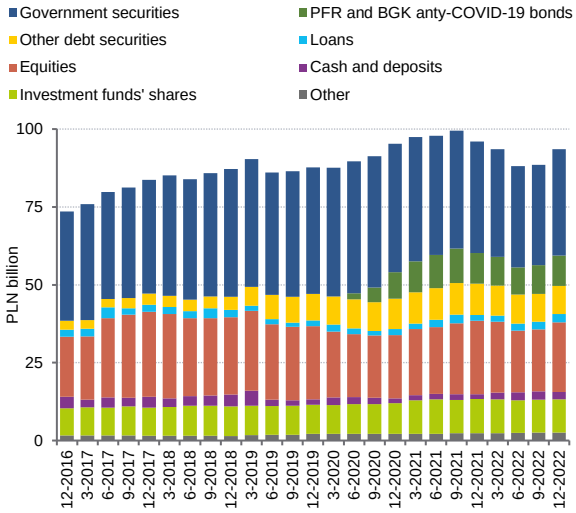
Figure 3.5. Investments and unit-linked assets – life insurance



Note: Government securities include securities issued or guaranteed by governments, central banks and supranational institutions without PFR and BGK bonds for the COVID-19 Response Fund.

Source: UKNF.

Figure 3.6. Investments – non-life insurance



Note: Government securities include securities issued or guaranteed by governments, central banks and supranational institutions without PFR and BGK bonds for the COVID-19 Response Fund.

Source: UKNF.

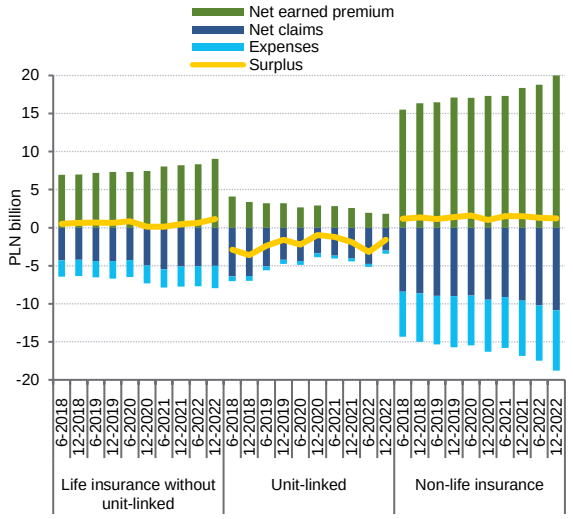
The increased net outflow of funds from UFK continued. In 2022, insurance companies paid out 8.4 bn zlotys of benefits from this group, i.e. almost 20% of the net UFK assets as at the end of 2021. In addition, a decrease was recorded in the premium collected on account of this insurance (by 1.9 bn zlotys). At the same time, the inflow of funds to UFK (3.8 bn zlotys) reached its lowest level since 2004. The negative balance was a consequence of, among others, the product intervention introduced from 1 January 2022.[76] At the end of 2022, the majority of UFK insurance products were at the phase-out stage, which may involve further capital outflows in the following years. In entities with the highest funds withdrawal rate, the UFK assets were mainly invested in investment certificates of closed-ended funds and structured securities. Net outflows of funds and negative valuation results in 2022 led to a decrease

[76] The KNF announcement regarding prohibitions on the marketing, distribution and sale of insurance investment products – life insurance contracts if linked to insurance assets: https://www.knf.gov.pl/knf/pl/komponenty/img/Komunikat_KNF_dot_interwencji_produktowej_UFK.pdf.

in the value of UFK assets by 9 bn zlotys, to 34.4 bn zlotys at the end of the year. At the end of the year, more than 1.5 million people were insured under these agreements.

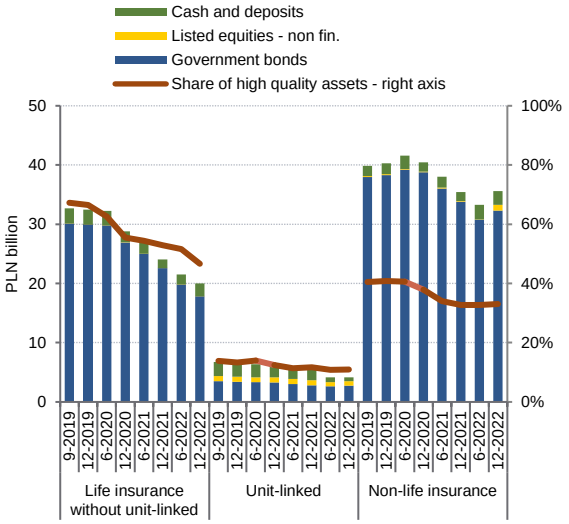
Despite the gradual reduction in the activities of unit-linked insurance, the legal risk associated with these agreements remains valid. It may lead to the necessity to refund the premiums paid, with interest, as a result of annulment of an agreement in court. Insufficient definition of the fund's investment policy or a limitation of the cover component in the agreements are recognised as risk factors. Claims under UFK insurance agreements are time-barred by a 10-year statute of limitations, so losses of insurance companies resulting from customer lawsuits may undermine the financial standing of the sector, particularly those entities whose main business was selling investment products.

Figure 3.7. Premium earned, claims, expenses and surplus funds in the half-year period



Source: UKNF.

Figure 3.8. Structure of high quality liquid assets of the insurance sector



Note: The following assets have been classified as high quality liquid assets: deposits and cash, government securities, debt securities of central banks and equities listed on organised markets (excluding equities of financial institutions) recognised at a half of their value.

Source: UKNF.

In 2022, the liquidity position of life insurance companies improved. Gross premium written from insurance other than UFK increased, while claims fell, bringing the excess of premiums over claims and expenses to a record high level. On the other hand, the liquidity ratio of high-quality assets[77] in life insurance decreased (from 53% at the end of 2021 to 47% at the end of 2022). This was affected by a decline in the value of the portfolio of Treasury securities (from 22.6 bn zlotys at the end of 2021 to 17.8

[77] The liquidity ratio of high quality assets measures the share of high quality liquid assets in the funds' total assets. The following assets have been classified as high-quality liquid assets: deposits and cash, securities issued by the central government, debt securities of central banks and shares listed on organised markets (excluding shares of financial institutions) recognised at half of their value.

bn zlotys at the end of December 2022), resulting from the sale of these instruments in the second half of the year. Liquidity ratios dropped, despite the net inflow of funds from insurance activity (see Figure 3.7). On the other hand, in non-life insurance companies, the increase in premiums did not exceed the higher value of claims and expenses, which reduced the surplus value. At the same time, the liquidity ratio did not fluctuate significantly and remained at 33% at the end of each quarter. Unit-linked life insurance continued to demonstrate the lowest liquidity, with a ratio of 11% (see Figure 3.8).

In 2022, the financial and technical result of life insurance companies improved, while the non-life insurance sector saw a slight decline. The net profit earned in 2022 by life insurance entities amounted to 2.2 bn zlotys (0.6 bn zlotys more than in the previous year), as a consequence of the increase in the technical result, from 2.1 bn zlotys to 2.8 bn zlotys. Thus, the profit of life insurance companies remained at a level similar to that recorded in 2020 and slightly lower than that observed in the years preceding the COVID-19 pandemic. The improvement in profitability occurred mainly in the second half of 2022. Class 1 of life insurance had a significant impact on the increase in the result, generating earnings of 0.3 bn zlotys in 2022, compared with a loss of 0.6 bn zlotys the year before. The lower benefit payments were related to a lower mortality rate than in the previous two years.[78] Health insurance continued to account for the highest share in earnings, with a result of 2 bn zlotys. In 2022, non-life insurance companies generated almost 3.9 bn zlotys in excess of revenues over costs and taxes and 2.9 bn zlotys in technical profit, 0.2 bn zlotys less than in 2021. Motor hull insurance was the largest contributor. On the other hand, higher claims in motor vehicle liability insurance resulted in a decrease in the technical profit of this group by 0.4 bn zlotys, to 0.25 bn zlotys.

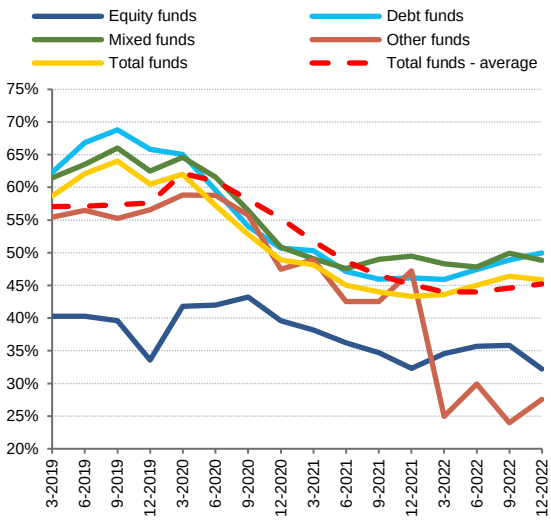
The high share of expected profits included in future premiums (EPIFP) in life insurance and the lack of a regulatory restriction on the double gearing of capital by non-life insurance undertakings means that the real resilience of the insurance sector may not be adequately reflected by capital ratios. At the end of December 2022, the value of EPIFP in life insurance amounted to 9.9 bn zlotys, similar to the end of June 2022; however, the share of EPIFP in own funds dropped to 44%. The capital raised by including profits from future premiums in own funds is classified as the highest quality category 1, although its loss-absorbing capacity is limited to the underwriting risk only. Failure to include the EPIFP in own funds would result in a decrease in the life insurance solvency ratio from 272% to 201%, and some establishments would experience a deficit in resources allocated for the fulfilment of capital requirements. In non-life insurance, the lack of a regulatory restriction on the double gearing of capital generates the risk of transferring losses of subsidiaries to the parent company. At the end of December 2022, non-life insurance companies held participations in other companies and banks with the value of over 19.7 bn zlotys. Limiting double gearing in this sector would result in a fall in the solvency ratio from 228% to 157%.

[78] In 2022, 447,000 people died in Poland, in 2021 – 519,000, and in 2020 – 486,000. In 2015-2019, the average number of deaths amounted to slightly over 400,000.

3.2. Investment funds

The liquidity position of open-ended funds[79] did not change significantly in the second half of 2022, while the exposure to liquidity risk remained sector's vulnerability. In UCITS, aggregate liquidity ratios of high-quality assets[80] were still significantly lower than those observed before the outbreak of the COVID-19 pandemic; however, the downward trend seems to slow down gradually (see Figure 3.9 and Figure 3.10). A contributing factor was an increase in the valuation of Treasury bonds held by the funds, observed in the fourth quarter. Both in UCITS and in open-ended AIFs, equity funds continued to have the lowest share of liquid assets in relation to total assets. The improvement in the sector's liquidity position was significantly hindered by the highest net outflow of funds ever recorded (10% of their net assets in 2022).[81] Over twelve months, UCITS repurchased participation units on a net basis in the amount of 17.8 bn zlotys (AIFs – 6.4 bn zlotys). The negative balance of inflows related mainly to debt funds (see Figure 3.11). Funds from UCITS were withdrawn on the largest scale by households (14.3 bn zlotys) and, in the case of open-ended AIFs, also by insurance companies and enterprises.

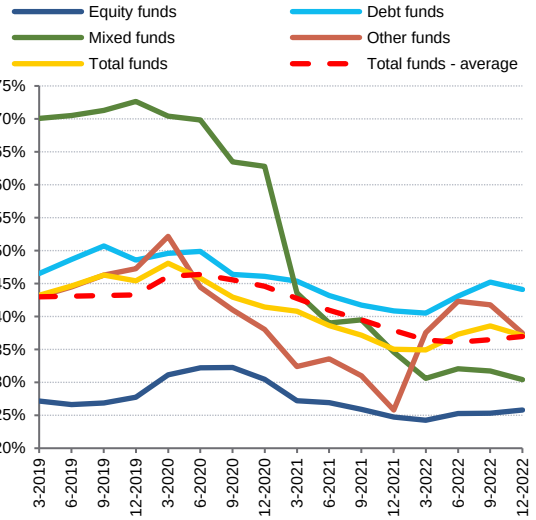
Figure 3.9. Liquidity coverage ratio of high quality assets in UCITS



Note: The average shown in the figure is a moving average of the four preceding quarters.

Source: NBP.

Figure 3.10. Liquidity coverage ratio of high quality assets in open-ended AIFs



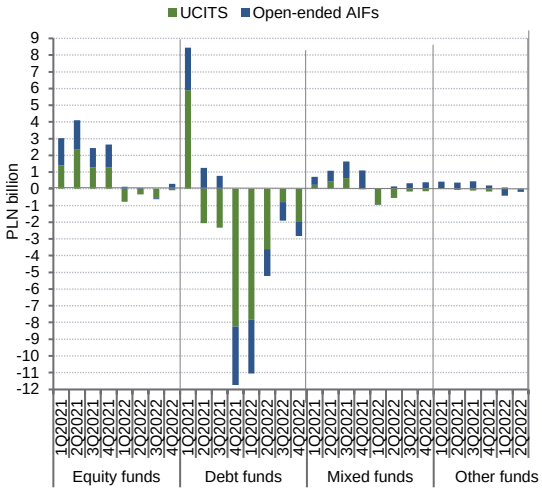
Note: The average shown in the figure is a moving average of the four preceding quarters.

Source: NBP.

[79] Open-ended funds include UCITS and open-ended alternative investment funds (AIFs).
[80] The liquidity ratio of high-quality assets (hereinafter referred to as the liquidity ratio) measures the share of high-quality liquid assets in total assets of the funds. The following are considered high-quality liquid assets: deposits, securities issued by central government institutions, debt securities of central banks and listed equities (excluding shares of financial institutions) at half of their value.
[81] In 2022, the balance of inflows to the investment fund sector amounted to -28.8 bn zlotys.

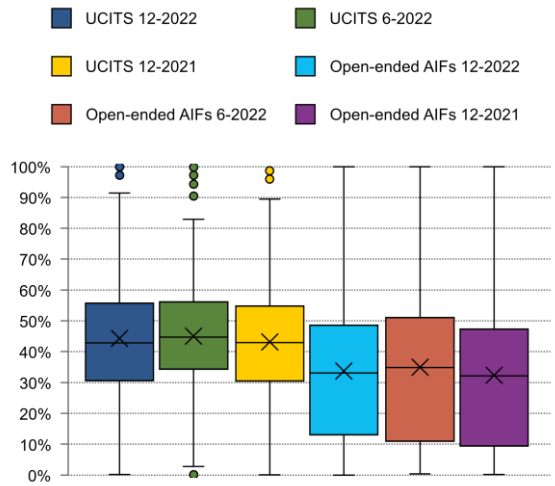
More than a half of the open-ended fund population recorded a slight deterioration of their liquidity position. The median liquidity ratio in UCITS fell from 44.7% at the end of the first half of 2022 to 42.9% at the end of the year, while in open-ended AIFs it fell from 36.9% to 33.2% (see Figure 3.12). The share of UCITS with a ratio below the median in the net assets of all UCITS amounted to 43.4% while in open-ended AIFs it was 45.5%.[82] Entities with very low liquidity ratios continued to operate in both groups.[83] They included funds with portfolios consisting almost exclusively of foreign UCITS-type funds (including ETFs) as well as funds offering pension products (these accounted for more than a half of the open-ended AIFs with the lowest levels of liquid assets). The latter, due to the limited risk of sudden withdrawal of funds by investors, are characterised by a different liquidity profile of their assets and liquidity needs arising from liabilities.

Figure 3.11. Balance of inflows to open-ended funds



Source: NBP.

Figure 3.12. Distribution of the liquidity ratio for open-ended funds



Notes: The edges of the box mark the first and third quartile, a line inside the box marks the median, and an "x" symbol – the average value. The vertical line is determined between the minimum and maximum value, after elimination of outliers, while points outside the line are regarded as outliers. The method of determining the liquidity ratios is described in the footnote earlier in this chapter.

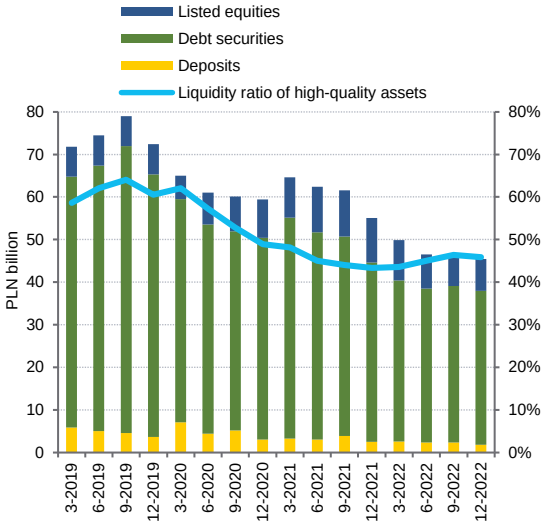
Source: NBP.

[82] The group of open-ended funds with a ratio below the median mostly included entities with a low market share. For example, in the open-ended AIFs group, the average share of a single entity with a ratio below the median in the net assets of all open-ended AIFs was 0.2% (the largest entity had a 3.5% share), in the UCITS group it was 0.3% and 3.4%, respectively. At the end of 2022, the number of entities with extremely low liquidity ratios (below 10%) was 20 for UCITS (managed by seven management companies) and 87 open-ended AIFs (managed by 16 management companies).

[83] In UCITS, entities with a liquidity ratio below 10% accounted for 4.2% of the net asset value of these funds, in open-ended AIFs this percentage was 16.1%. Open-ended funds did not invest directly in the real estate market.

Open-ended funds continued to maintain very low levels of deposits. In the case of UCITS, their ratio to total assets fell to a record low (1.8%) at the end of 2022. For open-ended AIFs, the share increased by only 0.4 percentage points compared to the end of June 2022 (to 2.8%) and remained significantly lower than in previous years. Domestic open-ended funds continued to hold significantly less cash in relation to their balance sheet total than entities in the euro area (see Figure 3.16). Furthermore, the direction of changes in the formation of liquidity buffers differed, as European open-ended funds increased their deposits in the first three quarters, while domestic funds reduced this category of assets. In both types of domestic open-ended funds, debt funds had the smallest liquidity cushion relative to assets. Maintaining low liquidity buffers by those entities that make up a significant part of the investment fund sector and whose participants have proven to be the most vulnerable to disturbances in global financial markets over recent years (the largest outflows of funds referred to debt funds) increases the liquidity risk of the entire sector of open-ended funds.

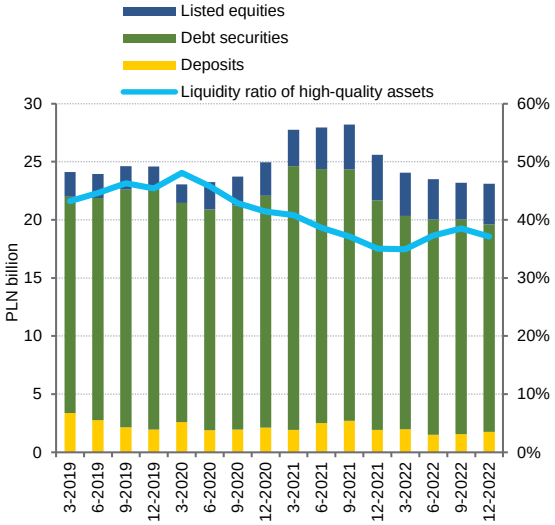
Figure 3.13. Structure of high quality liquid assets of UCITS



Notes: The method of determining the liquidity ratio is described in the footnote earlier in this chapter.

Source: NBP.

Figure 3.14. Structure of high quality liquid assets of open-ended AIFs



Notes: The method of determining the liquidity ratio is described in the footnote earlier in this chapter.

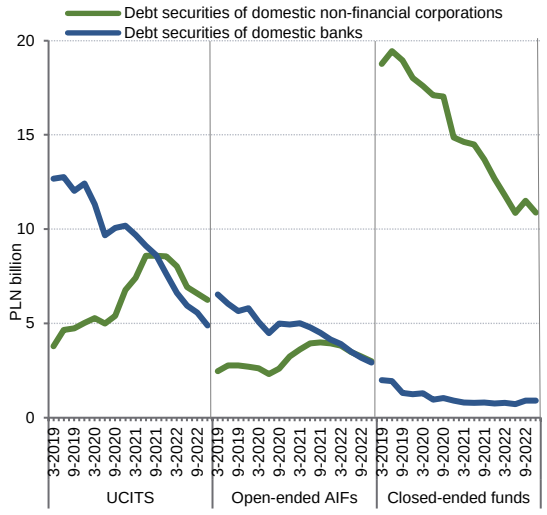
Source: NBP.

The structure of liquid assets of open-ended funds continued to be dominated by domestic Treasury bonds. In the second half of 2022, the balance of transactions in these instruments remained negative, but the increases in their prices recorded in the fourth quarter slowed the decline in the value of the funds' holdings of these securities (see Figure 3.13 and Figure 3.14). The continued sale of Treasury bonds in the period of favourable movements in prices of these instruments was driven by the need for the funds to acquire liquidity to fulfil increased redemption requests. Compared to the first half of 2022, the negative balance of transactions in floating-coupon instruments has significantly exacerbated. UCITS and open-ended AIFs have become net purchasers of fixed-rate instruments, particularly bonds

with original maturities of 5 and 10 years. The share of floating-coupon bonds in the portfolio of domestic Treasury bonds of open-ended funds decreased (in UCITS from 70% at the end of June to 60% at the end of December and in open-ended AIFs from 64% to 56%, respectively).

In 2022, the scale of investment funds' interlinkages with the domestic banking sector has significantly decreased. The funding provided to banks by the funds fell both as a result of lower deposits (10.7 bn zlotys at the end of 2021 and 8.6 bn zlotys at the end of 2022) and lower exposure to bank bonds (from 12.5 bn zlotys to 8.7 bn zlotys). While open-ended funds, particularly UCITS held the largest portfolio of bank debt securities, closed-ended funds demonstrated the highest value of deposits placed with banks. However, bank subordinated bonds prevailed among bank securities. Since the outbreak of the COVID-19 pandemic, investment funds have sold (net) debt instruments of domestic banks in the amount exceeding 10 bn zlotys. However, transactions of debt acquisition by securitisation funds have become increasingly important. The value of bank assets held by such funds at the end of 2022 stood at 7.6 bn zlotys, with their nominal value exceeding 100 bn zlotys.

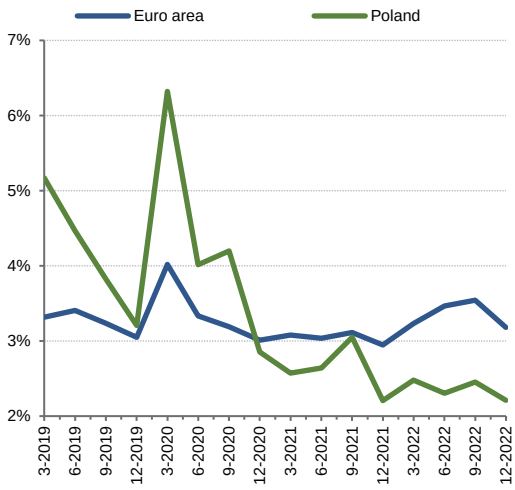
Figure 3.15. Exposure of investment funds to debt securities of domestic banks and corporations



Note: BGK bonds for the COVID-19 Response Fund were excluded from the category of "bank debt securities".

Source: NBP.

Figure 3.16. Deposits in relation to assets in open-ended funds in Poland and in the euro area



Note: For the euro area, data include deposits with banks and receivables due to loans granted.

Source: NBP, ECB.

In the second half of 2022, investment funds reduced their exposure to credit risk. The exposure to bonds of domestic enterprises and banks has decreased significantly (see Figure 3.15). As in the first half of the year, the funds did not increase the portfolio of PFR and BGK bonds for the COVID-19 Response Fund. Nevertheless, since 2020, these entities have purchased such securities in net terms for the amount of 25.6 bn zlotys, while selling domestic Treasury bonds worth more than 21 bn zlotys. In

2022, the balance of transactions in domestic corporate debt securities amounted to -4.2 bn zlotys and bank securities (excluding BGK) to -3.8 bn zlotys.[84]

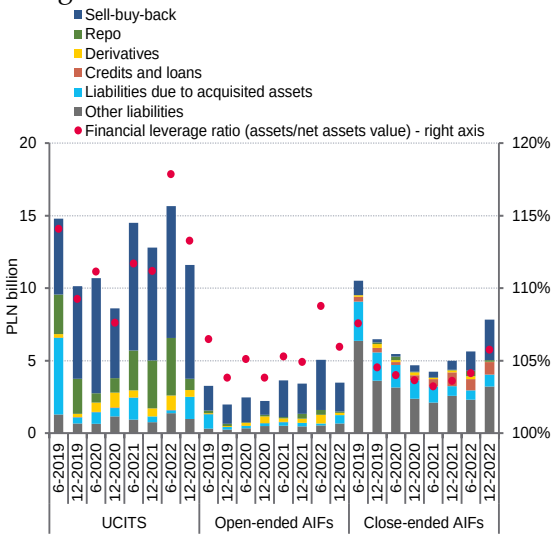
In 2022, UCITS used leverage to a greater extent than in previous years. These entities were also characterised by higher leverage ratios[85] than other fund types (see Figure 3.17). Conditional transactions remained its significant source accounting for nearly two-thirds of total liabilities. While around 95% of all UCITS had a leverage ratio of no more than 150% at the end of 2022, one entity reported total assets almost ten times higher than net assets (see Figure 3.19 and Figure 3.20). Despite the limits set by law reducing the level of total exposure in UCITS,[86] such a significant level of leverage was achievable by changing the method of its calculation, from the commitment method to the absolute value-at-risk method. However, this modification did not reduce the level of leverage in the fund, only the way it was presented, creating significant risks for investors.

Excessive leverage can significantly increase the risk in the sector if it accompanies a low share of liquid assets in the fund. At the end of 2022, funds that demonstrated an increased leverage had a liquidity ratio above the sector average. This was mainly due to the dominant role of Treasury securities in the asset structure of these entities, which in turn constituted the main source of collateral for their borrowings. Nevertheless, this group of funds also included entities with critically low levels of deposits, not exceeding 1.5% in relation to net assets, which, combined with higher debt levels, raises liquidity risks, the materialisation of which could, in some cases, result in problems in fulfilment of increased redemptions. Excessive use of leverage also results in higher volatility of returns.[87] Declines in the valuation of units may, on the other hand, encourage investors to withdraw funds rapidly, resulting in

[84] The scale of net sales of PFR bonds in relation to the portfolio held was significantly higher than the scale of the reduction in the Treasury bond portfolio. The scale of sales of bank and corporate bonds was also relatively greater.
[85] Financial leverage measured as a ratio of the fund's total assets to its net assets.
[86] In accordance with the Regulation of the Minister of Finance, Funds and Regional Policy of 18 November 2020 *on the manner, procedure and conditions for the conduct of activities by investment fund management companies* (Journal of Laws of 2020, item 2103, as amended), the total exposure of UCITS measured by the commitment method should not exceed the value of its net assets.
[87] The daily changes in share valuation of the entity with the highest leverage in the sector between June and December 2022 ranged from -7.8% to 9.2%. This compares with the daily share price fluctuations of the same fund in the period from its inception to May 2022 ranging from -0.5% to 0.5%. On the other hand, the daily changes in the value of the WIG and TBSP.Index in the second half of 2022 ranged from -3.4% to 3.8 and -1.2% to 1.6%, respectively.

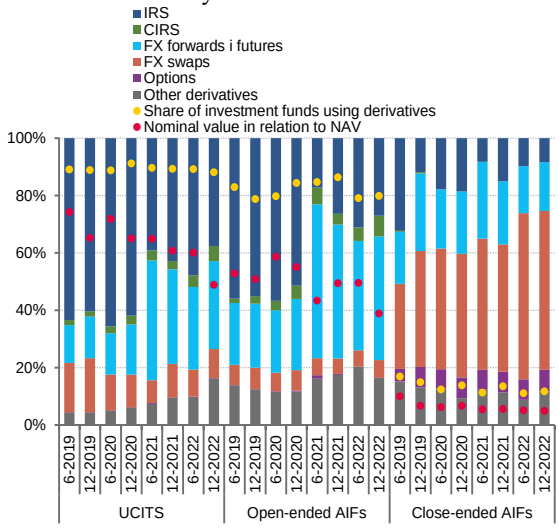
increased liquidity demand of the funds.[88] The need to redeem units may therefore result in forced sales of assets and further exacerbate losses for market participants.[89]

Figure 3.17. Structure of liabilities and financial leverage in the sector of investment funds



Source: NBP.

Figure 3.18. Structure of derivatives used by investment funds by nominal value



Source: NBP.

Derivatives were the source of synthetic leverage for open-ended funds. These funds used futures trading on a much larger scale than closed-ended funds. At the end of December 2022, around 88.0% of UCITS and 79.8% of open-ended AIFs used these instruments, while in closed-ended funds the share was 11.7%[90] (see Figure 3.18). However, in the second half of 2022 the scale of open-ended funds' exposure to these instruments decreased, both in nominal terms and in relation to the net assets of entities using them. The total nominal value of derivatives in their portfolios at the end of 2022 amounted to 72.1 bn zlotys and was lower by 16.1 bn zlotys compared to the end of the first half of the year. On the other hand, the nominal value of their derivatives holdings relative to their net assets amounted to48.8% for UCITS and 38.8% for open-ended AIFs, respectively, compared to 60.0% and 49.4% at the

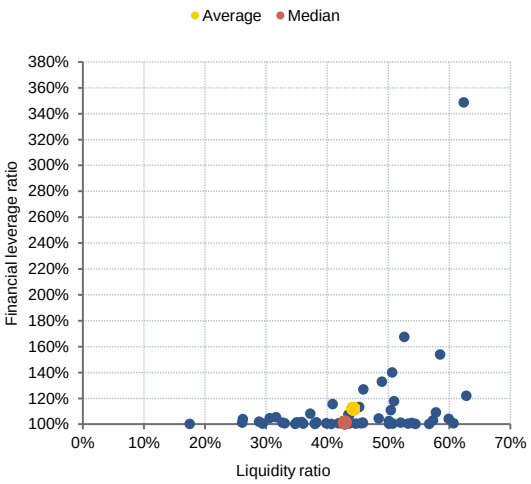
[88] At the end of December 2022, as in previous years, the largest group of investors in the UCITS were households (approximately 81%). This group of investors accounted for 73% of the open-ended AIFs net assets.

[89] The experience of UK pension funds using the Liability Driven Investment strategies (LDI) in September/October 2022 highlighted the risks associated with excessive leverage in the event of a liquidity disruption. As a result of the sharp rise in Treasury bond yields, funds were called upon to replenish margins and provide additional collateral for repo transactions. This had the effect of triggering forced sales of bonds included in the portfolios of these funds, which in turn exacerbated downward pressure on prices and the need for further replenishing of margins. Tension in the UK market prompted intervention by the Bank of England, which announced the purchase of Treasury bonds on 28 September 2022.

[90] The share measured by net assets of investment funds.

end of the first half of 2022. Interest rate swaps (IRS) and forward and futures FX contracts were the most significant for open-ended funds, and FX swaps for closed-ended funds.

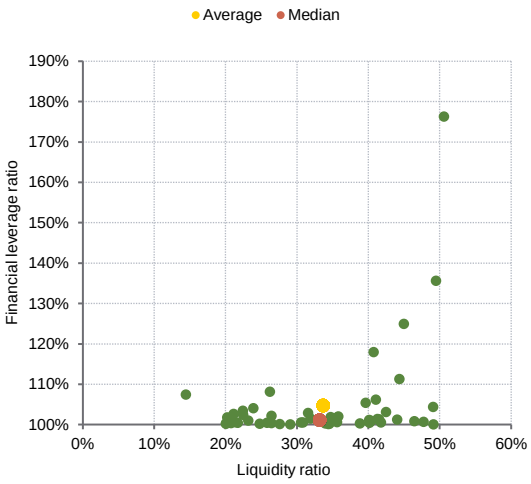
Figure 3.19. Distribution of the liquidity and leverage ratio in UCITS at the end of 2022.



Note: The entities are divided into equal groups in terms of size, by leverage ratio, in descending order. Each dot represents the average value of the leverage ratio and the liquidity ratio for a given group.

Source: NBP.

Figure 3.20. Distribution of the liquidity and leverage ratio in open-ended AIFs at the end of 2022.



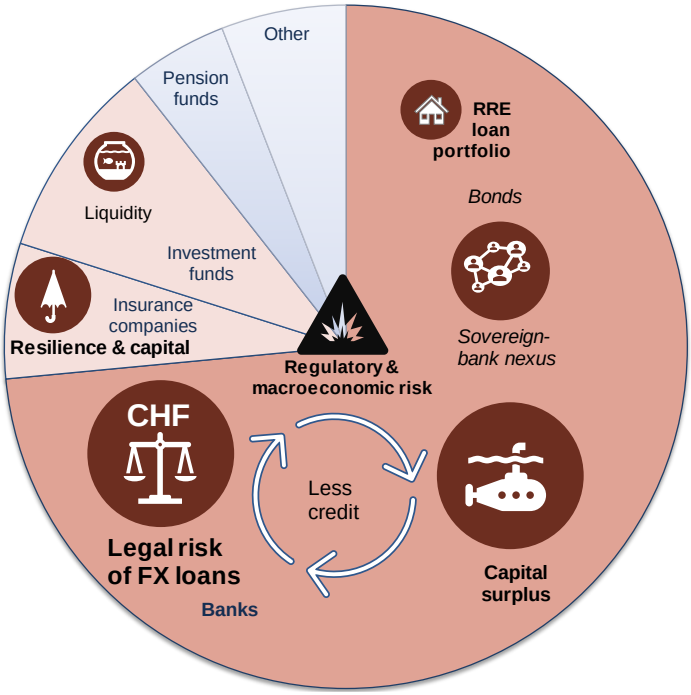
Note: The entities are divided into equal groups in terms of size, by leverage ratio, in descending order. Each dot represents the average value of the leverage ratio and the liquidity ratio for a given group.

Source: NBP.

4. Systemic risk assessment

The domestic banking sector remains resilient, but banks' excess capital will be under pressure, which may result in a rationing of credit. Banks' capital (together with expected profits over the 2025 horizon) is sufficient to absorb losses even in extreme macroeconomic scenarios. At the same time, banks remain resilient to potential liquidity shocks. Most banks hold sufficient capital to cover the MREL and the combined buffer requirement, but the scale of surplus capital in the sector will temporarily decline at the beginning of 2024, when the MREL is fully applicable, and certain banks may experience capital shortfalls. This generates a risk of a credit crunch in the banking sector, particularly should shocks occur. The relevance of this risk will depend on the proportion of compliance with the MREL with capital and debt instruments.

Chart 4.1. Main risks in Poland's financial system



Source: NBP.

Highly uncertain legal and regulatory conditions and the associated potential costs have a significant impact on the assessment of developments in the domestic financial system. This primarily concerns a number of aspects of FX housing loans, where a part of (or all) costs is passed onto the lenders, as well as universally applicable loan repayment holidays introduced by law, which passed a portion of the cost of interest rate risk onto banks. At the same time, there are signals about attempts to challenge PLN housing loan agreements. If such phenomena and the related financial implications continue or intensify, this will reduce the banking sector's capacity to provide financing to the economy and undermine confidence in credit arrangements, to the detriment of economic growth.

The level of systemic risk in the financial system is primarily affected by (see Chart 4.1) two factors: (i) likelihood that the costs of FX housing loan legal risk will continue to grow and (ii) potential macro-financial impacts of a substantial decline in the banking sector's excess capital above the total capital requirements.

Traditional risks faced by banks, i.e. credit risk, market risk, interest rate risk, liquidity risk, currently do not constitute threat to financial stability. In systemic risk assessment, we regularly refer to the two types of exposures having the biggest share in the assets of banks in Poland, i.e. (iii) a portfolio of Treasury bonds and State Treasury-guaranteed bonds and (iv) exposures to the residential real estate market and to the funding provided to the market.

4.1. Legal risk of FX loans

Legal risk of FX housing loans and its financial implications for banks remain the main risk to financial stability. The value of risk provisions amounted to approx. 37 billion PLN by the end of 2022 and continuation of this process should be expected.

If the CJEU ruling in case C-520/21 were in line with the Advocate General of the CJEU opinion, it may mean further increase of provisions making, however this does not fundamentally change the situation regarding the scale of banks burden in this regard. The number of court cases (over 111,000) is growing, and so is the amount of potential losses. Agreements between banks and borrowers to reach an out-of-court settlement of disputes between the parties interested allow banks to better manage the costs borne, however, costs of such settlements are expected to grow.

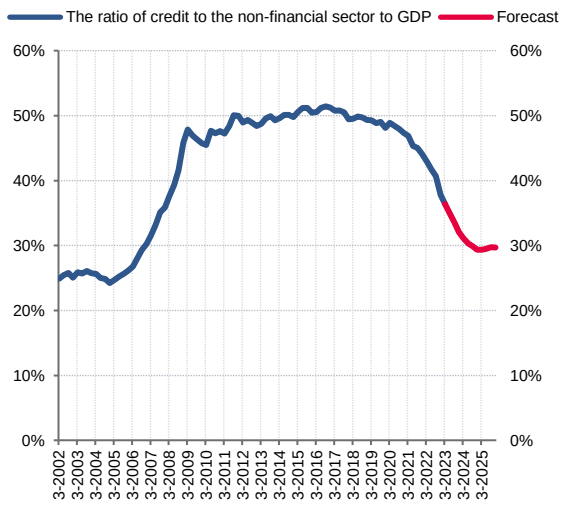
The process of risk provisioning has so far been spread over time and it should be expected that it will remain such, which should help banks to manage the risk. A portion of banks has already conservatively assumed no remuneration for the use of the principal. Nevertheless, the pace of provisioning will affected by the decisions on how to recognise potential losses after the CJEU ruling and the national courts stance on the issue of additional benefits to the borrower.

4.2. Decline in excess capital

Current macroeconomic and geopolitical conditions, i.e. relatively high interest rates, unfavourable economic growth outlook and high uncertainty contribute to slowdown of lending growth. As a result of the low lending growth and a relatively high nominal GDP growth, the ratio of loans to GDP is most likely to continue falling, even to the level of approx. 30% (see Figure 4.1). There has been no supply-related restrictions in funding the economy. The banks' acceptance rate of loan applications from enterprises in 2022 did not decrease substantially – it is within the range of fluctuations from the past five years (see Figure 4.2). The number of submitted loan applications has not decreased in a manner deviating from historical patterns. The interest rate hike cycle led to a rise in the costs of credit, which resulted in lack of demand pressure. Furthermore, the availability of funding in the segment of

housing loans was limited by the creditworthiness assessment interest rate buffer, increased to 5 p.p., which remained in force till 7 February 2023.[91]

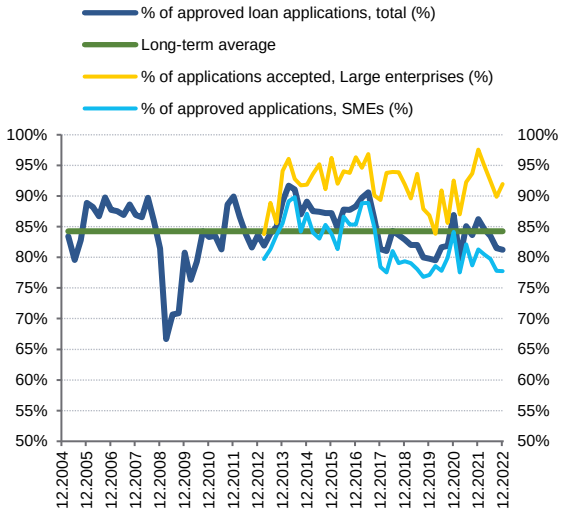
Figure 4.1 The ratio of credit to the non-financial sector to GDP



Notes: Last real observation – fourth quarter of 2022, last forecast observation – fourth quarter of 2025.

Źródło: NBP.

Figure 4.2. Average acceptance rate of loan applications from enterprises



Source: NBP Quick Monitoring. Economic climate in the enterprise sector. No. 01/2023, NBP. Seasonally unadjusted data.

Źródło: NBP.[92]

Capital levels currently held in the banking sector are high enough that financial stability will not be at risk even when substantial additional costs resulting from the materialisation of extremely adverse scenarios arise (see Figure 2.58). Nevertheless, there is a significant likelihood that the amount of excess capital above the regulatory requirements in the whole sector may be reduced in the near quarters, and some institutions may face capital shortfalls.

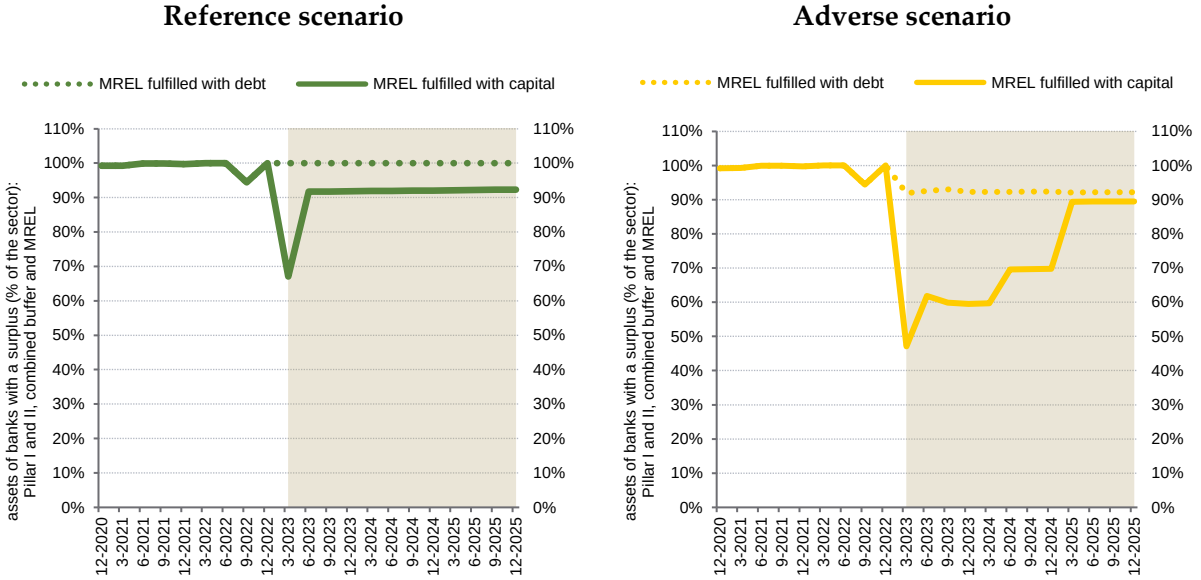
If banks' excess capital levels decline or some banks experience capital shortfalls, this may reduce the capacity of a part of banks to provide credit to the economy. This would trigger a stronger reduction of credit supply, and a further decrease in the loan to GDP ratio, than the one resulting purely from macroeconomic conditions.

Substantial burden on banks' earnings will be the main reason why excess capital would decline. This follows primarily from charges to provisions for the legal risk of FX loans, which – while limiting banks' income – would make it difficult for them to augment capital.

[91] Position of the Polish Financial Supervision Authority on a buffer applied in calculating creditworthiness: https://www.knf.gov.pl/knf/pl/komponenty/img/Stanowisko_UKNF_ws_oceny_zdolnosci_kredytowej_81068.pdf

[92] The model used to prepare lending growth forecasts is described in *Financial System in Poland 2020*; see https://nbp.pl/wp-content/uploads/2022/10/fsd_2020.pdf

Figure 4.3. Share of banks with capital surpluses above the supervisory requirements in the banking sector's assets over the stress-testing horizon:



Notes: The simulation performed under the assumption that the MREL has been applied since the start of the MST period, i.e. from the first quarter of 2023.

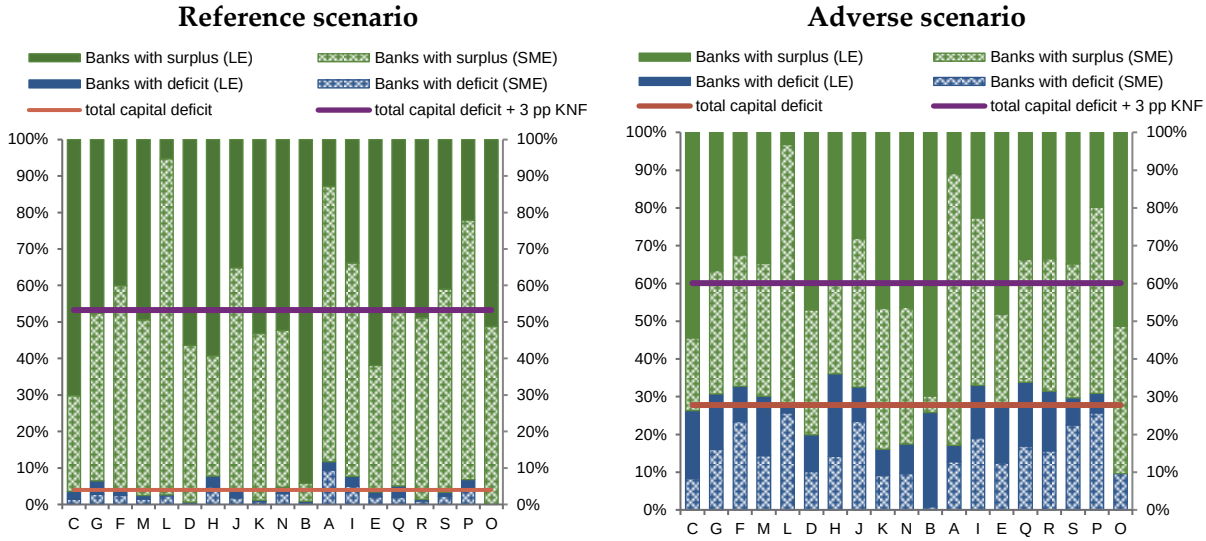
Source: NBP.

The necessity to fully comply with the MREL from the beginning of 2024 is the other factor that may affect the level of excess capital at banks. If the requirement is fulfilled with the issuance of eligible debt, this will not influence the value of excess capital and the capacity of banks to create credit. However, the issuance of MREL eligible debt remains difficult as the macroeconomic, geopolitical and regulatory environment is uncertain. In consequence, many banks may decide to meet the MREL requirements with existing capital, which will reduce the amount of capital surpluses above the supervisory requirements. The maximum decline of total excess capital to fully meet the MREL amounts to around 40 billion zlotys in the whole sector (Figure 2.53). As a result, some banks may show capital shortfalls against the supervisory requirements. If the issuance of eligible debt to meet the MREL is successful, the issue of capital surpluses would be significantly limited (see Figure 4.3).

The risk of credit rationing due to capital shortfalls may particularly relate to corporate loans. Such risk is relatively lesser for loans to households (both housing and consumer loans). These loans are largely standard products, therefore if lending is reduced due to capital shortfalls at some banks, other banks may easily meet the demand from households. Contrary to loans to households, loan applications by enterprises may be subject to specialised assessment, taking into consideration, among other, idiosyncrasies related to sector of the economy. This notwithstanding, lending provided by banks that show capital shortfalls is not concentrated in individual sections of the economy, which limits the risk of credit rationing in particular sector of the economy. There is also no specialization of banks with capital shortfalls based on the size of the enterprises that are provided with credit (see Figure 4.4). However, the universal nature of capital shortfalls may be challenging, especially in a adverse scenario

(see a red line in the right-hand panel of Figure 4.4). Moreover, the government "Safe 2% Credit" programme will make it possible to provide around 50 billion zlotys in subsidised housing loans[93] to households in 2023-2027, of which half may fall on the year 2024.[94] These loans may drive out other types of loans because of subsidies provided under the government-funded programme. This may pose an additional risk factor for corporate loan demand.

Figure 4.4. Share of banks with capital shortfalls or capital surpluses against the supervisory requirements, broken down into sections of the economy being supplied with credit:



Notes: Shares weighted with the size of corporate loan portfolios. '3 pp KNF' - for dividend policy purposes in 2023 the combined buffer requirement is increased by 3 percentage points. 'LE' – large enterprises loan portfolio. 'SME' – small and medium enterprises loan portfolio.
On the horizontal axis, NACE sections, in order from sections representing the largest loan portfolio (C – 213 billion zlotys) to the smallest loan portfolio (O – 186 million zlotys). The simulation performed under the assumption that there is no additional issuance of eligible debt classified as MREL category.

Explanation of the NACE section letter codes: A – Agriculture, forestry and fishing, B – Mining and quarrying, C – Manufacturing, D – Electricity, gas, steam and air conditioning supply, E – Water supply, sewerage, waste management, and remediation activities, F – Construction, G – Wholesale and retail trade; repair of motor vehicles and motorcycles, H – Transportation and storage, I – Accommodation and food service activities, J – Information and communication; K – Financial and insurance activities, L – Real estate activities, M – Professional, scientific and technical activities, N – Administrative and support service activities, O – Public administration and defence; compulsory social security, P – Education, Q – Human health and social work activities, R – Arts, entertainment and recreation, S – Other service activities, T – Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use, U – Activities of exterritorial organisations and bodies.

Source: NBP.

[93] In line with the a fall in interest rates in the next few years assumed in impact assessment (see https://legislacja.gov.pl/docs//2/12369053/12948731/12948732/dokument603297.pdf).
[94] It was assumed that loans will be granted from 2024 and that all funds provided for in the law will be used to subsidize the loans, and interest rate on housing loans will remain at the current level.

The dividend policy of the Polish Financial Supervision Authority (KNF) is an additional factor that impacts the freedom of banks in managing their capital surpluses, and as a result it may affect lending. The hitherto applicable dividend policy, while introducing an additional "supervisory" buffer[95] does not explicitly raise the capital requirements. However, it has an impact on the desirable level of capital[96] and therefore banks may be additionally prompted to reduce lending when they hold low excess capital levels. When fulfilling the MREL with capital under the reference scenario, banks accounting for 53% of the corporate loan portfolio will not hold capital surpluses above the Pillar 1 and 2 requirements, the combined buffer requirement, the MREL and the "supervisory" buffer (see a purple line in the left-hand panel of Figure 4.4).[97]

4.3. Portfolio of Treasury bonds and State Treasury-guaranteed bonds

The share of Treasury bonds and State Treasury-guaranteed bonds (which are hereinafter jointly referred to as "SPW") in the banking sector's assets has remained stable since September 2022. At the end of March 2023, the value of SPW in banks' portfolio[98] amounted to nearly 450 billion zlotys, which represented around 20% of the sector's assets (see Figure 4.5). The share of SPW in banks' assets has fallen from its all-time peak level of around 25% (approx. 485 bn zlotys) at the beginning of 2021.

A significant share of SPW in the banks' assets implies that banks are vulnerable to changes in bond valuation. Despite substantial exposure, the impact of changes in SPW market prices on their book value on banks' balance sheets is limited by two factors: (i) banks may use various strategies of bond portfolio recognition in their books and only around half of the bond portfolio is marked-to-market and (ii) bonds with a shorter duration prevail in the portfolio of bonds marked to market, which reduces their vulnerability to changes in bond yields. That is why only around 30% of changes of the market valuation of bonds has translated into a fall in banks' equity. Banks have recently reduced the sensitivity of own funds to valuation changes, and at the end of 2022 it was close to the long-term average (see Figure 4.6).

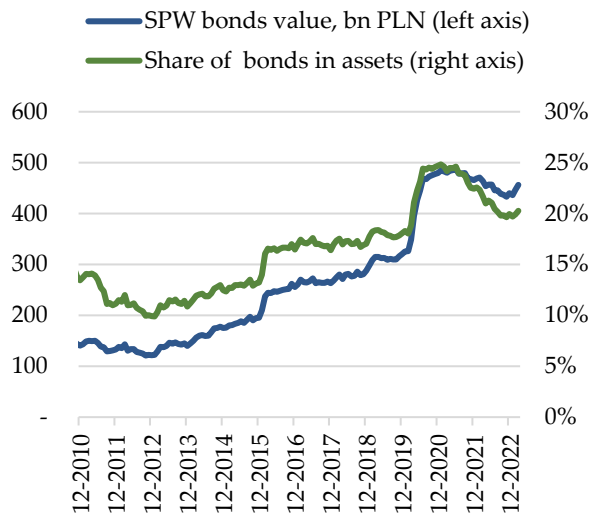
[95] In line with the Position of the KNF on dividend policy, for dividend policy purposes in 2023 the combined buffer requirement is increased by 3 percentage points of the supervisory buffer (see *Stanowisko KNF ws. polityki dywidendowej w 2023 r.* available at https://www.knf.gov.pl/knf/pl/komponenty/img/Stanowisko_KNF_dot_polityki_dywidendowej_w_2023_80488.pdf.

[96] Which is manifested by the profit distribution strategies of selected banks by retaining substantial items of the profit as undistributed profit by the General Assembly, including profit of previous years.

[97] Even in the most optimistic scenario, that is, of: (i) fully complying with the whole MREL with debt instruments and (ii) of the implementation of the MST reference scenario, in the first quarter of 2024 banks accounting for 33% of the corporate loan portfolio will not hold surplus capital above the Pillar 1 and 2 requirements, the combined buffer requirement, the MREL and the buffer resulting from the KNF's dividend policy.

[98] Excluding Bank Gospodarstwa Krajowego.

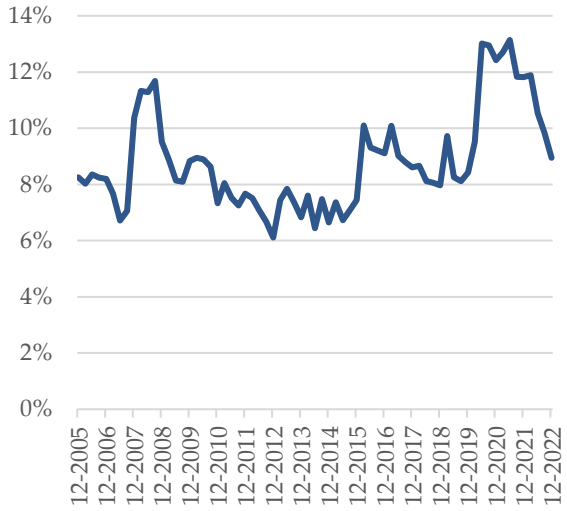
Figure 4.5. Share of Treasury bonds and State Treasury-guaranteed bonds in banking sector's assets



Note: Banking sector excluding BGK.

Source: NBP.

Figure 4.6. Sensitivity of own funds to credit risk of Treasury bonds and State Treasury-guaranteed bonds



Note: Sector of commercial banks. Loss (related to own funds) from changes in bond portfolio valuation amid a parallel upward shift of the yield curve of bonds by 300 basis points.

Source: NBP.

On the other hand, the latest turmoil on the global financial market, most notably the case of Silicon Valley Bank in the United States, shows that in some conditions risk to bank stability may stem from the portfolio of bonds not marked to market, i.e. measured at amortised cost and held to maturity. When banks experience liquidity strains or when confidence into banks drops, their vulnerability may become heightened due to market perception about the possible necessity to sell bonds from the portfolio that is not measured at market prices and, consequently, to show losses resulting from adjusting the valuation of bonds that have not been marked to market price.

In the Polish banking sector, stability risk related to the portfolio of bonds not marked to market is insignificant (see Box 4.1).

Box 4.1. The resilience of the Polish banking sector to the scenario of problems of US regional banks

The US regional banking crisis, including Silicon Valley Bank (SVB) in particular, led to a surge in risk on global financial markets and made investors carry out an in-depth analysis of banks' vulnerability to changes in values of the bonds they hold, as well as their liquidity risk in the context of the structure of the balance-sheet and sources of funding. SVB started a series of subsequent problems of the US regional banks (e.g. Signature Bank, First Republic Bank).

In this context, comparisons arise of banking systems in other countries, including Poland, with the situation of the US banks. Banks in Poland also hold substantial portfolios of Treasury bonds

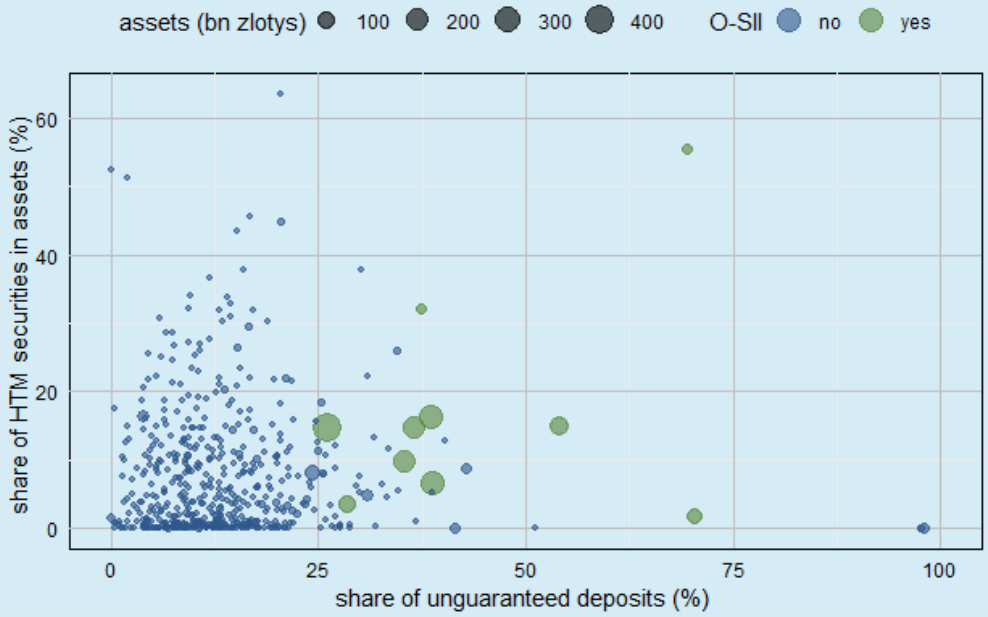
and State Treasury-guaranteed bonds (hereinafter jointly referred to as "SPW"), and they also display a considerable maturity mismatch between assets and liabilities. The value of SPW held by Polish banks amounted to around 450 billion zlotys at the end of March 2023, which accounted for around 20% of their assets. Despite this, Polish banks remain less vulnerable to changes in market prices of bonds. There is also a lower likelihood of a large outflow of deposits. Polish and US regional banks, including SVB, which have been affected by the recent crisis, differ in key areas, in particular:

- unlike many regional banks in the United States, including SVB, Polish banks are required to comply with the EU liquidity standards (LCR and NSFR) and more than comply with the requirements (LCR for commercial banks – over 180% at the end of February 2023 compared to the regulatory minimum of 100%). The liquidity position of the Polish banking sector is thus very good (see chapter on banking sector liquidity);
- unlike SVB, Polish banks' activity is based on a universal banking model and the banks have a diversified structure of assets and liabilities — both on an entity basis (enterprises of different nature and size and households) and a sectoral basis (loans financing various branches of the economy). This significantly reduces the vulnerability of banks to the economic cycle in individual sectors of the economy;
- Polish banks are mainly household deposit-funded (over 50% of total liabilities excluding equity); in its investment activity this category of depositors is less vulnerable to changes in market interest rates than enterprises, whose deposits prevailed in SVB's funding structure;
- the vast majority of deposits of the non-financial sector are guaranteed by BFG (their value does not exceed the equivalent of 100 thousand euros) (see Figure 4.7). Deposit guarantees increase bank stability in the event of a liquidity shock, thus considerably limiting the risk of a bank run. When bank activity is funded with relatively low value deposits from a large group of depositors, this eliminates risk of concentration on the liabilities side, which reduces the risk of a rapid withdrawal of deposits *en masse*;
- the average share of unguaranteed deposits at O-SII banks, i.e. large banks, is higher than in other Polish banking sector entities, and runs at around 40%; nevertheless, this level is substantially lower than at SVB (94%), Signature Bank (89%) or First Republic Bank (67%)[99] where liquidity risk materialised;
- a relatively underdeveloped financial market, which does not offer its depositors a broad alternative to bank deposits;
- a higher share of unguaranteed deposits enhances banks' vulnerability to liquidity risk during a shock (a bank run). However, the LCR takes into account this circumstance by assigning a higher outflow weight to unguaranteed deposits. Despite this, Polish O-SII banks more than comply with the liquidity coverage requirements;

[99] S&P Global Market Intelligence, *SVB, Signature racked up some high rates of uninsured deposits*, https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/svb-signature-racked-up-some-high-rates-of-uninsured-deposits-74747639

- in Poland, banks' financial instruments, including Treasury bonds, are mostly marked to market, at fair value – through other comprehensive income – whose changes are reflected in banks' equity. Interest rate increase-related losses, which the banks have so far incurred as a result of a decline in the value of the Treasury bond portfolio, have already been largely reflected in their equity. The need for a potential sale of bonds to obtain liquidity may be effected from the portfolio that is marked to market and it would not result in the materialisation of additional losses that have not been measured earlier[100];
- in the overwhelming majority of banks, as well as in the whole sector, marked-to-market SPW bonds are sufficient to satisfy banks' liquidity needs during shocks, without the need to sell securities that are not marked to market;
- for those entities that, to a relatively large extent, hold bonds to maturity, i.e. they do not take into account the effects of changes in bond market prices in equity on a daily basis, the results of analysis do not show that losses resulting from changes in the method of bond valuation would be high enough to pose a risk to bank stability, and the more so to the whole banking sector;
- liquidity surplus prevails in the domestic banking sector – NBP absorbs on a regular basis from the market around 250 billion zlotys under weekly sale auctions of mostly 7-day NBP bills. The funds return to banks on a regular basis and constitute an easily available source of liquidity in the case of an outflow of funds.

Figure 4.7. Share of unguaranteed deposits in total deposits under the deposit guarantee scheme and share of SPW not marked to market (the so-called Held to Maturity, HTM) in assets (%)



Source: NBP.

[100] In this context, it should be noted that SVB, like other regional banks in the United States, benefitted from exclusion and changes in the value of instruments marked to market were not factored in for the purposes of regulatory capital calculation.

In the conditions of economic slowdown and a decline in loan demand, banks' propensity to buy Treasury bonds may turn out to be high. This propensity results, among others, from the fact that Treasury bonds are excluded from the tax base of the tax on certain financial institutions, they carry zero risk weights and offer relatively high yields with relatively low credit risk. On the other hand, banks' propensity to continue buying SPW may be limited by the experience of bond re-pricing in 2022 and its impact on banks' equity.

4.4. Residential real estate market and the housing loan portfolio

A regular impact assessment of residential real estate market on financial stability takes into account three aspects: (1) price developments on the real estate market (collateral stretch), (2) banks' policy regarding funding real estate purchases (funding stretch), and (3) the level of household debt and the capacity of households to repay mortgages (household stretch).

Figure 4.8. The LSTI simulated distribution of value of housing loans (in %) prior to interest rate hike (2021)

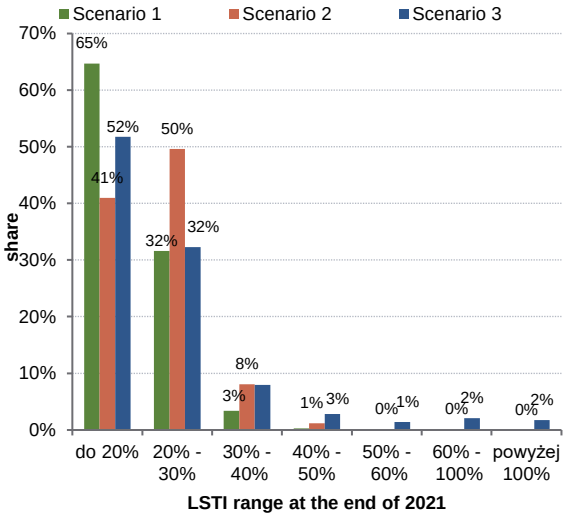
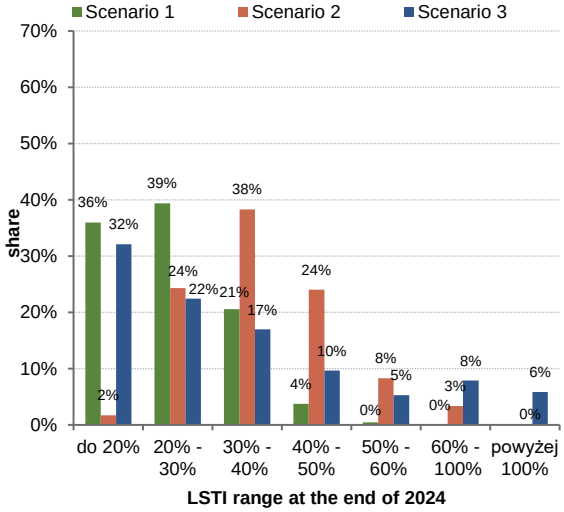


Figure 4.9. The LSTI simulated distribution of value of housing loans (in %) at the end of 2024



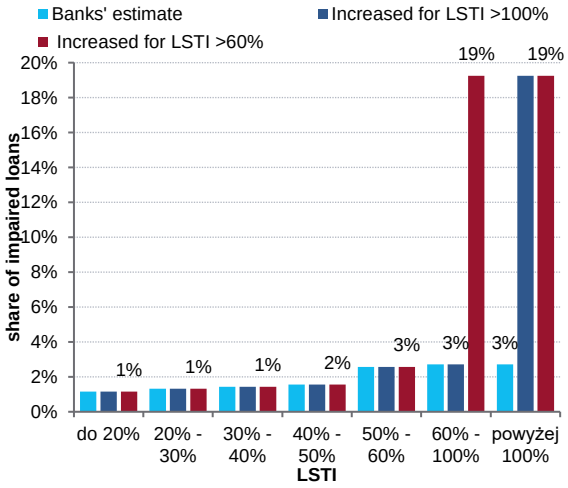
The simulation includes cohorts of loans provided by the largest commercial banks in 2012-2022, accounting for around 90% of the portfolio of zloty housing loans. The simulation aims to show the alternative burdens of borrowers under various assumptions about their wages developments. The need to adopt assumptions results from the lack of accurate data on changes in borrowers' income over the years. Scenario 1 assumes that income of every household at the moment of loan origination increases every year in line with an increase in the average monthly gross (nominal) wages in the national economy. Scenario 2 assumes that during the simulation period income of every household remains at the level of the loan origination date. Scenario 3 assumes that income of households changes randomly in line with the distribution of change of income obtained from Statistics Poland survey data. Scenario 3 takes into account the possibility of a fall of wages for a portion of borrowers, therefore it can generate higher burden estimates. The simulation assumes that the interest rate will remain unchanged by the end of 2024.

Source: NBP calculations based on UKNF non-standard reporting data, the Statistics Poland survey of household budgets.

Currently, the key risk is related to the credit risk in the portfolio of already granted loans (household stretch). As a result of the increase in interest rates and costs of living, the percentage of households heavily burdened with debt costs may reach 10-20% of the value of the portfolio. For the vast majority of borrowers, interest rate hikes significantly increased loan instalments compared with the loan origination date (and the creditworthiness assessment date). This may generate the risk of debt

servicing problems, particularly after the expiry of the loan repayment holidays introduced by the law. On the other hand, rising wages and loan amortisation support risk reduction. The results of the simulation that consider various scenarios of income changes (including its fall) show that at the end of 2024 10%-20% of the value of housing loans may be characterised by loan instalments exceeding half of their income (the LSTI ratio above 50%, see Figure 4.8 and Figure 4.9).

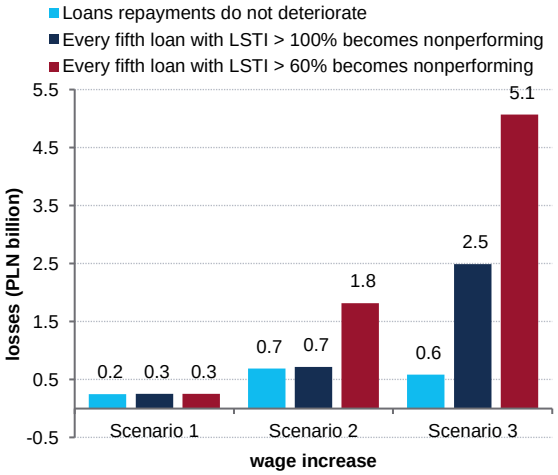
Figure 4.10. The simulated share of impaired loans in housing loan portfolio at the end of 2024



The "banks' estimate" scenario shows the average share of impaired loans that banks expect at the end of 2024 after assuming the following (i) no overpayment and sale of loans, (ii) an interest rate hike – a 400 bp increase of WIBOR, (iii) no income increase in 2023 and 2024, (iv) the estimate applies only to the portfolio of loans granted by the end of 2022."*Increased for LSTI > 100%"* and "*increased for LSTI >60%"* take into account a higher percentage of impaired loans in the respective ranges of LSTI, which on average was reported in smaller banks with a poorer capital position in 2022 (a share of the banks in the commercial banks sector is below 10%).

Source: NBP calculations based on UKNF non-standard reporting data.

Figure 4.11. Value of simulated loan losses in 2023-2024 (PLN billion)



Scenarios 1,2,3 take into account various scenarios regarding changes in income – as shown in previous figures.

Source: NBP calculations based on UKNF non-standard reporting data, the Statistics Poland survey of household.

Despite an increase in debt servicing costs, the scale of loan losses should not put at risk the stability of individual banks, and even less so the whole banking sector. It can be expected that the share of impaired loans, even in the case of loans with high LSTI, will not rise in comparison with the present situation. Under conservative assumptions (see Figure 4.10), the maximum value of simulated losses in 2023- 2024 may amount to 5 billion zlotys (see Figure 4.11), but under most scenarios it will be more than two times lower. This would represent a substantial rise compared to historical losses in this segment, but the scale of losses would remain limited compared to other sources of risk in the sector (primarily legal risk).

Glossary

Annualised data – in the case of data on flows – the value of flow in the preceding 12 months; in the case of data on balance (stock) – the average value of balance in the preceding 12 months.

Auto casco (AC) insurance – comprehensive auto insurance of land vehicles, excluding track vehicles, covering damage in automobiles or land vehicles lacking own drive – Class. 3 of the non-life insurance sector according to the Act on Insurance Activity.

Banking sector – all domestically incorporated commercial banks and cooperative banks as well as branches of foreign credit institutions active in Poland.

Combined Operating Ratio (COR) – the ratio of claims paid, costs and expenses to premium earned.

Commercial banks – domestic commercial banks and branches of credit institutions.

Consumer loans – loans granted to natural persons for personal use in the consumption of goods (including overdrafts and credit card loans).

Costs of credit risk – see Credit losses.

Credit losses – in banks applying the IFRS – the balance of provisions created or (-) released for expected credit losses (until the end of 2017, charges to provisions for impaired loans); in banks applying the PSR – the balance of specific provisions created or released. Credit losses also include net income on write-downs of a financial asset in the amount of the difference between the value of the financial assets written down and the value of provision/specific provision as well as recovery of assets written down earlier.

Debt-to-Income (DTI) ratio – the ratio of a client's debt to their annual income.

Domestic banking sector – domestic commercial banks and cooperative banks.

Domestic commercial banks – domestically incorporated banks operating in the legal form of a joint-stock company or a state bank.

Expected profits included in future premiums (EPIFP)– the difference between the technical provisions without a risk margin and the technical provisions without a risk margin under the assumption that the premiums relating to existing insurance and reinsurance contracts that are expected to be received in the future are not received for any reason other than because the insured event has occurred, regardless of the legal or contractual rights of the policyholder to discontinue the policy.

Forborne exposures – receivables in respect of which forbearance measures have been applied. The measures consist of preferential treatment of the debtor who is experiencing or is about to experience

difficulties in meeting its financial commitments (financial difficulties). Preferential treatment may result in a loss to the lender.

Housing loans – loans on residential real estate for households.

Institutional Protection Scheme (IPS) – an agreement of associating and cooperative banks associated with them established under the Act of 7 December 2000 on the Functioning of Cooperative Banks, their Associations and Associating Banks (i.e. Journal of Laws of 2022, item 456, as amended). The functioning of IPSs is aimed at providing liquidity and solvency to all participants in an IPS at terms laid down in the said act and in IPS agreements, in particular by granting loans, bank guarantees and sureties.

Interquartile range – the difference between the value of the third quartile and the value of the first quartile in the distribution of a variable.

Large enterprises – enterprises that employ at least 250 persons.

Loan-to-Income (LTI) – the ratio of the value of a housing loan at origination to the borrower's net total income.

Loan-Service-to-Income (LSTI) – the ratio of the monthly amount of loan instalments of housing loans to the net monthly income of households.

Loan-to-Value (LtV) – the ratio of the value of the housing loan granted to the value of property.

Loss ratio – the ratio of insurance claims and benefits paid, increased by changes in the amount of provisions, to premium earned.

Motor third party liability insurance – third party liability insurance for land vehicles with own drive – Class 10 of the non-insurance life sector according to the Act on Insurance Activity.

Net income from banking activity – the sum of net interest income and net non-interest income.

Net interest margin – the ratio of net interest income over a given period to the average balance sheet total in that period.

Non-interest income – the sum of net fee and commission income, revenue from dividends, income on valuation of instruments measured at fair value, gains/losses from the derecognition of financial instruments other than instruments measured at fair value through profit and loss, and foreign exchange rate differences.

Operating costs – the sum of a bank's general expenses and amortisation.

Own funds of insurance undertaking – the sum of basic own funds which include the excess of assets over liabilities and subordinated liabilities, and ancillary own funds which comprise unpaid share capital or initial fund that has not been called up, letters of credit and guarantees and also any other legally binding commitments received by insurance undertakings (or reinsurance undertakings).

Return on Equity (ROE) – the ratio of net income to equity.

Small and medium-sized enterprises – enterprises that employ fewer than 250 persons.

Solvency Capital Requirement (SCR) corresponds to the Value-at-Risk of the basic own funds of an insurance or reinsurance undertaking subject to a confidence level of 99.5% over a one-year period.

Systemic risk – the risk of disruption in the functioning of the financial system, which if materialised, interferes with the functioning of the financial system and the national economy as a whole (Article 4(15) of the Act of 5 August 2015 on Macroprudential Supervision of the Financial System and Crisis Management).

Technical provisions – the amount of liabilities arising from insurance contracts.

Vector Error Correction Model (VECM) – the model which belongs to multi-dimensional time series models, used to identify relationships that occur in variables and indicators observed over time.

Abbreviations

AFS	Available for sale
AIF	Alternative investment fund
AT1	Additional Tier 1 capital
BFG	Bank Guarantee Fund
BGK	Bank Gospodarstwa Krajowego
BIK	Credit Information Bureau
BION	Risk Assessment Framework (risk-based and prospective approach for insurance supervision)
CET1	Core Equity Tier 1 capital
CHF	Swiss franc
CEE	Central and Eastern Europe
CJEU	Court of Justice of the European Union
COR	Combined Operating Ratio
COVID-19	Coronavirus Disease 2019
CRR	Capital Requirements Regulation
DIF	Deposit Insurance Fund
DTI	Debt to income
EBA	European Banking Authority
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
EPIFP	Expected profits included in future premiums
EIOPA	European Insurance and Occupational Pensions Authority
ETF	Exchange-traded fund

EU	European Union
FDIC	Federal Deposit Insurance Corporation
FED	Federal Reserve System
FVOCI	Fair Value through Other Comprehensive Income
FWK	Borrower Support Fund
GDP	Gross Domestic Product
GUS	Statistics Poland
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
IPS	Institutional protection scheme
KNF	Polish Financial Supervision Authority
LCR	Liquidity Coverage Ratio
LSTI	Loan service to income
LTI	Loan to Income
LtV	Loan to Value
MCR	Minimum Capital Requirement
MREL	Minimum Requirement for Own Funds and Eligible Liabilities
NBP	Narodowy Bank Polski
NSFR	Net Stable Funding Ratio
OCI	Other comprehensive income
O-SII	Other Systemically Important Institutions
P2R	Pillar 2 Requirements
PFR	Polish Development Fund
P&L	Profit and Loss Account

PSR	Polish Accounting Standards
ROA	Return on Assets
ROE	Return on Equity
RORC	Return on Regulatory Capital
SCR	Solvency Capital Requirement
SME	Small and medium-sized enterprises
SOBK	Polish Commercial Banks' Protection System
SPE	Single Point of Entry
SPW	Treasury securities
SRB	Single Resolution Board
SVB	Silicon Valley Bank
TBSP.Index	Treasury BondSpot Poland Index
TCR	Total Capital Ratio
TEM	Total Exposure Measure
TREA	Total Risk Exposure Amount
UCITS	Undertaking for Collective Investment in Transferable Securities
UFK	Unit-linked insurance
UKNF	Office of the Polish Financial Supervision Authority
USA	United States of America
VECM	Vector Error Correction Model
WIBOR	Warsaw Interbank Offered Rate
WIG	Warsaw Stock Exchange index
WIG-Banki	Warsaw Stock Exchange index of banks

WIRON	Warsaw Interest Rate Overnight
WSE	Warsaw Stock Exchange

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