NBP Narodowy Bank Polski

June 2020

Financial Stability Report

Special Issue: impacts of the COVID-19 pandemic



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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 amid /in the situation of the unprecedented external shock (i.e. the shock stemming from outside the financial system), namely the outbreak of the COVID-19 pandemic. It seriously affected conditions in which particular segments of the financial system are functioning. The Report concentrates on the description of possible consequences of the shock.

Financial system stability is a situation when the system performs its functions in a continuous and efficient way, event 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 13 May 2020 (cut-off date). The Report was approved by the Management Board of Narodowy Bank Polski on 8 June 2020.

This *Financial Stability Report* is a translation of NBP *Raport o stabilności systemu finansowego* in Polish. In case of discrepancies, the original prevails.

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Executive summary

The Polish financial system has entered the period of the COVID-19 pandemic in a good condition, resilient to shocks and without major imbalances. Unlike in the global financial crisis of 2008, prior to which lending was growing rapidly, no similar market tension has been observed recently. At the same time, the resilience of the banking system has increased substantially, both by increasing banks' capital and improving risk management quality. The banking system is characterised by stable funding and high liquidity.

However, due to the strength and nature of the pandemic-related shock, credit risk has increased significantly, and the risk of a credit crunch has emerged. The magnitude of the macroeconomic shock associated with the COVID-19 pandemic substantially increases the likelihood of problems with debt servicing in most credit categories. At the same time, in view of expected credit losses, whose value is uncertain, the risk of a credit crunch has emerged. This might adversely affect the real economy and, consequently, also the financial system.

Measures taken by public authorities may partially reduce the risk of a credit crunch. Public fiscal stabilization measures directly and indirectly support financial stability. The financial support for companies provided in response to the shock triggered by the COVID-19 outbreak and substantial loosening of monetary policy, including NBP's interest rate cuts, reduce the solvency risk of companies and households. This, in effect, reduces credit losses of banks. At the same time, a release of the systemic risk buffer in the amount of approx. 30 billion zlotys, recommended by the FSC-M and implemented by the Minister of Finances act, gives banks a significant amounts of funds to maintain lending. However, the risk of a credit crunch depends not only on the scope and length of human contact restrictions and the efficiency of the government support measures that affect loan demand, but also on decisions taken by banks and their credit risk perception.

The COVID-19-related shock negatively affects the weaknesses of the financial system identified in previous editions of the Report and also creates new risk areas that will affect financial system stability.

The materialisation of risk associated with consumer loans may pose a material source of credit losses for banks. Consumer loans are riskier than the rest of the credit loans portfolio and constitute a significant share (16% of credit to non-financial sector and approx. 9% of GDP) of banks' loans compared to other EU countries. In addition, high-value consumer loans account for a significant portion of the consumer loans portfolio and, given the current shock, may prove to be particularly vulnerable to the economic downturn.

The nature of risk associated with housing loans has changed, and given the size of the portfolio, it may have a substantial influence on the condition of banks. Prior to the shock triggered by the COVID-19 outbreak, risk associated with housing loans stemmed primarily from the possibility of providing an excessive amount of credit to the real estate market in the conditions of expansion. The nature of the risk has changed and primarily involves a possible materialization of credit risk. Due to the value of housing loans (40% of loans to the non-financial sector, around 20% of GDP), even a limited increase in loan repayment problems may result in serious consequences for banks

and, consequently, for the economy. Historically, housing loans were characterized by very low NPL ratios, and NBP interest rate cuts limit the risk increase in this area. However, the current economic shock is very strong and due to its consequences for the labour market it may be a challenge even in the situation where lending policy earlier was cautious.

Legal risk associated with the FX mortgage loans portfolio remains valid. The depreciation of the zloty that increases the LtV of the loans and the deterioration of financial situation of borrowers may cause debt servicing problems (economic risk of the portfolio) and enhance customers' willingness to litigate (legal risk of the portfolio).

No significant imbalances have been recently identified in the corporate loan segment but given the magnitude of the shock for business activity, they may become an important source of credit losses. Corporate loans are relatively sensitive to economic conditions and they account for approx. 1/3 of the banks' loan portfolio. At the same time, limitations in credit supply may negatively affect the liquidity position of enterprises and their solvency, and, consequently, the economic situation of the country.

The importance of links between the banking and government sectors is growing as a result of the increased involvement of the banking sector in Treasury bonds and bonds guaranteed by the State Treasury.

Further decrease of banks' profitability may be an additional challenge to the financial system. The reduced profitability of the banking sector has been observed for several years. The shock associated with COVID-19 outbreak additionally negatively affects all sources of banks' income. This hampers banks' capacity to increase capital and elevates the credit crunch risk. At the same time fiscal stabilization measures and the significant loosening of monetary policy by the NBP will increase the borrowers' debt service capacity and therefore reduce the cost of banks' credit risk.

The shock related to the COVID-19 pandemic outbreak contributes to the simultaneous strong decline in activity in many economies, including the origin countries of Polish banks strategic investors. This generates the risk of propagating external shocks to the Polish financial system.

Prior to the COVID-19 outbreak, certain institutions were financially distressed and did not have sufficient capital surpluses. Possible problems of individual monetary institutions may negatively impact other banks' earnings due to necessity to incur costs of replenishing the deposit guarantee fund and the resolution fund. The scale of the shock points to a greater likelihood of such scenario.

In the face of the COVID-19 pandemic, the insurance sector's sensitivity is mainly associated with insurance companies' investment activity, and – to a lesser extent – with insurance business. Double-hit risk may materialise in the insurance sector as a result of the COVID-19 pandemic. This implies that the value of assets held by certain insurance undertakings may decline amid a simultaneous increase in technical provisions caused by a decrease in the risk-free interest rate. In

the face of an expected decline in inflowing premiums following the COVID-19 outbreak, the weakness of the Polish insurance sector, especially life insurance, is a very large share of expected profits from future premiums in own funds. The factor which increases the sensitivity of insurance companies to the current shock is the fact that own funds of insurance companies are not decreased by capital of financial institutions in which insurance companies acquired significant stakes. If risk in a subsidiary (e.g. a bank) materialises, then the insurance company own funds will automatically decrease (the contagion effect across institutions or sectors).

The financial markets turmoil sparked by the COVID-19 outbreak had a negative impact on the investment fund sector assets value. Participants began to withdraw funds mostly from open-ended investment funds which are the most sensitive, as they redeem their units on demand. At the end of 2019, the open-ended funds had one of the lowest liquidity buffers in history comprised of deposits and cash, which augments their sensitivity to rapid redemptions.

The challenge for financial institutions related to cybernetic risk is growing as a consequence of introducing more widespread remote work. Financial institutions are particularly exposed to disruptions associated with cyberattacks due to public trust and a high degree of dependence on confidential information. At present, due to the widespread use of remote work, both the likelihood of disruptions and the fallout of disruptions in the operation of IT systems have grown. The attention should also be paid to the financial institutions implementation of new IT solutions that allow remote use of financial services during the period of social isolation should also be.

Recommendations

In addition to identifying and assessing risk in the financial system, the role of the Report is to offer measures aimed at eliminating or mitigating systemic risk. This is one of the methods 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 NBP).

In the current situation associated with the COVID-19 pandemic, the top priority is to maintain lending to the economy and, at the same time, to preserve the security and resilience of the financial system. In Narodowy Bank Polski's view, the implementation of the recommendations listed below will be conducive to achieving this goal.

- **Credit institutions, insurance companies and investment fund management companies should earmark the entire profit of previous years to increase their capital base.** Additional regulatory capital from retained profits will allow the entities to absorb expected pandemic-related losses, and surpluses of capital will help them to maintain lending and ensure the uninterrupted provision of financial services. The non-payment of dividends is compliant with the expectations of the Chair of the KNF Board, the position of the EBA and the recommendation of the ESRB.

- **Banks should develop solutions that facilitate debt servicing for pandemic-hit entities, including among others, credit holidays, or allowing them – in justified cases – to restructure debt.** This would diminish the risk of bankruptcy of non-financial entities and, as consequence, reduce the escalation of credit losses of banks. To keep trust in the banking sector, these solutions cannot worsen the contractual relationships between the client and the bank. At the same time, where possible, the solutions should be harmonised and take account of the justified needs of the borrower.

- **Banks should maintain individual risk assessment and, among others, avoid automatic translation of the assessment of the state of play of specific industries into an assessment of the credit standing of people employed in them and companies active in the industries.** This will reduce the risk of credit crunch. In the environment of elevated uncertainty a reduction in the supply of credit may seem rational from the point of view of an individual institution, however if such actions were common and excessive, they would adversely affect the real economy and, as a result, the condition of the financial sector.

- **Banks, in cooperation with audit firms, should develop a harmonised approach to credit loss reporting.** This approach should take into account the flexibility from existing international regulations. Reducing uncertainty related to the value of banks' credit provisions will positively affect financial stability and their propensity to create credit.

- **Investment fund management companies should take action to reduce liquidity risk in the open-ended investment funds that they manage.** Investment funds should, where necessary, urgently rebuild and maintain larger liquidity buffers. They should also be able to

use additional liquidity-managing tools. Moreover, the use by investment funds of the adjusted purchase price as a method of valuation of certain debt instruments should be limited or eliminated

1. Specific nature of risk associated with COVID-19 – its impact on the economy and financial system

1.1. Impact on the economy

The COVID-19 pandemic is causing a health crisis on an unprecedented scale, which has not been seen throughout the past decades, and which directly translates into a collapse of the global economy. The unique nature of this development stems from the extent of the impact the social distancing restrictions are having on economic activity and the fact that it is affecting all countries around the world at the same time.

Measures taken to protect health, which involve social distancing rules, have caused a very strong, negative demand and supply shock that is affecting the whole economy. There was a sharp fall in demand for services in some industries, including among others, the transportation sector and tourism, arts and recreation in the broad sense, which led to a slump in income of a portion of enterprises. At the same time, the supply of many services and products has drastically decreased on the back of the restrictions arising from both limited staff availability in a number of industries as well as the reduced availability of other production factors through the disruption of the production and supply chains. The extent of the direct impact on the economy is closely related to the scope of social distancing restrictions.

The magnitude of the economic crisis is also affected by the expected length of the restrictions and uncertainty about their impact on the economy. As the period of restrictions is prolonged, additional, negative developments will emerge and they will cause liquidity shortfalls in certain industries to turn into solvency problems. The uncertainty over the magnitude of the shock holds back investments and leads to reduction of employment in enterprises, and the postponement of or resignation from purchases of assets (including fixed assets) by households. It also reduces the availability of funding from banks and other financial institutions. All of the phenomena exacerbate the direct consequences of the restrictions being taken.

The support programmes implemented by public authorities are a factor that decreases the extent of the economic crisis. They are aimed at reducing the risk of a temporary drop in income and in corporate liquidity turning into a problem of solvency, a surge in unemployment and a credit crunch. The unprecedented scope and nature of the programmes include monetary policy and fiscal policy measures as well as regulatory and supervisory action (see Chapter 3 for more information on the support measures).

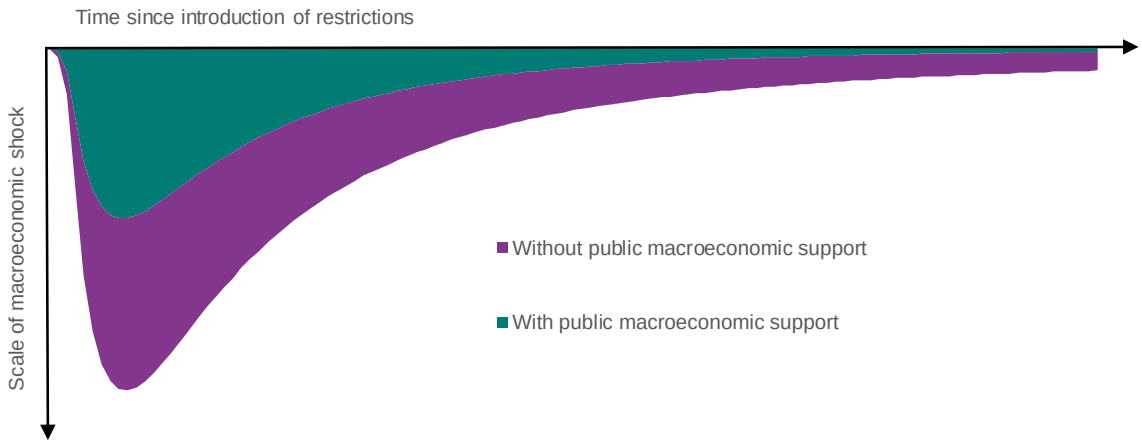
In view of the scale of the drop in business activity, global and national recession is projected in all forecast releases or scenarios of economic developments.[1] However, it is difficult to determine the extent and length of the recession as it depends simultaneously on:

[1] See e.g. IMF World Economic Outlook, April 2020.

- the extent and length of social distancing restrictions,
- the extent and efficiency of macroeconomic support measures,
- the impact of the current crisis on the change in behaviour patterns of households and companies (e.g. by lower propensity to take risk, a drop in consumption or investment).

The support measures cannot overcome the initial shock that the social distancing restrictions are having on the economy, but they can reduce the scale of negative secondary effects that this shock triggers. A stylised impact of the pandemic-driven shock on the economy is shown in Diagram 1.1.

Diagram 1.1. A stylised impact of the pandemic-driven shock on the economy



Notes: the figure presents a stylised impact of the healthcare measures and macroeconomic support measures, and not a forecast of the impact.

Source: own elaboration based on P.O. Gourinchas, Flattening the Pandemic and Recession Curves, March 2020 (https://econfip.org/policy-brief/flattening-the-pandemic-and-recession-curves/#).

1.2. Impact on the financial system

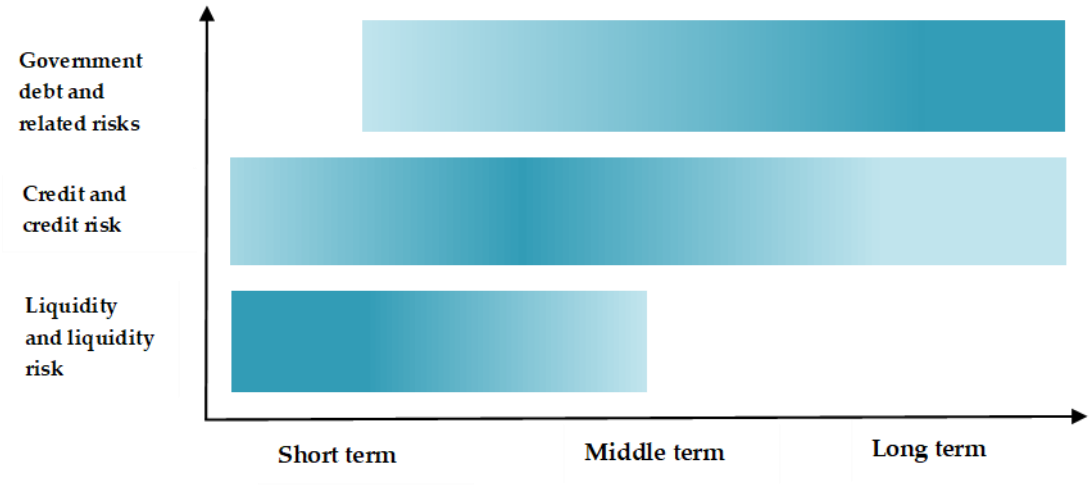
The impact of the shock triggered by COVID-19 on the functioning and stability of the financial system varies and its effects also differ depending on the time horizon in which it is analysed (see Diagram 1.2):

- **In the short term,** a sharp drop in financial market liquidity and dramatic changes in the prices of many asset classes has been driven by a sudden increase of uncertainty. The basic challenge was also ensuring a continuous and uninterrupted access of the public and economic agents to cash and non-cash settlements;
- **In the medium term,** due to the surge in risk aversion, the key issue is to sustain financing the economy, including by credit creation,

- **In the long term,** for a number of countries risk may stem, among others, from the level of public indebtedness, which will be significantly higher than before the shock.

The report focuses on the short and medium term aspects, which will be analysed in subsequent chapters.

Diagram 1.2. The time horizon of the impact of COVID-19 shock on financial stability



Note: The color intensity determines the dominant time dimension in which the risk can materialize.

Source: NBP

A macroeconomic shock triggered by COVID-19 negatively impacts financial stability and the shock itself may be amplified by a response of the financial system. The COVID-19 pandemic and containment measures have an impact on financial stability through two main channels:

- **the macroeconomic channel** (as a source of supply and demand shock) and
- **the market channel** (through a change in the price of risk in financial markets).

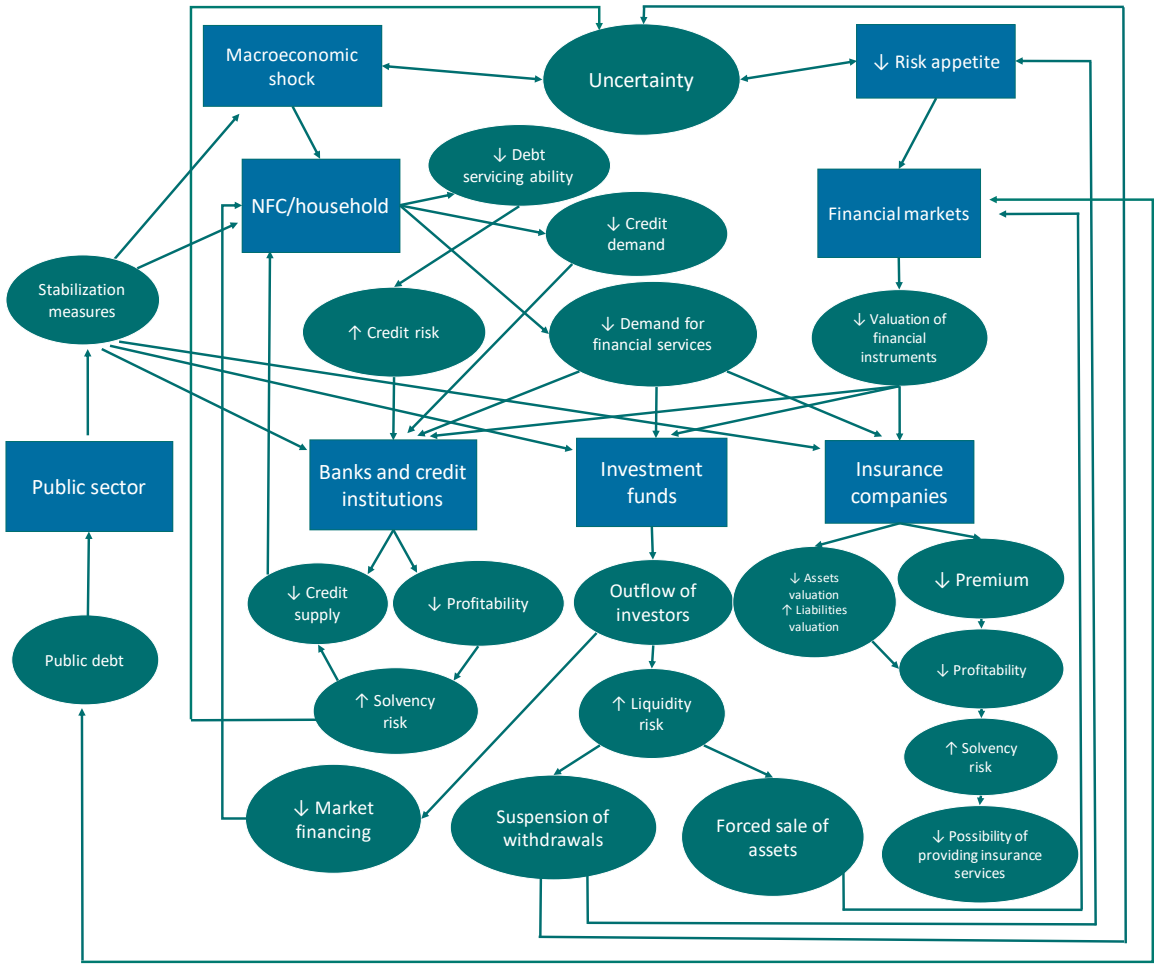
The two channels may reinforce mutually their impact on the financial system. Uncertainty of economic agents about the strength and persistence of the shock plays a major role in the process. At the same time, the economic consequences of COVID-19 may act as the catalyst for systemic risk arising from imbalances present in the economy and the financial system in many regions of the world (among others**,** high valuations of financial instruments; high corporate and sovereign debt, weaknesses of certain financial institutions and financial sectors or their business models)[2] before the pandemic outbreak. A stylised mechanism of the impact of the current crisis on the financial sector is shown in Diagram 1.3.

The key phenomena affecting the situation of the financial system and its stability are listed below:

[2] See Chapter 1.2 in Financial Stability Report. December 2019, Narodowy Bank Polski, 2019.

- **a fall in debt servicing capacity of enterprises and households** (it causes losses on existing loans and increases the risk of origination of new loans; the extent of the two developments is tied to the duration of the shock, related structural changes in behavior of economic agents and the public support measures),
- **a fall in the corporate and household demand for financial services** (it leads to a decline of financial sector income; it results from their subdued economic activity and lower risk appetite due to expected consequences of the shock), and
- **a drop in the valuation of instruments on financial markets** (it lowers the value of assets in the balance sheets of the financial institutions and may bring about losses; it stems from the worse economic outlook and an increase in credit risk premium).

Diagram 1.3. A stylised mechanism of the impact of the COVID-19 shock on the financial sector



Source: NBP

The phenomena negatively affect the profitability of financial institutions and, depending on the magnitude of the macroeconomic shock, the extent of past imbalances and resilience of the financial system, may cause a risk to their stability, and even jeopardise the smooth operation of

the financial system as a whole (systemic risk). In addition to the above, the significant factor influencing systemic risk is a reaction of the financial system, e.g. when banks reduce the supply of credit or non-bank financial institutions start fire sales of assets. These phenomena may exacerbate the negative trends in the economy and in the financial system and, consequently, may lead to an economic and financial crisis.

2. Financial markets' response to COVID-19

2.1. International environment

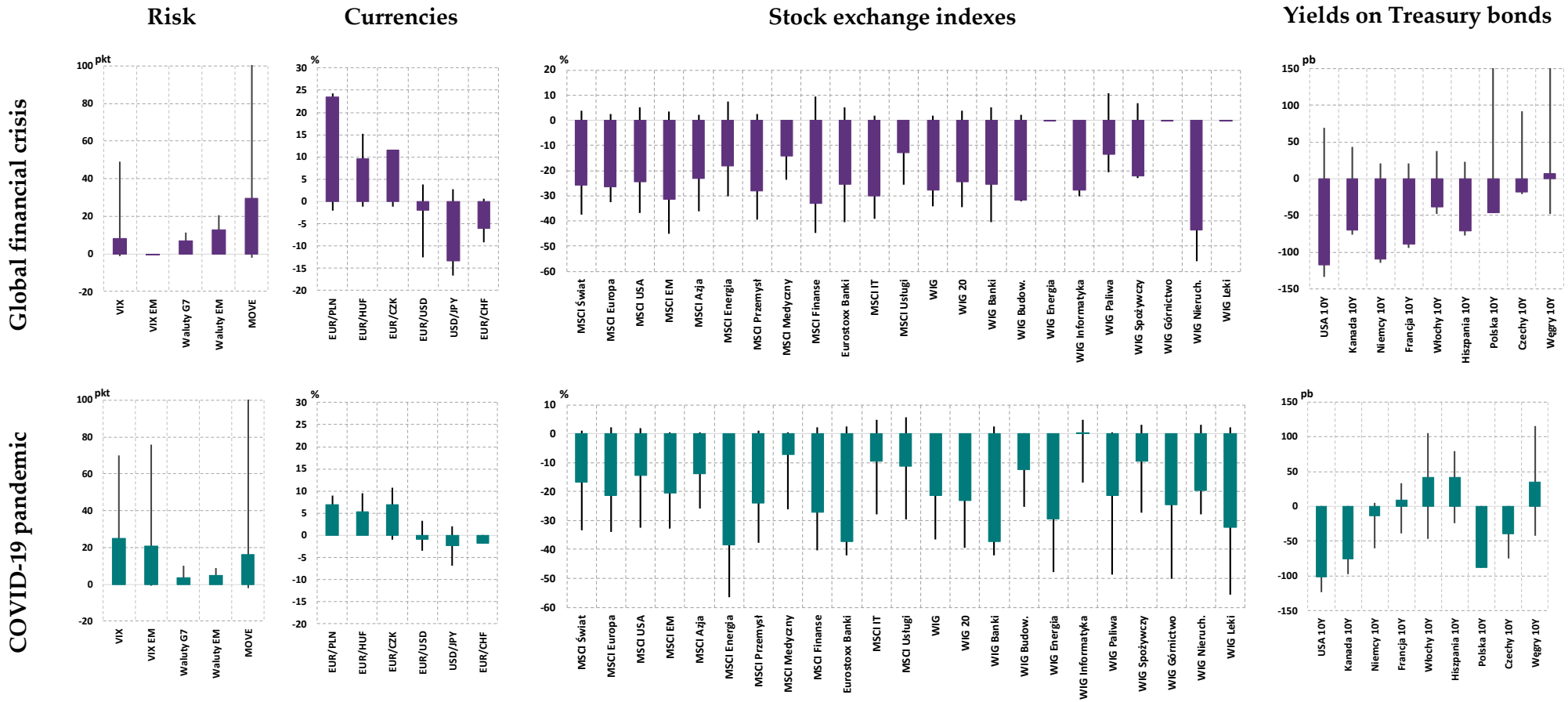
The recent period has brought a significant rise in risk assessment in the global market – in many cases to the highest level since the 2008 global financial crisis (see Figure 2.1). High risk aversion was driven by the uncertainty about the impact of the COVID-19 pandemic on global economic activity. This uncertainty and a decline in the financial markets' liquidity resulted in abrupt changes in the prices of many asset classes.

High price volatility was observed in almost all asset classes, particularly in the equity market. Many risk measures – except for FX volatility – reached very high levels (see Figure 2.1, left-hand panel). The decline in share prices was particularly sharp – equity markets saw the largest daily declines since the Black Monday in 1987.[3] As a result, worldwide stock price declines exceeded even 30%, as compared to the peaks noted at the end of January 2020. In the face of the looming global recession and the resulting rise in credit risk, banks' quotations saw particularly sharp price drops (see Figure 2.1, right-hand panel). The observed magnitude of the drops and the uncertainty about the economic outlook resulted in a strong rise in equity risk aversion – the VIX equity volatility index raised temporary to the level exceeding the highest values observed in October 2008 (see Figure 2.1, left-hand panel). On the other hand, the prices of many countries' Treasury bonds increased which was due to the shift in investor demand toward *safer assets*. Yet, in some countries with high debt levels or a more difficult macroeconomic situation, bond prices were declining (see Figure 2.1, right-hand panel).

The shock in the money markets was severe but markedly milder than during the global financial crisis in 2008. The spread between LIBOR and OIS USD saw a temporary increase to approx. 150 bp., i.e. to the highest level since 2009, indicating growing risk aversion in the US interbank market. Yet, this rise was markedly lower than during the 2008 crisis when the banking sector itself was the source of the shock. Also, the costs of obtaining the US currency in the international financial market saw temporary strong increases (by almost 100 bp.), yet to the level half lower than the one observed during the global financial crisis. Swift and effective measures taken by central banks curbed the scale of disruptions in the money market and price decrease in other markets (for more detail see Chapter 3).

[3] On 19 October 1987, New York Stock Exchange the DJIA (Dow Jones Industrial Average) index fell by 22%, which was accompanied by similar declines in all major world stock exchanges.

Figure 2.1. Changes in the valuation of financial instruments in selected periods



Notes: Bars indicate changes in asset valuations in selected periods, while vertical lines indicate the range of these changes in a given period. The first figure indicates the change in value at the end of the period compared to the beginning of the period, while the second figure additionally factors in the maximum or minimum change over a given period. The period from 21 January 2020 (the escalation of COVID-19 infection in China, start date of official statistics) till the cut-off date of the *Report* was adopted as the COVID-19 epidemic period. The period from 15 September 2008 (bankruptcy of the Lehman Brothers) till the end of 2008 was adopted as the period of the global financial crisis. The length of the period of the global financial crisis was adjusted to ensure comparability with the COVID-19 epidemic period. Changes for several financial instruments on the top panel amount to zero as no corresponding quotes are available.

Source: Bloomberg.

2.2. Financial market in Poland

The prices of Polish Treasury bonds increased abruptly, and their yields plummeted to the historical low levels, despite lower liquidity and high volatility in the market. The NBP interest rate decreases largely contributed to declines in bond yields.[4] On the other hand, the pricing of Poland's credit risk, reflected by CDS quotations, increased by only approx. 15 bp. to 60 bp., namely to the levels considerably lower than those recorded during the global crisis in 2008, when the maximum level was in excess of 400 bp. As a result, the difference in the yields on Polish Treasury bonds against German Bunds reached its long-term minimum (see Figure 2.2).

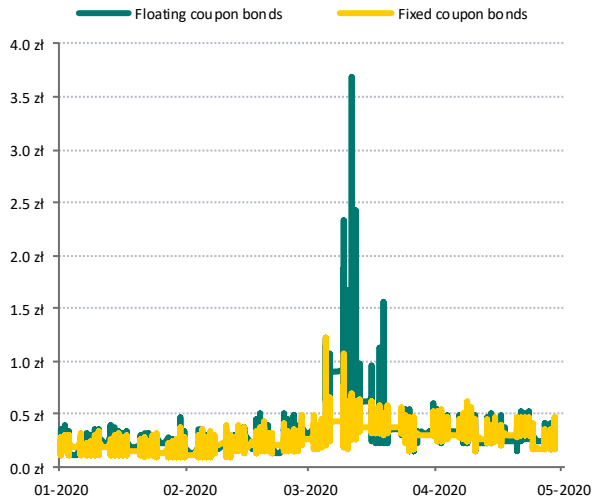
The yields on Polish Treasury bonds were changing sharply exceeding manifold historical volatility, which was partly due to lower market liquidity. Lower liquidity in the Treasury bond market was reflected, among others, in an acute widening in bid/ask spreads for bonds in the secondary market, in particular, for less liquid floating coupon bonds (see Figure 2.3) and growing spreads for the so-called asset swaps (showing the cumulative effect of the difference in the assessment of credit risk and liquidity in the bond and IRS market).

Figure 2.2. Yields on 10-year Treasury securities against spread to German Bunds



Source: Thomson Reuters.

Figure 2.3. Bid/ask spread for domestic fixed and floating coupon Treasury bonds



Note: mean values for all series of Treasury bonds traded in the secondary market according to quotations at a particular moment; in the absence of quotations, the last available ones were taken into account.

Source: Thomson Reuters.

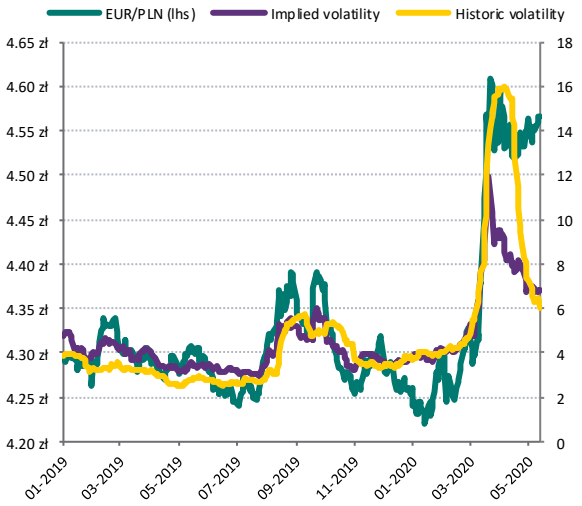
In March 2020, NBP launched the redemption of debt securities (initially only Treasury bonds, and subsequently also guaranteed by the Treasury) from the secondary market as part of structural open

[4] The Monetary Policy Council lowered the main interest rates in Poland three times: on 17 March (by 50 bp.), on 8 April (by 50 bp.) and 28 May (by 40 bp.). After those decisions, the main interest rates are at the following levels: the reference rate at 0.10%, the Lombard rate at 0.50%, the deposit rate at 0.00%, the rediscount rate at 0.11% and the discount rate at 0.12%.

market operations. These measures, both directly and through their impact on market agents' expectations, improved liquidity of, among others, the interbank market and the secondary market of Treasury bonds.

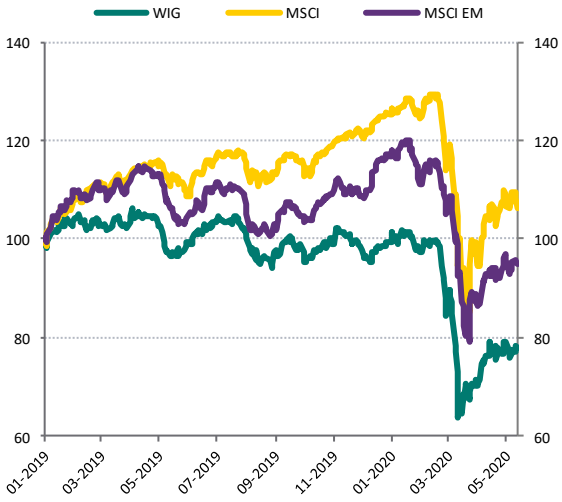
The zloty exchange rate, after a long period of stabilisation and resilience to the episodes of growing risk aversion in the international financial markets, increased considerably against major currencies. The strong depreciation of the zloty against the euro led to a sharp rise in the volatility, yet, the scale of fluctuations of the zloty exchange rate and its volatility were considerably lower than those recorded during the global financial crisis in 2008 (see Figure 2.4). The FX market remained liquid, allowing transactions to be carried out smoothly. As in the case of major world currencies, also the swap spreads of EUR/PLN and EUR/CHF in CIRS *basis* transactions – the transactions by which domestic banks can hedge financing of, among others, foreign currency denominated mortgage loans - increased, however at levels which were lower than during the global financial crisis in 2008.

Figure 2.4. EUR/PLN exchange rate and its volatility



Note: Measures of historical volatility and implied volatility for a one-month tenor.
Source: Bloomberg.

Figure 2.5. Changes in the Polish stock index compared to international environment



Notes: Stock exchange indexes: MSCI World Index, MSCI EM Index and WIG Index were normalized to 100 out of the beginning of 2019.

Source: Bloomberg.

The domestic equity market prices changes reflected the trends observed in the world stock exchanges. As a result of reduced investors' exposures and growing supply, equity prices in the GPW plummeted in all sectors (see Figure 2.5). Some declines were due to industry-specific factors. In particular, factors specific for the energy sector were worldwide oil price slumps, whereas considerable declines in bank share prices were driven by the anticipated declines in their profits amid the expected economic slowdown, increased credit risk and the expected withholding of dividend payments.

3. Remedial measures

Governments, central banks and international institutions have immediately taken measures to limit the negative consequences of the COVID-19 pandemic. These measures addressed all areas of economic policy. The description presented below concerns mainly measures taken by the EU countries.

Fiscal policy measures were mainly intended to support enterprises and employees, especially in sectors mostly affected by the crisis. The most common forms of support aimed to reduce the financial burden of enterprises include the temporary deferrals of tax and compulsory social security contributions, tax advantages and wage subsidies. Moreover, in order to ensure liquidity of enterprises and support them financially state guarantees for loans (mainly for working capital and investment loans), preferential loans (granted mainly by domestic development banks) and direct financing in the form of grants or subsidies have been offered.

The European Commission has relaxed State aid rules in favour of enterprises during the COVID-19 pandemic.[5] Until the end of December 2020, the approved forms of State aid measures will include, among others, direct grants/tax advantages/advance payments up to the amount equivalent to 800 thousand euros per undertaking; state guarantees for corporate loans; preferential corporate loans; short-term export credit insurance; support for coronavirus related research; support for the manufacturing of products relevant for fighting coronavirus; aid in the form of wage subsidies. In addition, as part of the amendment to the State aid rules, the European Commission approved support for non-financial enterprises in the form of recapitalization or subordinated debt instruments.

In the area of monetary policy, the scope and type of central bank tools used was determined by the characteristics and the structure of the domestic financial system, as well as the existing space to conduct expansionary monetary policy. The range of instruments applied by those central banks (including NBP), which used to conduct a more conventional monetary policy, was considerably extended. The response of central banks worldwide was fast, and flexible and involved:

- monetary easing through short-term interest rate cuts (in cases, where there was space for interest rate cuts) and influencing monetary conditions through purchases of selected asset classes;
- ensuring liquidity in selected asset markets (e.g. government bonds, municipal and corporate bonds, asset-backed securities[6]) by purchasing selected assets in the secondary market;

[5] Communication from the Commission Temporary Framework for the State aid measures to support the economy in the current COVID-19 outbreak (Consolidated version), 8 May 2020.

[6] Asset-Backed Securities.

- increasing banking sector liquidity by lowering the required reserve rate and conducting (or extending) purchases of selected types of debt securities; relaxing collateral requirements, facilitating access to repo operations and extending their frequency and maturity;
- stimulating corporate credit by refinancing loans granted by commercial banks to enterprises[7];
- containing the negative impacts of tightened conditions in the global financial markets by providing commercial banks with US and EUR financing, using swap lines provided by the Fed[8] and the ECB[9];
- conducting currency interventions to limit excessive volatility of the domestic currency exchange rate; reducing the FX reserve requirements[10] / FX liquidity requirements also served this purpose.

As regards microprudential supervision, majority of measures taken by EU countries concerned the banking sector, and their main purpose was to maintain the flow of credit to the real economy. These measures involved allowing banks to use their capital buffers to absorb losses, as well as temporary suspension of the need to fulfil some capital requirements and abstaining from applying supervisory sanctions in this regard, and as regards liquidity standards – allowing banks to temporarily operate below the regulatory requirements; taking a flexible approach to credit exposures' classification, including issuing guidelines on limiting the pro-cyclical effects of applying the IFRS 9; reducing operational burdens resulting from the existing supervisory priorities (e.g. postponing stress tests, on-site inspections or planned introduction of new regulatory requirements) or from the reporting obligations (e.g. extending the deadlines for publishing financial statements). Recommendations were also issued to suspend dividend payments and share buybacks. As regards measures related to the banking sector, some countries also put in place moratoria on loan repayments.

[7] The Federal Reserve also launched the Primary Dealer Credit Facility and Money Market Mutual Fund Facility programs aimed at supporting the availability of loans to enterprises and households.
[8] On 19 March 2020 the Federal Reserve announced the establishment of temporary U.S. dollar liquidity arrangements (swap lines) lines with nine central banks, including with four emerging economies.
[9] On 20 March 2020 the ECB concluded a currency arrangement (swap line) with the central bank of Denmark, on 15 April with the central bank of Croatia, and on 22 April with the central bank of Bulgaria.
[10] E.g. in case of Central Bank of the Republic of Turkey.

Box 3.1. Information on dividend distribution restrictions in view of the COVID-19 pandemic: reviewing the experience

Following the outbreak of the Covid-19 pandemic, the European Union supervisory authorities and individual EU member states took measures aimed at strengthening the resilience of entities in the financial sector.

At the same time, many supervisory authorities implemented restrictions on profit distribution by financial institutions, including, among others, restrictions on dividend distribution and variable remuneration, and share buy-back. The European Banking Authority (EBA) and the European Central Bank (ECB) issued recommendations for banks to withhold dividend distribution during the pandemic (see Table 3.1). The restrictions are aimed at increasing the resilience of the banking system in face of the negative consequences of the COVID-19 pandemic, making banks keep their capital levels to continue lending. One of the aims is also to prevent banks from using capital freed up as a result of the release of capital buffers for profit redistribution rather than improving resilience and keeping lending to the non-financial sector.

Table 3.1. Recommendations of the ECB, EBA and EIOPA on dividend distribution

Institution	Key recommendations
EBC **12, 20 and 27 March 2020.**	▪ Recommendation for banks not to pay dividends during the pandemic (at least until 1 October 2020). ▪ The recommendation concerns dividends for 2019 and 2020, but does not concern dividends already paid out for the financial year 2019. ▪ The ECB expects banks to continue funding households and businesses, by joining the fight against the effects of the COVID-19 pandemic.
EBA **12 and 31 March 2020**	▪ All banks are urged to refrain from the distribution of dividends or share buy-backs which result in the payment of capital outside the banking system capital. ▪ The EBA stresses that the release of the capital buffers was aimed at supporting lending to the economy and not the distribution of profits. ▪ The relevant supervisory authorities should monitor intra-group cash flows.
EIOPA **17 March and 2 April 2020**	▪ Recommendation for insurance companies to follow prudent dividend distribution policies, taking due account of uncertainty related to the impacts of COVID-19. ▪ The recommendation concerns both the level of dividend distribution at the consolidated level, and significant intra-group dividend distributions.

Source: EBA, ECB, EIOPA and ESRB.

Many supervisory authorities in EU countries have already issued relevant recommendations to banks with respect to restrictions on dividend distribution, thus largely implementing the recommendations of the ECB, EBA and EIOPA. In most cases, national supervisory authorities expect the dividend payment restrictions to remain in force at least until October 2020 (in line with the ECB recommendation) or until the end of the pandemic.

In line with the statement of the Chair of the KNF Board of 26 March 2020[11], banks and insurance undertakings in Poland are expected, irrespective of the measures taken so far, to retain the entire profit generated in previous years. The largest banks listed on the Warsaw Stock Exchange have indicated that they also received a letter from the KNF concerning this information (dividend payment).[12] On the other hand, certain central banks in the countries of the CEE region are extending the scope of the recommendations and point to the need to withhold the distribution of dividends and not to take steps that could jeopardise the resilience of individual banks. Such a position was formulated by the Czech National Bank, which at the same time expects banks to refrain from any dividend payout until the coronavirus pandemic is contained.[13] The central bank of Hungary is calling on banks and their owners to make sure that dividends are neither approved nor paid out before the end of September 2020 (which is in line with the ECB position).[14] In Latvia, the Financial and Capital Market Commission (FCMC) expects banks, considering the current circumstances, to cancel or re-schedule dividend payment irrespective of their capital position with a view to continuing lending to the economy and ensuring the absorption of potential losses in the future. In its release[15], FCMC cites the ECB recommendations on dividend distribution.

Similar measures were also taken by central banks and supervisory authorities of European countries outside the region. In March 2020, the Bank of England sent a letter to the largest UK deposit-takers to consider suspension of dividends and share buybacks until the end of 2020, and also asked them to cancel payments of any outstanding 2019 dividends, expecting the banks not to pay cash bonuses to senior staff.[16] The largest UK deposit-takers announced that they agreed with the BoE request. A similar recommendation was also issued by the French supervisory authority (Autorité de Contrôle Prudentiel et de Résolution, ACPR), in which domestic banks and insurance companies were recommended to refrain from the payment of dividends for 2019 and advance payments at least until 1

[11] Statement of the Chair of the KNF Board on the distribution of dividends of banks and insurance undertakings: https://www.knf.gov.pl/knf/en/komponenty/img/Statement_of_the_Chair_of_the_KNF_Board_on_the_distribution_of_dividends_of_banks_and_insurance_undertakings_69557.pdf.

[12] Press release of the Management Board of PKO Bank Polski S.A.: https://www.pkobp.pl/relacje-inwestorskie/raporty-biezace/raport-nr-14-2020-pismo-komisji-nadzoru-finansowego-dotyczace-wyplaty-dywidendy/.

[13] Press release of the Czech National Bank: https://www.cnb.cz/en/cnb-news/press-releases/CNB-adopts-stabilising-measures-in-connection-with-coronavirus-epidemic/.

[14] Press release of the central bank of Hungary https://www.mnb.hu/en/pressroom/press-releases/press-releases-2020/the-mnb-takes-several-measures-to-support-the-operation-of-banks.

[15] Press release of the financial and Capital Market Commission (FCMC): https://www.fktk.lv/en/news/press-releases/fcmc-expects-latvias-credit-institutions-to-refrain-from-a-dividend-payment-under-the-current-circumstances/.

[16] Statement of the Bank of England: https://www.bankofengland.co.uk/prudential-regulation/publication/2020/pra-statement-on-deposit-takers-approach-to-dividend-payments-share-buybacks-and-cash-bonuses.

October 2020.[17] The supervisor authorities of Italy[18] and Spain[19] followed suit, recommending banks to not to pay out any dividends for 2019 and take any commitments regarding the payment of dividends for the financial year 2020. Moreover, Italy's insurance companies were recommended to use extreme caution in the distribution of dividends and in the payment of variable remuneration.[20] On the other hand, Germany is one of few EU countries where no restrictions on dividend payments have been put in place. A broader list of countries and description of the dividend distribution restrictions they have implemented is published by the European Systemic Risk Board (ESRB).

Source: NBP

The measures taken by the European microprudential supervisory authorities were mainly intended to ensure the coherence of national supervisory activities and a coordinated approach to the emerging supervisory problems. As regards the classification of credit exposures in connection with fiscal support in the form of guarantees on loans or suspension of loan repayment, the EBA, the ESMA and the ECB[21] opted for a flexible application of the IFRS 9. In particular, it was decided that the introduction of general guarantees or suspension of loan repayment should not automatically trigger the classification of an exposure as impaired. In turn, the ECB-SSM agreed that banks subject to its direct supervision will be temporarily allowed to operate below the Pillar 2 Guidance (P2G)[22], the capital conservation buffer (CCB) and the liquidity coverage ratio (LCR). Moreover, the ECB also allowed banks to use, to a greater extent, instruments that do not qualify as Common Equity Tier 1 (CET1) capital, for example Additional Tier 1 or Tier 2 instruments, to meet the Pillar 2 Requirements (P2R). Similar measures were also announced within the banking union by national supervisors for banks under their supervision. Also, the ESMA with a view to maintaining proper functioning and the integrity of the EU financial market, tightened the reporting obligations with respect to short-selling by temporarily lowering (to 0.1% of the issued share capital) the threshold requiring, when exceeded, the holders of net short positions in shares to notify the relevant national competent authority (NCA) on their exposures. In turn, the Single Resolution Board[23] postponed less urgent information or data requests related to the upcoming resolution planning cycle and also announced a flexible approach, taking into account the crisis situation, when making decisions regarding the implementation of intermediate targets for meeting the minimum requirement for own funds and eligible liabilities (MREL). Moreover, the European Commission initiated legislative activities in the area of banking sector regulation aimed at facilitating lending to households and enterprises during the current COVID-19 pandemic. The targeted amendments

[17] Press release of the Bank of France: https://acpr.banque-france.fr/sites/default/files/medias/documents/20200330_communique_presse_recommandation_lsi_et_sf.pdf.

[18] Press release of the Bank of Italy: https://www.bancaditalia.it/media/notizia/recommendation-of-the-bank-of-italy-on-the-dividend-distribution-policies-of-less-significant-italian-banks-during-the-covid-19-pandemic/.

[19] Press release of the Bank of Spain: https://www.bde.es/f/webbde/GAP/Secciones/SalaPrensa/NotasInformativas/20/presbe2020_25en.pdf.

[20] Press release of the Institute for the Supervision of Insurance (IVASS): https://www.ivass.it/media/avviso/covid-dividendi/?com.dotmarketing.htmlpage.language=3.

[21] As the Single Supervisory Mechanism (SSM) – banking supervision authority of the banking union.

[22] Pillar 2 Guidance, P2G

[23] *Single Resolution Board* – the central resolution authority of euro area bank (of the Banking Union).

to the CRR proposed by the EC[24] concern, among others, extension of transitional provisions connected with the application of the international financial reporting standard IFRS 9 and the increase in provisions for expected losses, preferential treatment of non-performing exposures secured by public guarantees within the mechanism providing appropriate provisioning of non-performing exposures (*NPL prudential backstop*), postponing the use of the leverage ratio buffer for G-SII banks, as well as bringing forward the entry into force of some provisions from the CRRII[25] that could provide banks with relief in the capital adequacy calculations[26].

Also, macroprudential authorities in EU countries took swift measures, easing the parameters of instruments that were in force at that time, or withdrawing from the previously announced tightening of macroprudential tools. These measures were aimed at limiting the risk of pro-cyclical tightening of credit conditions, and enabling banks to absorb losses by using previously accumulated capital buffers. In particular, countries in which the countercyclical buffer was set at a positive rate, decided to reduce its required rate, sometimes to zero, or withdrew from their decisions to increase it. Macroprudential authorities in several EU countries reduced (or fully released) systemic risk buffers and other systemically important institution buffers. At the same time, some countries eased the parameters of instruments not harmonized in EU law, such as LtV limits and borrower-based instruments.

International financial institutions also participate in actions aimed at limiting the global and regional effects of the pandemic. The International Monetary Fund offers support to countries under three programmes: the Rapid Credit Facility (credit facility for the poorest countries, approx. 10 billion USD), the Rapid Financing Instrument (loan program for all IMF Members, mainly underdeveloped countries and emerging markets, approx. 40 billion USD) and the Catastrophe Containment and Relief Trust (a fund for providing grants and debt relief), as well as under the newly introduced Short-term Liquidity Line (a tool providing short-term liquidity). On the other hand, the World Bank launched a 14 billion USD aid package to support developing countries to fight the COVID-19 pandemic. The European Investment Bank (EIB) launched a 40 billion EUR aid package that includes guarantee schemes on loans to European companies, liquidity lines to banks to ensure provision of working capital loans to small and medium-sized enterprises and an asset-backed securities purchase programme. Moreover, the EIB launched a 25 billion EUR guarantee fund to support the financing of enterprises. In turn, the European Bank for Reconstruction and Development (EBRD) established an 1 billion EUR "Solidarity Package", including, among others, short-term liquidity support or aid in restructuring liabilities, including accounts payable to the EBRD. For the euro area countries, the European Stability Mechanism provided the Pandemic Crisis Support in the form of a credit line based on the already

[24] Proposal for a Regulation of the European Parliament and of the Council amending Regulations (EU) No 575/2013 and (EU) 2019/876 as regards adjustments in response to the COVID-19 pandemic, COM(2020)310 final, Brussels, 28.4.2020.

[25] Regulation (EU) 2019/876 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) No 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposure to collective investment undertakings, large exposures, reporting and disclosure requirements, and Regulation (EU) No 648/2012.

[26] For example modification of the SMEs supporting factor, introduction of infrastructure investment supporting factor, lower risk weights for loans collateralised on pension or salary.

existing Enhanced Conditions Credit Line. The beneficiary Member State has to commit that the funds advanced under the ESM will be used to finance healthcare, cure and prevention related costs due to COVID-19 pandemic. The amount of aid granted under the PCS is limited to 2% of the GDP of the applying country.

Table 3.2. Financial stability and economic policy measures taken in response to the COVID-19 pandemic

		Areas of economic policy			
		Fiscal policy	Monetary policy	Microprudential supervision	Macroprudential supervision
Objectives of measures	Reducing the financial burden of the private sector to limit credit risk	✓	✓	✓	
	Maintaining financing of the economy	✓	✓	✓	✓
	Ensuring liquidity of the banking sector		✓	✓	
	Ensuring liquidity of financial markets		✓		

Source: NBP.

Box 3.2. Measures taken by Poland's financial safety net institutions

Measures taken by the Polish government

In order to counteract the effects of the crisis caused by the COVID-19 pandemic, on 18 March the Polish government announced a package of aid measures known as the "Anti-crisis Shield" envisaging support for business entities, households, health services as well as financial system. Measures directly addressing the financial system, described in more detail further in the box, mainly include actions taken by NBP and the KNF. Among support measures directed at employees and enterprises which came into force at the end of March (further extended in April and May) are, in particular wage subsidies, the so-called downtime benefit for the self-employed and persons working under a specific task contracts or mandate contracts, exemption from payment of ZUS contributions (social insurance) in period from March to May (for enterprises employing less than 50 employees) as well as loans for micro-companies provided they maintain economic activity. The cost for public finances estimated by the government of the above mentioned measures is around 43-50 billion zlotys (approx. 2% of GDP). Moreover, some administrative or tax obligations have been postponed, including annual personal income tax (PIT) and corporate income tax (CIT) returns and employees' PIT

withholdings in March and April. The BGK guarantee programme was also launched enabling enterprises to take out BGK-guaranteed loans, and the guarantee was increased to 80% of the loan amount in the *de minimis* programme.

On 8 April 2020 the government unveiled a new 100 billion zlotys financial aid programme for enterprises, which will be operated by the Polish Development Fund (PFR). The PFR Financial Shield for micro-, small- and medium enterprises worth 75 billion zlotys (over 3% of GDP) and launched at the end of April after obtaining the European Commission approval, offers support which could be written off up to 75% provided certain conditions are fulfilled (such as maintenance of the economic activity, scope of employment reduction, and decrease in sales in case of SMEs). The PFR estimates that 65% of the funding under the programme will constitute non-reimbursable State aid. The PFR Shield (Liquidity, Financial and Capital) for large companies worth 25 billion zlotys (over 1% of GDP) received the approval of the European Commission at the beginning of June this year.

Fiscal measures support financial stability both directly (e.g. through guarantees) and indirectly (e.g. through financial support for enterprises and households, which reduces problems with debt service by borrowers). The scale of fiscal support for the economy launched in Poland is one of the largest in the European Union. This is indicated, for example, by the increase in the primary structural deficit of public finances, estimated in the EC forecasts from May this year, which for Poland is over 5 pp of GDP, against 3.3 pp on average in the EU.

Measures taken by Narodowy Bank Polski

The package of aid measures launched by NBP encompasses:

- interest rate cuts – the reference rate was reduced three times (including also the decision of 28 May 2020) by 140bp and after interest rate cuts stands at 0.10%;
- reduction of the required reserve rate by 300 bp, from 3.5% to 0.5%;
- equalisation of the interest rate on funds held in the form of required reserve with the level of the NBP reference rate;
- introduction of repo transactions providing liquidity to the banking sector;
- purchases of Treasury bonds and debt securities guaranteed by the State Treasury in the secondary market as part of structural open market operations;
- extension of the list of collateral eligible in liquidity refinancing operations to include also bonds guaranteed by the State Treasury;
- introduction of discount credit to refinance loans granted by banks to enterprises.

Macroprudential policy measures

The Financial Stability Committee in its macroprudential capacity (FSC-M), chaired by the President of NBP, recommended releasing the systemic risk buffer, which was set a 3%. In implementing this recommendation, the Minister of Finance issued a Regulation of 18 March 2020 on releasing banks from the obligation to maintain the systemic risk buffer. As a result of this decision, banks' capital worth approx. 30 billion zlotys was freed. In the Committee's opinion, allowing banks to use the funds from the buffer reduces the risk of a limiting the credit flow to the economy.

Measures taken by the Polish Financial Supervision Authority

The Polish Financial Supervision Authority (KNF) developed a package of measures called the Supervisory Stimulus Package for Security and Development (Pakiet Impulsów Nadzorczych na Rzecz Bezpieczeństwa i Rozwoju, PIN):

- as regards the banking sector, the KNF offered measures in the area of provisioning and classification of exposures, allowed banks to operate below the combined buffer requirement and the LCR, and announced that it would consider reducing the O-SII buffer requirement.
- the KNF proposals addressed to the insurance sector included, among others, the possibility of setting a quarterly Solvency Capital Requirement (SCR) without changing the parameters, allowing the entire process of concluding insurance contracts electronically, as well as lifting administrative sanctions for untimely claims settlement.
- as regards the capital market, the KNF proposed a case-by-case approach to cases of breaching investment limits applicable to investment funds, the launch of tools supporting liquidity in the area of Treasury securities, as well as the extension of deadlines for preparing, approving and publishing financial statements and quarterly reports.

Measures proposed in the PIN package are still open for discussion and its components will be implemented according to the arising needs and depending on the situation.

Measures taken by the Bank Guarantee Fund

The Bank Guarantee Fund (BFG) announced that the intermediate MREL targets, due be met at the end of 2020, will not be regarded as mandatory, thus allowing deviations from achieving these targets. Moreover, the BFG said that the deadline for meeting the final MREL target will be postponed from 2023 to 2024, and therefore will be in line with the deadline under BRRD II.

4. Impact of the COVID-19 pandemic on the Polish financial system

The chapter consists of two parts. The first part describes the key mechanisms through which COVID-19 shock impacts the Polish financial system, taking into account its characteristics. The focus will be on the banking system whose assets currently account for about three quarters of the assets of the entire financial system in Poland. A stylized scheme of the impact of the COVID-19 shock on the banking sector is presented in Diagram 4.1. The impact of the shock on the non-banking sector was shown earlier in Diagram 1.3. The schemes show the likely directions of the shock's impact, however, they do not reflect its strength and do not take into account the effects of public measures taken in Poland and worldwide to counteract the economic risks associated with the pandemic.

The second part of the chapter presents a more in-depth analysis of the shock impact on individual segments of the financial system in Poland. The assessments of consequences and threats presented in this section will take into account the potential effects of existing public anti-crisis measures.

4.1. Scheme of COVID-19 impact on the Polish financial system

In the case of the Polish financial system, the most important source of risk associated with COVID-19 is the macroeconomic shock. This is particularly important in the case of the banking sector. For the remaining parts of the financial system (mainly insurance companies, investment funds and pension funds), the market channel is more important, but due to their limited role in financing of the economy, the first type of shock is vital for financial stability.

In the short term, the first and most important effect of the COVID-19 pandemic was an increase in demand for liquid funds from households and enterprises. Households feared the possibility of introducing local mobility restrictions, which resulted in an increased demand for cash (especially in areas with the low use of banking services or where access to non-cash/electronic settlements was limited). As a consequence, in the period from the end of February 2020 to the end of May, the withdrawal of funds from banks was observed, resulting in an increase in cash in circulation by 54 billion zlotys, i.e. by 23%. This is a phenomenon that has never been recorded before, even during the 2008 crisis. As a result of increased demand for cash, the liquidity of the banking sector decreased. Uncertainty of the economic effects of the shock has also caused a significant increase in the demand of non-financial enterprises for liquid funds, which results in arrears in payments between enterprises and an increase in demand for bank working capital loans.

These phenomena will affect the size and structure of banks' financing sources in multiple directions. In the short term, the increase in the demand of enterprises for liquidity should be conducive to the growth of funds in bank accounts, while the increase in household demand for cash – to their decline. In the long run, the trends may change. Enterprises will use the accumulated funds to service

liabilities, whereas in the case of households, on the one hand, a drop in income will foster the use of savings accumulated in bank accounts but on the other hand, a decrease in risk appetite will contribute to a change in the structure of savings allocation towards an increase in the share of bank deposits.

Under the circumstances of the pandemic and increased social sensitivity, a critical condition for the efficient functioning of the economy and for maintaining trust in the financial system is the possibility of making continuous, uninterrupted payments. This applies to both cash and electronic payments. Disruptions in this area could result in a negative response of customers and could compromise the stability of banks and other depository institutions. For this reason, banks are increasing their demand for liquid funds deposited in their central bank accounts and for coins and banknotes in order to meet the increased demand for cash.

In the medium term, the prerequisite for limiting the scale of systemic risks to the stability of the banking sector is to prevent transformation of liquidity problems of enterprises into a risk of their insolvency and to maintain the financing of the economy, including in particular the supply of bank credit. The macroeconomic shock associated with COVID-19 has a negative impact on the quality of the existing loan portfolio as well as on banks' propensity to grant new loans. In the case of the existing loan portfolio, the shock initially affects negatively the borrowers' capacity to service the debt and, consequently, leads to a deterioration in the quality of loans. The magnitude of the impact depends primarily on the impact of the epidemic on GDP (corporate loans) as well as on employment and wages (household loans).

Credit risk and provisions for expected credit losses are expected to increase. These phenomena result from a drop in the activity of domestic enterprises (increased uncertainty concerning business conditions) as well as households (reduced consumption and increased savings) and a significant deterioration in the economic situation of Poland's main trading and manufacturing partners. Industries sensitive to the effects of the epidemic (i.e. transport and logistics, hospitality, tourism, culture and the arts) and part of industry (especially enterprises comprising the global value chains) may be particularly severely affected.

Banks' response to the macroeconomic shock may include restricting the supply of credit by reducing limits and increasing the price of credit (due to increased credit spreads). The main reason is the deterioration of the financial situation of potential borrowers and difficulties in credit risk assessment due to increased uncertainty related to the effects of the shock and future economic developments. Restrictions on access to financing may be experienced primarily by financially weak sectors and companies and those more vulnerable to the effects of the pandemic. The disruption of lending processes within banks themselves as a result of restricted access to bank outlets or quarantine of their employees may be an additional factor.

In general, a decline in demand for credit from economic agents should also be expected. However, the trends may vary depending on the type of borrower and the category of loan. In the case of enterprises, an increase in demand for working capital loans should be observed (due to an increase in

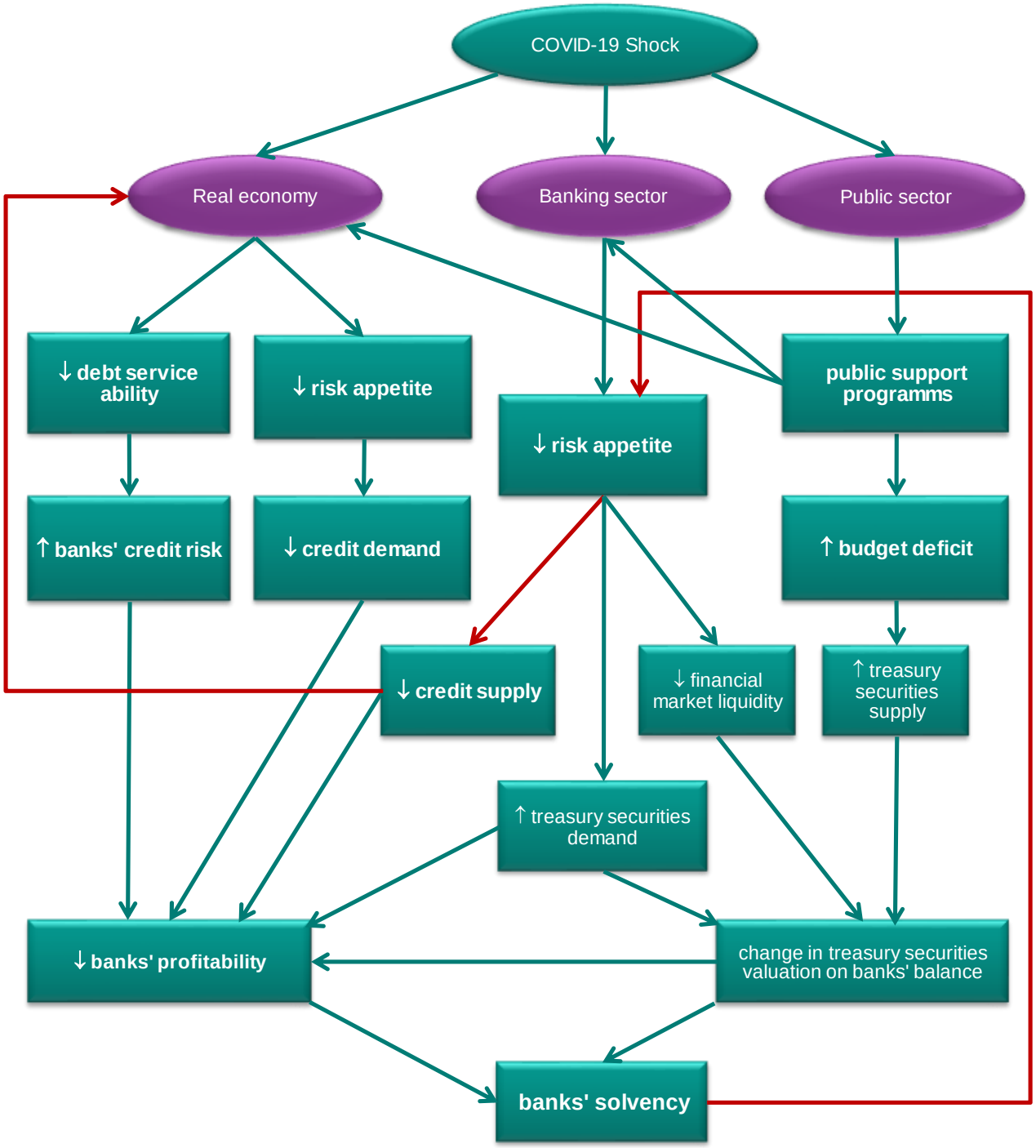
payment backlogs and for prudential reasons) and its decrease in the case of investment loans (uncertainty of the economic outlook). In the case of households, a more homogeneous behaviour can be expected – a decline in demand will mainly result from prudential reasons (i.e. avoiding new financial obligations).

The impact of the crisis on the valuation of Treasury securities may be multidirectional. This is an important issue due to the high share of government bonds in the banking sector assets. In the short term, the demand of domestic entities for safe assets should increase, which – ceteris paribus – should foster the growth in prices of these bonds. This situation should continue in the case of a weaker impact of the epidemic on the economy. In the longer term, especially in the scenario of a longer duration of the epidemic, the need for greater use of public funds and a significant increase in public indebtedness and in the supply of bonds, a downward pressure on Treasury securities prices may occur. This effect may be reinforced by the outflow of foreign investors from emerging markets.

The shock associated with COVID-19 results in an increase in the cost of currency risk hedging and a rise in the value of required collateral as well as an increase in the cost of raising funds in financial markets. The higher cost of hedging the risk of open foreign currency on-balance sheet position is a consequence of high uncertainty about the consequences of the crisis for banks as well as a decrease in liquidity of global interbank financial markets (FX swaps, CIRS). These factors also increase the cost of market funding for banks and decrease the demand for issues of debt instrument. In the case of Polish banks, the risk is limited due to a relatively limited scope of financing in bond markets.

The profitability of banks and other credit institutions will be subject to strong downward pressure. In particular, consequences of the COVID-19 crisis may include a decrease in loan volume, an increase in provisions for credit risk, a decline in non-interest margins due to a general reduction in demand for banking services. The decline in interest rates has a two-pronged effect – it directly reduces banks' interest margin income but indirectly reduces banks' credit losses by increasing borrowers' capacity to service debt and thus supports the profitability of banks. The cost of market financing and the cost of market risk insurance will increase. The impact of banks' exposure to the Treasury securities on banks' profitability may be multidirectional depending on the developments. As a result of a depreciation of the Polish zloty, legal risk may be expected to intensity further – a depreciation of the Polish zloty against the Swiss franc increases the value of the debt denominated in the Polish zloty, which may stimulate an increase in the number of court cases related to FX mortgage loans. The depreciation of the Polish zloty also causes – ceteris paribus – an increase in the capital requirement and a decrease in the capital adequacy ratio of banks with significant foreign currency loan portfolios. Whereas the deterioration of the banks' operating conditions would result in the necessity of the Bank Guarantee Fund to intervene, it is also possible to increase the banks' contributions to BFG funds.

Diagram 4.1. The scheme of the COVID-19 shock impact on the banking sector in Poland



Source: NBP.

The impact of the COVID-19 pandemic on the sector of investment funds is mainly the effect of a market shock (decrease in valuation of financial assets) and the decline in the real economy demand for their financial services (see Diagram 1.3.). An element of uncertainty plays a major role, which reduces the "risk appetite" of investors and market makers. The result is the withdrawal of funds

from investment funds and the decline in liquidity of financial markets. Both these situations could lead to wider turbulences if - with the low liquidity of the markets - the pressure on redemption of participation units persists over a longer term. The possibilities for investment funds to "liquidate" the assets necessary to pay out funds to investors may be limited. Fire sales at low prices would lead to further price falls in the financial markets and the emergence of a negative price and supply spiral. On the other hand, if funds periodically stop disbursements (e.g. as a result of the inability to price assets in an illiquid market), this might increase investor uncertainty and further reduce the "risk appetite". Investors' withdrawal from investment funds will also have a constraining effect on the possibility of market financing of enterprises.

The impact of the COVID-19 shock on the insurance sector is more complex than in the case of investment funds. A decline in prices in financial markets affects the valuation of their assets, mainly government bonds and shares (in multiple directions). By changing the position of the Treasury securities curve (risk-free curve), it also affects the value of liabilities (they increase when it shifts downwards). The demand for insurance services is also falling, which is reflected in a decrease in the rate of written premium. All these phenomena lead to a reduction in the profitability of insurance companies and, in the extreme case, they may result in a threat to the solvency of certain entities; this in turn would force them to limit the provision of insurance services.

In the long run, the most important phenomenon related to the response to the COVID-19 shock and affecting the stability of the Polish financial system may be an increase in the level of general government debt and its ratio to GDP. This increase will be a consequence of the mobilisation of public funds to finance anti-crisis measures. An increase in public debt that would be accompanied by continued increases in the share of Treasury securities in banks' balance sheets increases the likelihood and strength of negative feedbacks between the financial situation of the State and the banking sector (sovereign-bank nexus).

4.2. Description of the impact of COVID-19

4.2.1. Banking sector

4.2.1.1. Situation of the banking sector before the pandemic

The banking sector has entered the COVID-19 pandemic period in a stable and good condition. The majority of banks had adequate capital exceeding the required capital buffers, supported by the retention of a substantial part of their profits over recent years. Banks also had accumulated high liquidity buffers that allowed them to smoothly cope with the increased deposit withdrawals that occurred during the first pandemic period. The share of impaired loans has fallen to its lowest level since mid-2009. The total credit growth was moderate, resulting in a stable credit-to-GDP ratio, without giving rise to creating a countercyclical capital buffer.

In the overall assessment of factors influencing the risk associated with lending those indicating the lack of a significant imbalance prevailed:

- the growth rate of loans to the non-financial sector has remained moderate for several years and close to the GDP growth rate;
- borrowers' burden with loan instalment repayment has not increased due to the simultaneous increase in wages;
- despite the increase in the average value of housing loans, the ratio of new housing loans to GDP and the wage bill has increased slightly, albeit was significantly lower than in 2008;
- the value of the portfolio of FX housing loans decreased at a steady pace of about 8% y/y;
- in 2015-2019, the share of housing loans with LTV over 80% was systematically decreasing (from approx. 52% to 24%);
- the value of new consumer loans in relation to the wage bill and GDP has not increased and the growth rate of high-value consumer loans in 2019 decreased compared to 2017-2018;
- surveys from recent quarters did not indicate an excessive easing of lending standards and terms; most banks either tightened the lending policy standards or did not change them and the only sign of the easing was the extension of the maximum maturity in the consumer loan segment;
- the percentage of loan applications accepted compared to 2018 has not changed in the household segment, while in the corporate segment it has decreased.

However, phenomena justifying the need for careful risk monitoring were present in some areas, especially with respect to high-value consumer loans and housing loans:

- the average value of new housing loans increased steadily, from approx. 220 thousand zlotys in 2015 to approx. 275 thousand zlotys in 2019;
- in 2019, the share of loans with LtV in the range of 80-90% in new housing loans increased(to approx. 37%);
- the share of investment loans in new housing loans in 2017-2019 was about twice as high as in the period preceding the crisis of 2008 (8% and 4%, respectively), which may increase banks' vulnerability to potential problems related to the repayment of loans from rental income during the period of the decline in economic activity caused by the pandemic;
- the share of high-value consumer loans in new loans has increased in recent years (in 2019 it exceeded 34%), which may increase banks' vulnerability to potential debt repayment difficulties as a result of the decline in revenue caused by the effects of COVID-19;
- the share of loans originated under the simplified creditworthiness assessment in new consumer loans has increased, which may increase banks' vulnerability to potential repayment

difficulties due to the difference between past receipts and declared income and those received during the pandemic.

The moderate growth rate of lending was accompanied by a historically low level of credit risk costs (0.84% of the value of loans), resulting from the good economic situation and a relatively conservative lending policy of banks in previous years.

The liquidity position of the banking sector was very good, while the majority of banks had a high surplus of liquid assets in the form of portfolios of Treasury securities and NBP bills (18% and 3% of assets[27] at the end of February 2020, respectively). Since the end of 2018, the value of Treasury debt securities in banks' portfolios has increased by about PLN 40 billion. The average duration of government securities in banks' portfolios remained relatively low (at a level close to 2 years), among others as a result of significant exposure to floating-rate bonds (approx. 43% of the portfolio). This limited the impact of interest rate changes on the fair value of the portfolio and, consequently, also on equity and financial results.

The levels of short-term liquidity ratio (LCR) significantly exceeded the regulatory minimum. At the end of February 2020, the average LCR amounted to: 158% for commercial banks, 446% for those cooperative banks, which are obliged to maintain the LCR on individual basis, and 268% for both institutional protection schemes (IPS).

In the banks' balance sheets, the maturity mismatch between assets and liabilities related to the financing of long-term assets with shorter maturities and the mismatch between the repricing dates of the interest-bearing assets and liabilities continued. The risk related to the maturity mismatch was limited by a large share of deposits of the non-financial sector (including mainly household deposits) and banks' low reliance on the more volatile wholesale market. At the end of December 2019, the average level of the long-term liquidity ratio (NSFR) for commercial banks reached 125%. Higher value of interest-bearing assets with shorter repricing dates and the limited possibility to reduce interest rates on some liabilities resulted in sensitivity of banks' net interest income to interest rate cuts.

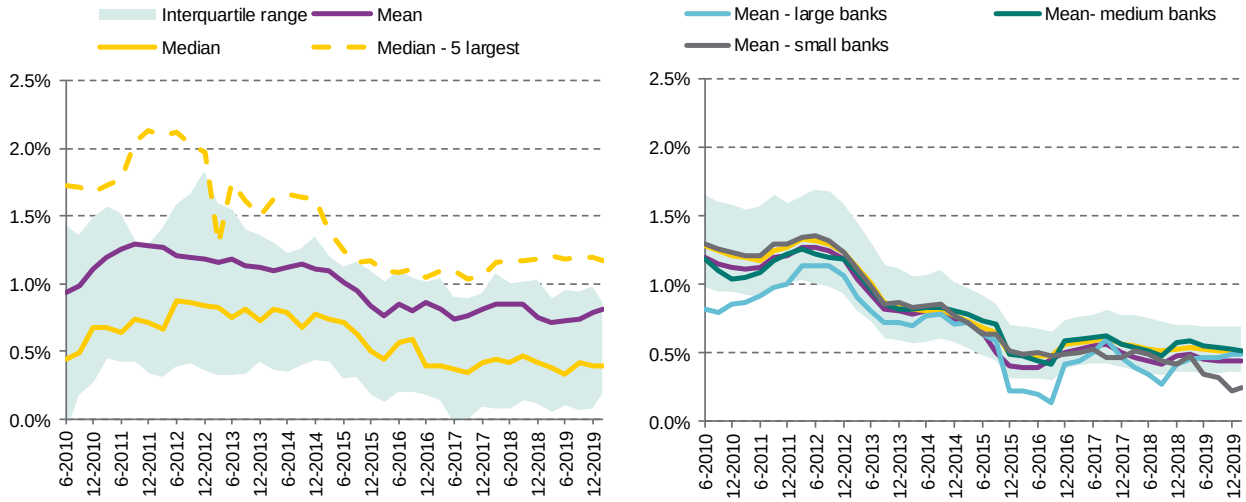
The relatively high value of FX loans (16% of assets) was accompanied by a closed net foreign exchange position. Dependence on derivatives transactions was decreasing due to a faster reduction of foreign currency receivables compared to liabilities, which gradually reduces the risk of rollover of hedging transactions at a higher cost.

The portfolio of FX housing loans was associated with an increasing legal risk. Following the CJEU ruling in Case C-260/18 in October 2019, the interest of customers in challenging the provisions of loan agreements increased, and the growing number of court cases was recorded. Consequently, some banks created portfolio provisions for this risk, which reduced their earnings for 2019 and early 2020.

[27] Data on Treasury securities and money bills excluding BGK.

Banking sector profitability ratios over recent quarters have been stable, higher than the average in the most developed EU countries, yet below the averages for CESEE banking sectors. Tax and non-tax public levies introduced over recent years had an adverse impact on profitability (for example, the rate of return on banking sector assets without bank tax costs would be almost 30% higher). The profitability of the majority of banks listed on the GPW was below the estimated cost of raising capital in the financial market.

Figure 4.1. ROA at domestic commercial banks (left-hand panel) and cooperative banks (right-hand panel)



Notes: annualized data. Dashed line presents the ROA median for five largest commercial banks (excluding BGK).

A temporary decline in the average ROA of domestic commercial banks at the end of 2018 and in 2019 results from the loss of one of the banks in December 2018 (the indicator at a given moment comprises the result of the previous 12 months). Without taking this loss into account, the average ROA in this period would range from 0.79% to 0.83%.

Source: NBP.

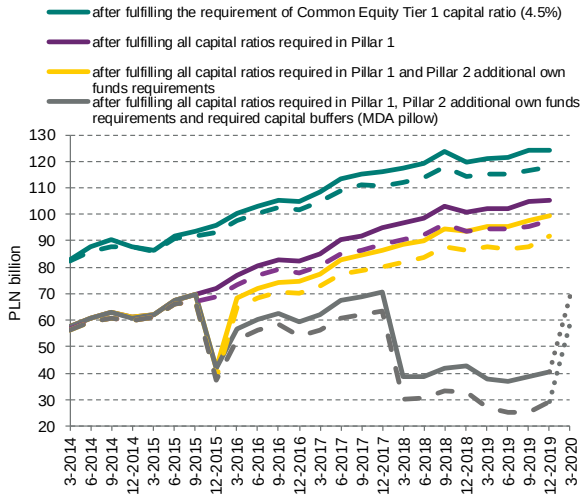
Profitability of individual banks varied considerably. The largest commercial banks continued to exhibit higher average profitability than the remaining parts of the sector (see Figure 4.1), gaining an advantage by exploiting economies of scale (especially in terms of cost efficiency). For this reason, on average, medium-sized and small banks can be considered more sensitive to shocks. This applies in particular to a group of entities (with a total share of approx. 5% in the assets of the sector) which suffered losses in the period of 12 months preceding the pandemic. Some of these institutions (including commercial banks) continued to be unprofitable in the long term despite implemented restructuring programmes. Few entities suffered losses that significantly reduced available capital, jeopardising their prospects to continue as a going concern.

As of the end of December 2019, the banking sector had significant excess of Tier 1 capital[28].This excess was further increased as a result of the release of the systemic risk buffer in March 2020 and it

[28] Unless otherwise stated, the analysis includes data from unconsolidated statements of commercial banks with their foreign branches and cooperative banks (foreign branches' assets account for approx. 0.3% of the banking sector's assets and slightly below 1% of the

currently amounts to approx. PLN 70 billion (see Figure 4.2). A further capital increase can be expected once banks have recognised the 2019 profits in their regulatory capital.[29] However, the capital position of individual banks varied. In the group of cooperative banks, excess of capital was relatively smaller, which makes them more susceptible to an increase in the level of loan losses and the risk of exposure concentration. Capital shortages were recorded in few commercial and cooperative banks.

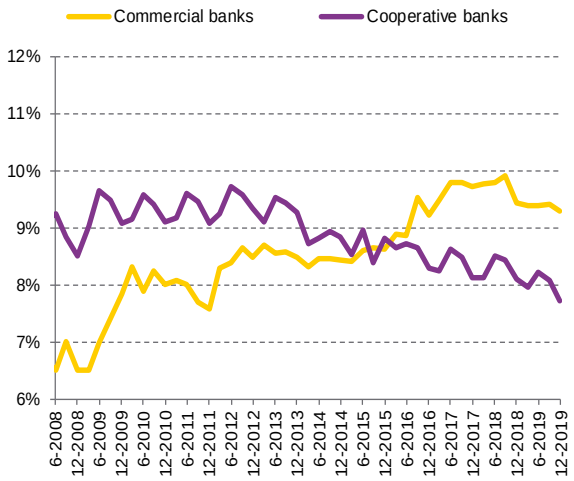
Figure 4.2. Excess of Common Equity Tier 1 capital



Notes: dashed line presents the data for the prudentially consolidated banking sector. Dashed dotted lines present the expected impact of the release of the systemic risk buffer. The figure includes only banks or capital groups with excess of Common Equity Tier 1. The total deficit of Common Equity Tier 1 as of the end of December 2019, on unconsolidated basis, amounted to approx. PLN 3.2 billion (including PLN 0.6 billion to cover Pillar 1 and Pillar 2 requirements), and on the prudentially consolidated basis – slightly over PLN 3.3 billion.

Source: NBP data.

Figure 4.3. Average leverage ratio



Source: NBP data.

Financial leverage in commercial and cooperative banks remained low while the leverage ratio resulting from the CRDIV/CRR regulatory package and its revision remained well above the future regulatory minimum of 3% in the majority of banks[30] (see Figure 4.3).

three banks that have foreign branches). The analysis excludes branches of foreign credit institutions and BGK, as it is not subject to the CRDIV/CRR regulatory package to the same extent as other banks.

[29] In December 2019, KNF published its position on the assumptions of the dividend policy for commercial banks, cooperative and associating banks, insurance and reinsurance companies in 2020, while at the end of March 2020, the KNF Chair additionally appealed to banks' management boards to retain all the profits earned in previous years in view of the current situation related to the pandemic and further negative economic consequences of this state. (https://www.knf.gov.pl/knf/pl/komponenty/img/Komunikat_ws_polityki_dywidendowej_w_2020_67952.pdf).

[30] The requirement related to the minimum level of the leverage ratio is a part of the CRRII to enter into force in mid-2021.

4.2.1.2. Impact of the COVID-19 pandemic on the banking sector

Lending

Due to existing excess of capital over the regulatory requirements, additionally increased by supervisory policy decisions, regulatory capital will not constitute a limit for lending in the short term in the majority of banks. Nevertheless, due to the impact of the COVID-19 pandemic, credit growth may be expected to slow down. Credit growth will be adversely affected by uncertainty regarding the economic activity, the labour market situation and borrowers' income as well as the magnitude of tightening of lending standards and terms. On the other hand, the credit growth rate may be supported by an increased corporate demand for liquid funds, historically low interest rates and other interventions of public authorities.

In the medium term, a slowdown in household lending growth may be expected. As early as in March 2020, the value of new consumer loans according to BIK data was about 30% lower y/y. The slowdown in the growth rate of consumer loans may contribute to reducing the negative trends observed prior to the COVID-19 shock, which pointed to growing risk for this category of loans, i.e. a decline in the average value and the maturity of consumer loans. Survey data indicate that lending policy with respect to loans to households will be tightened – banks will more thoroughly verify the standing of people applying for loans, including in particular the assessment of the stability of their income source.[31] Due to the expected lower propensity of households to increase their long-term financial liabilities, especially amid uncertainty on the real estate market, lower demand for loans may be expected. Banks expected strong falls in demand for both consumer and housing loans in the second quarter of 2020.

The rate of corporate lending growth will be limited due to increased credit risk. This risk will only partly be mitigated by the intervention of public authorities. It should also be expected that loans will be replaced by other forms of financing and public support. The support declared so far in the form of loan guarantees amounts to about 100 billion zlotys[32], which would allow banks to grant about 125 billion zlotys worth of new loans (this in turn would correspond to about 80% of new loans granted

[31] In the second quarter of 2020, banks plan to tighten standards on housing loans at the level of -70%, and on consumer loans at the level of -96%. More about the reasons and directions of changes in lending policy in: "Senior loan officer opinion survey on bank lending practices and lending conditions. 2nd quarter 2020", May 2020, NBP.

[32] The 100 billion zloty of the support declared by BGK (https://www.pb.pl/ke-polski-program-gwarancji-dla-firm-moze-przelozyc-siena-125-mld-zl-pozyczek-987481) will consist of: *de minimis* guarantees (increase of the guarantee scope up to 80% of the loan amount, extension of the guarantee period from 27 to 39 months for a working loan, no commission in the first one-year guarantee period) and guarantees from the Liquidity Guarantee Fund (guarantee limit of 80% of the loan amount up to 250 million zlotys, guarantee period of up to 27 months, guarantees only for working loans to ensure financial liquidity). The specific cumulative values of the guarantees granted are not specified in legal acts (the explanatory memorandum to the Act provides for the budget funding of 18.65 billion zlotys for the FGP [Liquidity Guarantee Fund]). See Regulation of the Minister of Finance of 16 March 2020 *amending the Regulation on granting de minimis aid by Bank Gospodarstwa Krajowego in the form of loan repayment guarantees* (Journal of Laws of 2020, item 454), Act of 31 March 2020 *amending the Act on special solutions related to the prevention, counteracting and combating of COVID-19, other infectious diseases and crisis situations triggered by them and certain other acts* (Journal of Laws of 2020, item 568).

in 2019[33]). The guarantees (and their extension to 80% of the loan value) and the possibility of recognising them as a special form of collateral[34] should facilitate fund raising for micro-, small and medium-sized enterprises. At the same time, however, non-interest-bearing and partly non-refundable (once certain conditions are met) subsidies from the Polish Development Fund for enterprises[35] may reduce the demand of enterprises for loans due to lower costs and the lack of requirement to obtain a positive creditworthiness assessment. In the April survey, banks announced their plans to tighten the lending standards for large enterprises and SMEs in the second quarter of 2020.[36] The survey data also indicate that banks expect a decline in the demand, especially the demand of SMEs for long-term loans as well as an increase in demand of large enterprises for short-term loans.

Credit risk

As a result of the expected strong economic downturn, credit risk and its costs to the banking sector will increase significantly. In the medium term, this will be one of the most important channels of the impact of the pandemic on the banking sector. However, the remedial measures implemented by state institutions and banks (including, inter alia, loan moratoria) should partly limit the materialisation of this risk and its negative financial consequences and spread them over time. This situation requires that banks closely monitor and apply a case-by-case approach to assessing borrowers' creditworthiness prospects.

On the other hand, the reduction of loan servicing costs due to lower interest rates may contribute to reducing loan losses. This effect will be particularly important in housing loans due to the high share of the interest rate in the total loan instalment.[37] Nevertheless, much higher provisions should be expected at the end of 2020 compared to 2019.

The method of recognition of loan moratoria in banks' financial statements should also affect the reduction and distribution of loan losses over time (see Box 4.1).

[33] From 2013 when the programme started to the end of 2019, under *de minimis* programmes, BGK granted the total of about 71 billion zlotys of guarantees and the amount of loans granted with this support reached 124 billion zlotys.

[34] Position of the Office of the Polish Financial Supervision Authority of 8 April 2020 under the *Supervisory Stimulus Package for Security and Development* on financing of micro, small and medium-sized enterprises by banks.

[35] See the Act of 16 April 2020 *on specific support instruments in connection with the spread of the SARS-CoV-2 virus* (Journal of Laws of 17 April 2020, item 695).

[36] The net percentage determining the scale of changes was approx. -60% and -80%, respectively.

[37] As a result of the interest rate decrease by a total of 1.4 percentage point, the instalment of an average Polish zloty-denominated housing will decrease by about 11% for loans repaid in constant instalments and by 15% for loans repaid in decreasing instalments (constant principal instalments).

Box 4.1. Loan moratoria

Following the outbreak of the COVID-19 pandemic, loan moratoria, otherwise known as "loan holidays", were launched in many EU Member States. Their implementation proceeded in two main forms: (1) legal regulations (among others, Germany, Italy, Spain, Austria, Portugal and from the CEE region – the Czech Republic, Hungary and Slovakia) **and (2) voluntary initiatives of banking associations, banking groups or individual entities** (among others, Poland, the Netherlands, Denmark, Sweden, Finland and Ireland)**.**

The moratoria usually relate to housing loans, consumer loans and loans to small enterprises. In many cases, the prerequisite to benefit from the moratorium is the deterioration of the borrower's situation due to the epidemic and the absence of significant delays in loan repayment before the outbreak of the pandemic. The most frequent deferral periods range from 3 to 6 months.

Loan moratoria in Poland related to the outbreak of the pandemic were applied at the initiative of the banking sector. In its communication, the Polish Bank Association (ZBP)[38] said that banks would facilitate postponement (suspension) of instalments of housing, consumer and corporate loans for up to 3 months to the borrowers whose financial situation deteriorated as a result of the pandemic. Similar facilitations for customers were offered to factoring and leasing companies owned by banks.

Banks in Poland have not developed a uniform standard of loan moratoria. As a result, borrowers face various conditions on the suspension of loan repayment depending on the lending bank, and this distorts the principle of equal treatment of customers in the financial market. Two main approaches can be distinguished:

- **only principal instalment is deferred**, interest instalment is still accrued and paid by the borrower,
- **both interest and principal instalments are deferred**, however, interest during the repayment suspension period continues to accrue – it is payable after the end of the repayment suspension period.

Such a design means the absence or a substantial reduction of the borrower's expenditure on loan repayment during the moratorium period. However, after its termination, loan instalment will increase compared to the period before the moratorium due to the need to repay principal and interest during the suspension period. An increase in the instalment may be limited by the extension of the loan repayment period (some banks offer this possibility to borrowers), but it will also result in an increase in the cumulative cost of the loan.

According to the ZBP information of 21 April 2020, the total value of postponed loan instalments for consumers amounted to 18 billion zlotys and for entrepreneurs – 24 billion zlotys.

Impact of moratoria on banks' standing

Loans subject to moratoria (either introduced under legal regulations or through agreements of banking organisations or banks representing a sufficiently large part of the sector) **should not be classified as forborne[39], and for the purposes of classifying a loan as defaulted[40] a period of delay in relation to the payment schedule modified by the moratorium should be applied.** In accordance with the EBA guidelines[41], this approach must be conditional on moratoria meeting the following criteria:

- they were implemented in connection with the pandemic,
- they applied only to loans granted before the moratorium was put in place,
- they covered a sufficiently wide range of borrowers (e.g. natural persons, small enterprises) and/or the category of loans (e.g. housing loans, consumer loans),
- participation in the moratorium was not subject to a creditworthiness assessment,
- they provided for the same conditions of restructuring for similar credit exposures,
- they did not provide for changes to other conditions of the loan agreement besides the payment schedule (e.g. interest).

At the same time, the EBA stresses the need for proper risk assessment and measurement, especially in cases where a borrower's short-term liquidity problems due to the pandemic may evolve into long-term financial problems and insolvency.

Moreover, banks applying the IFRS should not automatically reclassify a loan to Stage 2 or Stage 3 or increase the value of provisions based on a loan repayment rescheduling event if the borrower is in good economic and financial situation and no delays in repayment occur. Such an approach is consistent with the position of the UKNF presented in the *Supervisory Stimulus Package for Security and Development*. The EBA's position[42] also recommends lack of automatic

[38] See "Communique of the Polish Bank Association on aid measures taken by banks in connection with the coronavirus disease (COVID-19) pandemic" of 16 March 2020, available at https://zbp.pl/Aktualnosci/Wydarzenia/Komunikat-ZBP-w-sprawie-dzialan-pomocowych-podejmowanych-przez-banki.

[39] Unless they were classified as such before.

[40] Defaulted exposures – Article 178 of the CRR.

[41] "Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis" issued by EBA on 2 April 2020.

[42] See "Statement on the application of the prudential framework regarding Default, Forbearance and IFRS9 in light of COVID-19 measures", available at https://eba.europa.eu/sites/default/documents/files/document_library/News and Press/Press Room/Press Releases/2020/EBA provides clarity to banks and consumers on the application of the prudential framework in light of COVID-19 measures/Statement on the application of the prudential framework regarding Default, Forbearance and IFRS9 in light of COVID-19 measures.pdf

qualification a loan subject to moratorium to Stage 2. This issue requires a case-by-case approach and cooperation between banks and auditors.

Polish Banks applying the Polish Accounting Standards (PSR) may take advantage of the extension of the period for recognition of loan collateral for the purpose of reducing the basis for creating special-purpose provisions and the possibility of an additional one-off rescheduling, after which the degree of reduction is calculated as for a new loan.[43]

Loan repayment suspension operations carried out by Polish banks according to the above conditions have a minor impact on their earnings, especially when the interest accrued against the moratorium period is capitalised or payable immediately after its completion. The general accrual accounting principle implies that the condition for recognition of interest income in the bank's books is not the receipt of the (cash) interest instalment but its accrual. On the other hand, the moratoria may affect the liquidity position of banks (see Chapter 4.2.1).

A potential implementation of loan holidays by an act of law under which, unlike current practices, no interest instalment would be accrued, would lead to a direct adverse impact on banks' net interest income. In accordance with paragraph 5.4.3 of IFRS 9, the loss due to non-accrual of interest during the moratorium period would be immediately recognised in the bank's financial result as a net income from modification of loan contract. The strength of this impact would depend on the size of the group of borrowers who would ultimately be entitled to benefit from the moratorium.

Source: NBP.

The adverse impact of the pandemic on corporate loans applies primarily to industries directly affected by business restrictions. The highest credit exposures relate to such industries as accommodation (hotels, boarding houses), food service activities (restaurants, bars) and parts of retail trade (except for trading in basic goods and mail order sales). Cooperative banks and individual small and medium-sized commercial banks have a relatively higher exposure to these industries in relation to portfolio value (see Table 4.1).

A significant increase in credit risk also applies to parts of the manufacturing and services industries indirectly affected by the pandemic as a result of the economic downturn in Poland and outside Poland and the indirect impact of regulations aimed at preventing its spread. Sectors most strongly affected by the need for temporary suspension of production include manufacturing industries, such

[43] See Regulation of the Minister of Finance of 16 April 2020 *amending the Regulation on the rules for creating provisions for the risk related to banking activity* (Journal of Laws of 17 April 2020, item 687).

as the automotive, furniture and household appliances manufacturing and the services sector, e.g. transport.[44] Commercial banks have a slightly greater exposure to these industries.

The impact of the pandemic effects on credit risk may be greater for loans granted to small and micro enterprises, including sole proprietors. Surveys indicate[45] that the situation of these categories of enterprises deteriorated more than for other enterprises already at the initial stage of the pandemic. Cooperative banks (14%) and individual commercial banks, mainly small and medium-sized, including those specializing in granting such loans (commercial banks in total – 6.5%) have a larger share of loans for individual entrepreneurs in the portfolio of loans for the non-financial sector.

In the case of housing and consumer loans, risk stems mostly from the growth in unemployment. A factor increasing the sensitivity of the quality of consumer loans to an unemployment shock was a more relaxed lending policy in this segment over recent years, which was reflected, among others, in a higher share of people with less stable forms of employment.[46] Moreover, households repaying housing loans exhibit a much higher share of people living in the largest cities and people with higher education.[47] The increase in unemployment in these population groups was lower in the past than among the other groups. On the other hand, in the case of housing loans the risk of unemployment may be adversely affected by a higher percentage of sole proprietors[48], the group that may be affected more severely by the pandemic. Moreover, the size of this portfolio (2.5 times larger than the consumer loan portfolio) and lower product profitability cause that the deterioration of the repayment of these loans poses a significant risk to the profitability of banks.

In the case of FX loans, an additional factor affecting the growth of credit risk is the depreciation of the zloty exchange rate resulting in higher loan instalments. The impact of depreciation on the value of instalments has not been mitigated by a decrease in interest rates, as it was the past. In the short term, the impact of the zloty depreciation on credit risk may be mitigated by borrowers taking advantage of the possibility to postpone loan repayment.

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[44] See "The economic situation in industrial processing, construction, trade and services - April 2020, GUS, available at https://stat.gov.pl/download/gfx/portalinformacyjny/pl/defaultaktualnosci/5516/3/89/1/koniunktura_w_przetworstwie_przemyslowym_budownictwie_handlu_i_uslugac....pdf

[45] See "Situation of Polish enterprises and the labour market after the first weeks of the epidemic", Polish Economic Institute, available at http://pie.net.pl/wp-content/uploads/2020/04/2020-04-04-Badania-PIE_Sytuacja-polskich-przedsiębiorstw-i-rynku-pracy-po-pierwszych-tygodniach-epidemii.pdf and "The economic situation in manufacturing, construction, trade and services" - April 2020, GUS, available at https://stat.gov.pl/download/gfx/portalinformacyjny/pl/defaultaktualnosci/5516/3/89/1/koniunktura_w_przetworstwie_przemyslowym_budownictwie_handlu_i_uslugac....pdf

[46] In households repaying consumer loans, the percentage of reference persons (persons in a household with the highest income) in households with less unstable forms of employment (employment contract for a fixed period of time, contract of mandate, contract for specific work, other contracts) is higher by about 6 percentage points than in households repaying mortgage loans (source: NBP estimates based on 2018 household budget survey data).

[47] The percentage of borrowers living in the largest cities (over 500 thousand inhabitants) and with higher education, repaying housing loans amounted to 22% and 55%, respectively, whereas in the group repaying consumer loans – 14% and 28%. (source: NBP estimates based on 2018 household budget survey data).

[48] In households repaying mortgage loans, the percentage of reference persons who are self-employed (sole proprietors, freelancers) is 16% (with employees – 6%, without employees – 10%). In the case of households repaying consumer loans, this percentage amounts to 7%, 2% and 5%, respectively. Source: NBP estimates based on 2018 household budget survey data (data without farmer households).

Table 4.1. The percentage structure of corporate loan portfolios by industry and loans to households by employment in these sectors (estimates)

Sector	Corporate loans		Loans for households employed in a given sector	
	Commercial banks	Cooperative banks	Housing loans	Consumer loans
Agriculture, Forestry and Fishing	2.6%	20.6%	0.7%	1.3%
Mining and Quarrying	1.3%	0.7%	2.3%	1.9%
Manufacturing, of which:	24.6%	13.5%	19.6%	18.1%
Manufacture of Textiles, Wearings, Leather Products	0.6%	0.6%	0.3%	0.5%
Manufacture of Motor Vehicles	1.0%	0.1%	2.2%	2.2%
Manufacture of Furniture	0.8%	0.7%	0.8%	1.1%
Electricity, Gas, Steam	5.3%	0.9%	1.4%	1.1%
Water Supply, Sewerage, Waste Management	1.0%	1.1%	0.9%	1.3%
Construction	7.2%	13.3%	7.3%	7.9%
Wholesale and Retail Trade, of which:	18.0%	17.1%	11.9%	10.1%
Sale of Motor Vehicles	2.9%	1.2%	n.a.	n.a.
Retail trade of items affected by restrictions due to pandemic	2.0%	2.3%	n.a.	n.a.
Transportation and Storage	4.5%	4.0%	6.7%	5.3%
Accommodation and Food Service Activities	2.6%	6.9%	1.2%	1.3%
Information and Communication	4.3%	0.5%	8.4%	3.1%
Real Estate Activities	14.3%	11.6%	0.9%	0.5%
Professional, Scientific and Technical Activities	7.7%	3.3%	6.5%	4.1%
Administrative and Support Service Activities, of which:	3.8%	1.6%	2.1%	3.0%
Travel Agencies, Tour Operators and Related Activities	0.1%	0.1%	0.1%	0.0%
Education	0.2%	0.6%	4.9%	5.5%
Human Health and Social Work Activities	1.5%	2.5%	4.5%	4.4%
Arts, Entertainment and Recreation	0.6%	0.7%	0.9%	1.1%
Other Service Activities	0.3%	1.1%	1.0%	0.6%

Note: corporate loans cover a part of the sector of sole proprietors and farmers – calculations based on reporting of so-called large exposures. To estimate the structure of loans to households by employment sector, data for the so-called reference persons (with the highest income in the household) derived from the GUS household budget survey were used, weighted by the amount of loan instalment repayments (farmers' households were not included).

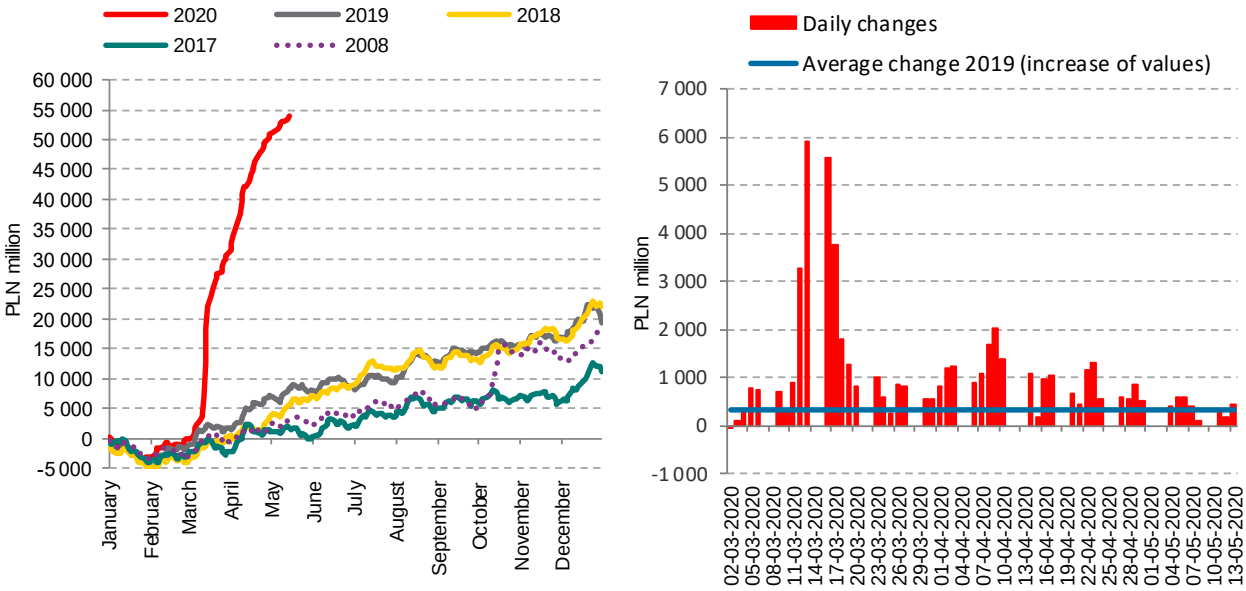
Shares for household loans do not add up to 100% – some people do not work (e.g. retired persons, pensioners, those making their living from other unearned sources) or work outside the sector of non-financial enterprises (public administration, financial sector, individual farmers).

Source: NBP data.

Liquidity and market risk

Following the announcement of the pandemic by the WHO, the banking sector experienced significant cash withdrawals by customers fearing sanitary restrictions being put in place and lack of access to the money accumulated in their accounts. The value of currency in circulation has been increasing steadily and grew by 23% from the beginning of the year to mid-May this year (see Figure 4.4). Due to previously accumulated buffers, no threat to banks' liquidity occurred. In some branches of banks and ATMs, temporary operational problems have arisen, related to delays in the delivery of cash from the logistic centres of banks and cash handling companies. The situation has stabilised after a few days and withdrawal amounts have decreased, although they remained at higher levels. Increased demand for cash and the expected income reduction suggest that the rapid growth rate of non-financial sector deposits observed so far, especially in the case of household deposits, may weaken. The prudential reasons, on the other hand, will foster maintaining funds in bank accounts.

Figure 4.4. Currency in circulation: daily cumulative changes (left-hand panel) and daily changes since the beginning of March 2020 (right-hand panel)



Source: NBP data.

The medium- and long-term impact of the pandemic on the funding structure and liquidity position of the banking sector is currently difficult to predict. Considering the relatively small scale of funding by market funds, including in particular by issuing debt instruments, the developments in deposits from the non-financial sector and potential liquidity-providing operations conducted by the central bank will be of key importance.

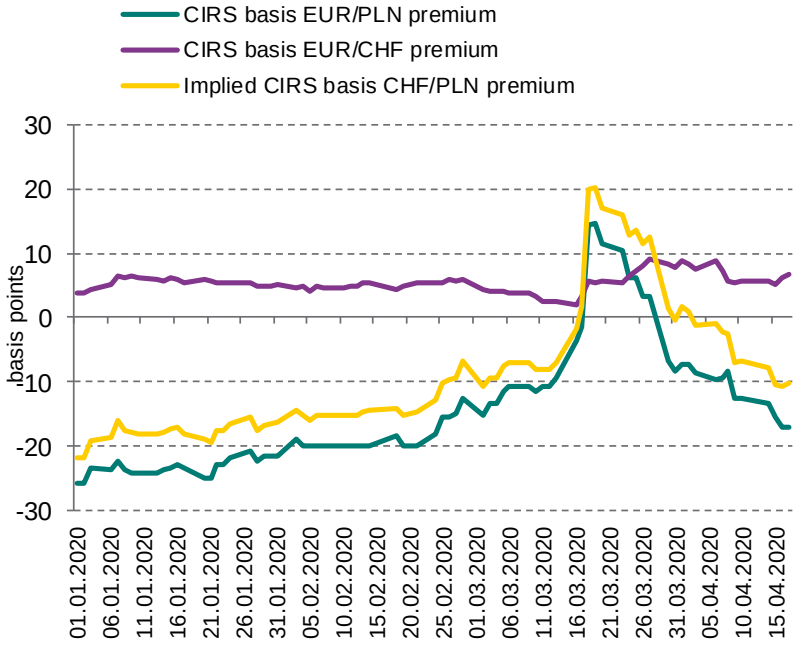
Considering that the shock associated with the COVID-19 pandemic contributes to a simultaneous, strong decline in activity in many economies - including in the countries of origin of strategic investors of Polish banks - it will also have a negative impact on the situation of those financial systems,

including banks. A much larger scale of debt than in the previous crisis will contribute to this. This generates the risk of transferring these shocks to the Polish financial system.

Factors which may adversely affect banks' liquidity position include:

- possible lower growth of non-financial sector deposits in the conditions of the severe economic slowdown and rising unemployment;
- acceleration of the rate of deterioration in the quality of loan portfolios and discontinuation of loan servicing; potentially, the large scale of customer use of moratoria on loan repayment does not seem, in this context, to be an important factor for the liquidity measured by the LCR, despite smaller amounts of cash receipts accompanying the moratoria; the estimates indicate that even if customers' use of the moratoria was widespread, the ratio would remain above 100% in the majority of banks (see Figure 4.6);
- uncertainty regarding the maintenance of deposits by other domestic financial entities (especially investment funds), which account for about 11% of liabilities;
- uncertainty about the renewal of debt securities by banks, including covered bonds[49];
- uncertainty regarding the renewal of the transactions hedging the foreign exchange position and the additional liquidity needs resulting from the increase in margin requirements for these transactions under the conditions of increased market volatility and risk aversion (see Figure 4.5).

Figure 4.5. Premia on the 10-year CIRS basis transaction market



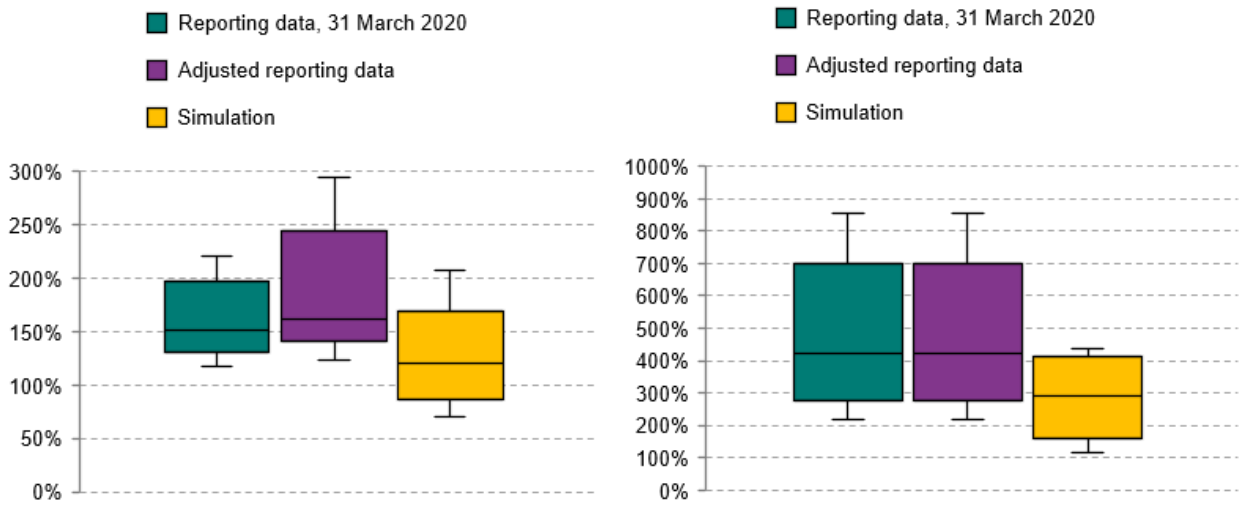
Source: NBP calculations based on Bloomberg data.

[49] The total value of debt securities issued by banks, maturing in 2020, amounts to approx. PLN 7.8 billion, including approx. PLN 1.3 billion for mortgage covered bonds.

Factors which have or may positively affect banks' liquidity position include:

- reduction by the Monetary Policy Council of the required reserve ratio, as a result of which the value of funds at banks' disposal increased by PLN 41.3 billion, which was also reflected in the growth of banks' liquidity ratios;
- the use of non-standard monetary policy instruments to support, among others liquidity in the financial system: by end of-May, the market value of government bonds and government-guaranteed bonds purchased by NBP amounted to PLN 90.7 billion. NBP has also made available bill discount credit, which is intended to enable refinancing of loans granted to non-financial enterprises; If necessary, the NBP is also able to satisfy the liquidity needs of the banking sector at any time by using repo fine-tuning operations (under current anti-crisis operations this type of operation was carried out only once - on 16 March 2020 the banking sector was temporarily provided with liquidity in the amount of PLN 7.3 billion for a period of 4 days);
- increase in the share of liquid and safe assets (e.g. government bonds or government-guaranteed bonds) in banks' balance sheets at the expense of less liquid and more risky assets of higher profitability (e.g. loans) due to an increased risk aversion of banks.

Figure 4.6. The LCRs of commercial banks (left-hand panel) and cooperative banks operating outside the IPS (right-hand panel), including simulation of the impact of loan repayment suspension



Simulation assumptions: banks' liquid assets include funds released from the required reserve and the equivalent of six-fold monthly payments from the non-financial sector (being a component of the so-called net outflows taken into account in calculating the LCR) is not included in the net outflows, which means that all non-financial customers of banks will use a possibility to suspend the repayment of loan instalments for six months.

*Adjusted reporting data – data as of the end of March adjusted for the value of funds released from the required reserve. Banks with high LCRs were excluded from the sample: on the left-hand panel – over 500%, on the right-hand panel – over 1000%.

Source: NBP data.

Earnings

A significant decline in the average profitability of the banking sector and a growth in the number and share of loss-making banks in the assets of the sector should be expected in the coming period. This will be caused by the following factors:

- **Decline in net interest margin.** A decrease in the NBP reference rate (by 1.4pp) will result in a 15-30% decline in the net interest margin. Reduction of interest rates will affect the interest of assets more than liabilities, among others, as a result of a decrease in the maximum interest rate limit from 10% to 7.2% and limited possibilities to reduce interest rates on accounts and deposits (zero lower bound). In addition, due to the existence of a positive interest rate gap, interest on assets will fall faster than on liabilities. Compared to commercial banks, the net earnings of cooperative banks remain more sensitive to interest rate falls.

  A decrease in the rate of substitution of less profitable loans (especially FX loans) by more profitable ones can also be expected (which has increased the interest margin in recent periods). Loan moratoria will slow down repayments while the pace of lending is likely to fall. It cannot be ruled out that a decline in banks' risk appetite could cause deleveraging and an increase in, the share of safer but less profitable instruments (such as government bonds or government-guaranteed bonds) in banks' assets. The banks' reimbursement of a part of fees and commissions on due to prepayments of loans will also contribute to a decline in interest margin, although the phenomenon of early repayments is likely to decrease significantly in the near future;
- **In the medium term, a significant increase in charges to provisions for expected loan losses;**
- **A decrease in banks' fee and commission income** as a result of lower demand for banking services as well as, among others, the statutory reduction of non-interest costs of consumer loans;
- **Potential increase in portfolio provisions for legal risk related to FX housing loan agreements.** The interest of customers in challenging the provisions of these agreements at court may increase due to the CJEU ruling in Case C-260/18 as well as the depreciation of the zloty against the Swiss franc and the expected decline in borrowers' income.
- **Low potential for further cost reductions.** Banks significantly improved their cost efficiency over recent years. Additionally, employee layoffs require banks to incur the cost of additional severance payments in the short term.

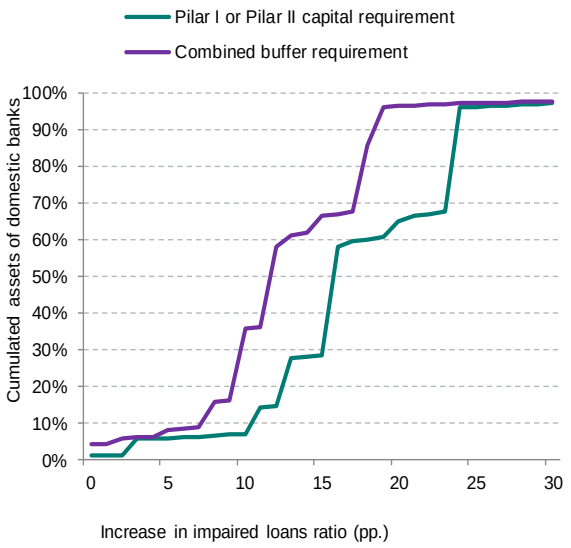
The decline in profitability could be reduced through the potential sale by banks of bonds measured at fair value through other comprehensive income (especially fixed-rate bonds), the valuation of which has increased as a result of the NBP rate decreases and the launch of the bond purchase programme[50]. However, the scale of profits to be potentially obtained from an increase in the value of the

[50] This would result in reclassification of the increase in the value of these bonds from the capital (the so-called other comprehensive income) to the profit and loss account.

Treasury securities portfolio as a result of interest rate drops is limited by the relatively small duration of this portfolio (see above).

Capital position

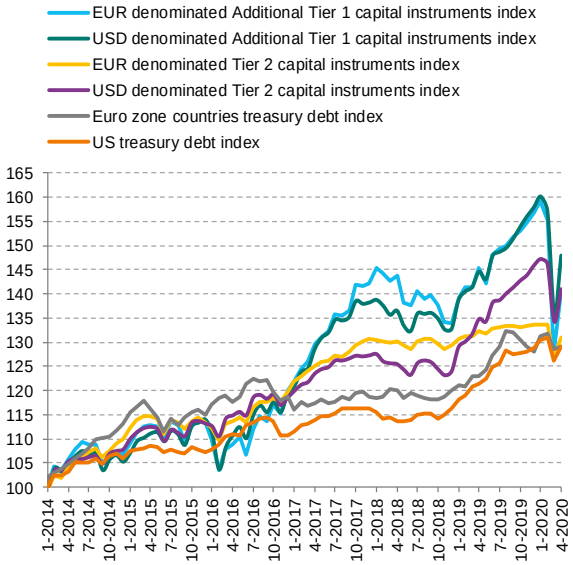
Figure 4.7. Breach of the capital requirements due to an increase of impaired loan ratio of loans to the non-financial sector



Notes: it has been assumed that in parallel with the increase in the value of impaired loans (Phase 3/substandard, doubtful or loss according to PSR), loans in Phase 2/under observation increase to the same extent. The simulation assumes that the loans reclassified to Phase 3/ substandard, doubtful or loss and Phase 2/under observation will be covered by provisions to the same extent as in December 2019, i.e. on average 58% and 6%, respectively.
Some banks do not meet the capital requirements resulting from Pillar 1 and 2 or the combined buffer requirement even before the simulation.

Source: NBP

Figure 4.8. Comparison of total return indices of financial instruments classified as capital and total return indices on Treasury debt of the euro zone countries and the United States



Notes: indices standardised (1.01.2014 = 100).

Indices of instruments classified as Additional Tier 1 capital and Tier 2 capital are indices from the group of Markit iBoxx Contingent Convertible Liquid Developed Markets AT1 TRI Index and Markit iBoxx Contingent Convertible Liquid Developed Markets T2 TRI Index.

Source: Bloomberg data and NBP calculations.

At this stage, the vast majority of banks do not need to increase their capital. Nevertheless, it cannot be excluded that the scale of bank losses[51] caused by the pandemic will make it difficult for some of

[51] The effect of an increase in provisions for expected credit losses on the level of capital may be deferred and spread over time if the currently being developed CRR amendments extending the transitional period during which banks may add'back the increase in provisions for Phase 1 and Phase 2 loans to Common Equity Tier 1 capital enter into force.

entities with lower capital ratios to meet the capital requirements. Simple simulations of the deterioration of the quality of the loan portfolio for the non-financial sector indicate that a double increase in impaired loans ratio from the current 6.6% will not have a major impact on the capacity of the majority of the banking sector to comply with the capital requirements (see Figure 4.7). Potential breaches of the combined buffer requirement at these levels of growth of impaired loans ratios *ceteris paribus* should also not prevent the sector from continuing lending.[52]

The situation in the financial markets may impede banks' ability to raise own funds from external sources. Uncertainty regarding the impact of the pandemic on banks' position has triggered a decline in investor interest in instruments issued by banks, as evidenced, among others, by declines in indices linked to debt instruments eligible as banks' regulatory capital (see Figure 4.8). This will have a negative impact not only on the ability to increase external financing, but also on banks' ability to renew maturing debt. The latter factor will not significantly affect the situation of the banking sector (by the end of 2021 subordinated bonds of about PLN 1 billion are going to reach their maturity date, most of which are no longer classified as Tier 2 capital), although it may deteriorate the situation of several banks using this form of raising capital on a large scale, especially if they are unable to benefit from the support of other entities in the capital group or the IPS.

Meeting the minimum requirement for own funds and eligible liabilities (MREL) remains a medium-term challenge for Polish banks, but at present the related pressure is lower. The waiver of the obligation for banks to hold capital for the systemic risk buffer translated into a reduction in the amount of deficits of own funds or eligible liabilities compared to the target MREL by about PLN 25 billion. The BFG extended the deadline for meeting the target MREL until beginning of 2024 and the deadline for meeting the first binding interim target to 1 January 2022 (earlier – end of 2020).[53]

[52] The consequences of non-compliance with the capital requirement and the combined buffer requirement are described in Box 4 in "Financial Stability Report. June 2017", NBP, p.122.

[53] For details, see BFG Communication of 26 March 2020: https://www.bfg.pl/komunikat-bfg-ws-mrel/

4.2.1.3 Selected indicators describing the situation of the banking sector

Table 4.2. Banking sector

w %	12-2018	3-2019	6-2019	9-2019	12-2019
Return on assets (ROA) *	0.72	0.68	0.69	0.69	0.74
Return on Tier 1 capital (RORC) *	7.6	7.3	7.5	7.6	8.3
Return on accounting capital (ROE) *	6.9	6.6	6.8	6.9	7.4
Net interest margin (NIM) *	2.51	2.52	2.53	2.54	2.53
The share of net interest income in net income from banking activity *	71.6	71.7	71.9	72.1	71.4
The share of net noninterest income in net income from banking activity *	28.4	28.3	28.1	27.9	28.6
Operating costs to net income from banking activity (CTI) *	58.5	59.4	58.7	58.0	56.9
Net charges to credit risk provisions to net income from banking activity *	14.3	14.5	14.9	15.0	13.0
Loan grow th rates (y/y)					
- nonfinancial sector	5.8	5.8	5.8	5.4	4.9
- households	5.5	5.5	5.8	6.1	5.7
- consumer loans	9.1	8.7	8.9	9.3	8.3
- housing loans	4.9	4.9	5.3	5.9	6.0
- enterprises	6.5	6.4	5.6	4.0	3.2
Impaired loan ratios					
- nonfinancial sector	6.9	6.8	6.8	6.8	6.6
- households	5.9	6.0	6.0	6.0	5.7
- consumer loans	10.8	11.0	10.8	11.1	10.3
- housing loans	2.5	2.5	2.4	2.4	2.3
- enterprises	8.7	8.5	8.6	8.5	8.5
Net charges to credit risk provisions to net value of loans *					
- nonfinancial sector	0.88	0.90	0.93	0.95	0.84
- households	0.97	1.00	1.01	1.08	0.93
- consumer loans	2.38	2.45	2.64	2.90	2.68
- housing loans	0.15	0.15	0.08	0.10	0.05
- enterprises	0.72	0.72	0.78	0.71	0.69
Funding gap	1.5	0.6	0.2	-2.2	-2.0
Total capital ratio	18.3	18.3	18.3	18.4	18.6
Tier 1 capital ratio	16.3	16.2	16.2	16.3	16.4
Core Equity Tier 1 capital ratio	16.3	16.2	16.2	16.3	16.4
Financial leverage (multiple)	10.2	10.3	10.3	10.3	10.4
Leverage ratio according to CRDIV/CRR	9.3	9.3	9.3	9.3	9.1

Note: annualized data are marked with an asterisk. Capital ratios and returns on equity calculated for domestic banks without BGK. Growth rate of loans after adjusting for foreign exchange rate changes. A temporary decline in the average profitability as at the end of 2018 and in 2019 results from the loss of one of the commercial banks in December 2018 (the ratio at a given moment comprises the result of the preceding 12 months). Without taking this loss into account, the average ROA in this period would range from 0.74% to 0.80%.

Source: NBP.

Table 4.3. Domestic commercial banks

w %	12-2018	3-2019	6-2019	9-2019	12-2019
Return on assets (ROA) *	0.75	0.71	0.73	0.73	0.79
Return on Tier 1 capital (RORC) *	7.8	7.4	7.7	7.8	8.5
Return on accounting capital (ROE) *	7.0	6.7	6.9	7.0	7.6
Net interest margin (NIM) *	2.54	2.55	2.56	2.57	2.57
The share of net interest income in net income from banking activity *	71.4	71.4	71.7	72.0	71.3
The share of net noninterest income in net income from banking activity *	28.6	28.6	28.3	28.0	28.7
Operating costs to net income from banking activity (CTI) *	54.4	55.3	54.5	53.6	52.5
Net charges to credit risk provisions to net income from banking activity *	14.3	14.5	14.8	14.9	12.9
Loan grow th rates (y/y)					
- nonfinancial sector	3.9	4.1	3.9	3.4	4.7
- households	3.5	3.5	3.8	4.0	5.9
- consumer loans	7.7	7.8	8.1	8.5	8.4
- housing loans	1.6	1.7	2.1	2.6	6.2
- enterprises	4.7	5.4	4.0	2.1	2.0
Impaired loan ratios					
- nonfinancial sector	6.8	6.8	6.8	6.9	6.6
- households	5.9	6.0	6.0	6.0	5.7
- consumer loans	11.1	11.3	11.1	11.4	10.6
- housing loans	2.5	2.5	2.4	2.4	2.3
- enterprises	8.6	8.4	8.5	8.5	8.4
Net charges to credit risk provisions to net value of loans *					
- nonfinancial sector	0.98	0.95	1.04	1.08	1.04
- households	0.59	0.58	0.64	0.66	0.67
- consumer loans	0.76	0.76	0.82	0.84	0.83
- housing loans	0.10	0.10	0.08	0.07	0.12
- enterprises	1.95	1.88	2.07	2.15	2.03
Funding gap	2.8	1.7	1.5	-1.3	-0.4
LCR	156.3	152.0	146.1	140.4	152.4
Total capital ratio	18.4	18.4	18.3	18.4	18.7
Tier 1 capital ratio	16.3	16.2	16.2	16.3	16.4
Core Equity Tier 1 capital ratio	16.3	16.2	16.2	16.3	16.4
Financial leverage (multiple)	10.1	10.1	10.2	10.1	10.2
Leverage ratio according to CRDIV/CRR	9.4	9.4	9.4	9.4	9.3

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. A temporary decline in the average profitability as at the end of 2018 and in 2019 results from the loss of one of the banks in December 2018 (the ratio at a given moment comprises the result of the preceding 12 months). Without taking this loss into account, the average ROA in this period would range from 0.79% to 0.83%.

Source: NBP

Table 4.4. Cooperative banks

w %	12-2018	3-2019	6-2019	9-2019	12-2019
Return on assets (ROA) *	0.48	0.50	0.45	0.44	0.45
Return on Tier 1 capital (RORC) *	5.7	5.9	5.4	5.3	5.5
Return on accounting capital (ROE) *	5.3	5.5	5.0	4.9	5.1
Net interest margin (NIM) *	2.80	2.78	2.76	2.75	2.72
The share of net interest income in net income from banking activity *	77.3	77.5	77.7	77.8	78.1
The share of net noninterest income in net income from banking activity *	22.7	22.5	22.3	23.2	23.9
Operating costs to net income from banking activity (CTI) *	69.8	69.8	69.5	69.2	68.8
Net charges to credit risk provisions to net income from banking activity *	13.0	12.5	13.6	14.3	13.8
Loan grow th rates (y/y)					
- nonfinancial sector	2.6	2.6	3.0	2.6	2.8
- households	3.3	3.5	4.4	4.2	4.4
- consumer loans	6.7	3.7	2.4	2.2	2.0
- housing loans	13.6	13.0	12.5	13.1	13.7
- enterprises	0.7	0.4	-0.7	-1.7	-1.2
Impaired loan ratios					
- nonfinancial sector	9.1	8.9	8.9	8.9	9.0
- households	5.4	5.3	5.4	5.4	5.4
- consumer loans	6.0	6.1	6.0	5.9	5.9
- housing loans	1.7	1.7	1.7	1.6	1.5
- enterprises	18.1	17.7	17.6	17.8	18.1
Net charges to credit risk provisions to net value of loans *					
- nonfinancial sector	0.98	0.95	1.04	1.08	1.04
- households	0.59	0.58	0.64	0.66	0.67
- consumer loans	0.76	0.76	0.82	0.84	0.83
- housing loans	0.10	0.10	0.08	0.07	0.12
- enterprises	1.95	1.88	2.07	2.15	2.03
Funding gap	-57.8	-58.7	-57.4	-58.0	-65.0
LCR on individual basis	442.2	539.8	479.3	469.4	508.5
LCR on consolidated basis	230.9	254.3	245.9	255.5	266.5
Total capital ratio	17.6	17.4	17.9	17.8	17.7
Tier 1 capital ratio	16.8	16.6	17.1	17.0	17.0
Core Equity Tier 1 capital ratio	16.7	16.6	17.1	17.0	16.9
Financial leverage (multiple)	12.1	12.3	11.9	12.1	12.7
Leverage ratio according to CRDIV/CRR	8.1	7.9	8.2	8.1	7.7

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.

Source: NBP.

4.2.2. Credit unions

4.2.2.1. Characteristics and position of the credit union sector at the end of 2019[54]

The credit union sector entered the COVID-19 pandemic period in a stable condition, although it still showed low efficiency and a weak capital position.

This sector shows a high entity concentration. At the end of 2019, 25 credit unions were active and the value of their assets amounted to 9.4 billion zlotys. Two largest entities have the greatest impact on the overall situation of the sector, with their share in the sector's assets at more than 80% (see Table 4.5).

Table 4.5. Structure of the credit union sector by asset value (31 December 2019)

	Number of credit unions in the group	Assets	Share in sector's assets	Net income (million PLN)	Regulatory capital (million PLN)
Sector in total, including the credit unions with assets:	**25**	**9 430,30**	**100,00%**	**12,15**	**545,25**
- up to PLN 50 million	10	206,18	2,19%	-1,08	18,06
- from at least PLN 50 million to PLN 200 million	12	1 124,30	11,92%	3,08	86,32
- from at least PLN 200 million	3	8 099,82	85,89%	10,15	440,87

Source: UKNF.

Receivables from private individuals remained the main asset of credit unions, however their quality was still poor. Loans to private individuals (5.9 billion zlotys), whose value rose by over 5% in 2019[55], prevailed in the credit unions' loan portfolio of over 6 billion zlotys. The quality ratio of the credit union loan portfolio did not change significantly in the second half of 2019 and stood at 13.1% (see Figure 4.9).

Low efficiency of credit unions continued to act as a significant constraint for the sector's development. The sector's earnings as at the end of 2019 amounted to 12.15 million zlotys and was 85% lower than in the previous year.[56] This resulted in a significant decline in efficiency ratios – ROA to 0.13% and ROE to 2.56%, with the continued high (close to 100%) C/I cost ratio. For credit union that implement

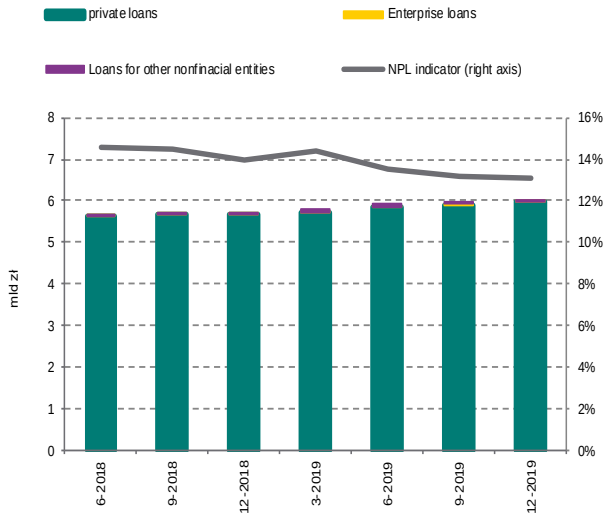
[54] The analysis of the situation of the credit union sector was based on reporting data which do not fully and on a day-to-day basis take account of all the reservations reported by KNF under its supervision mandate. The differences between data presented in the Report's previous issues result from the adjustments gradually implemented by specific credit unions and from the change in the number of credit unions in the group under analysis.

[55] For the purposes of the Report, a group of credit unions that continued to operate, i.e. the credit unions that carried on operation as at 31 December 2019, was separated to eliminate the statistical impact of the credit unions that discontinued operations (i.e. credit unions taken over by banks and the credit unions which were suspended). Unless otherwise indicated, the analysis and figures relate only to this credit union group.

[56] The low level of the sector's profit for 2019 was significantly affected by the creation of provisions for expected reimbursements of the cost of loans for potential claims by customers related to the ruling of the Court of Justice of the European Union (CJEU) on the consumer's entitlement to reduce the cost of a loan in the event of early repayment of the amount of a consumer loan (Case C-383/18).

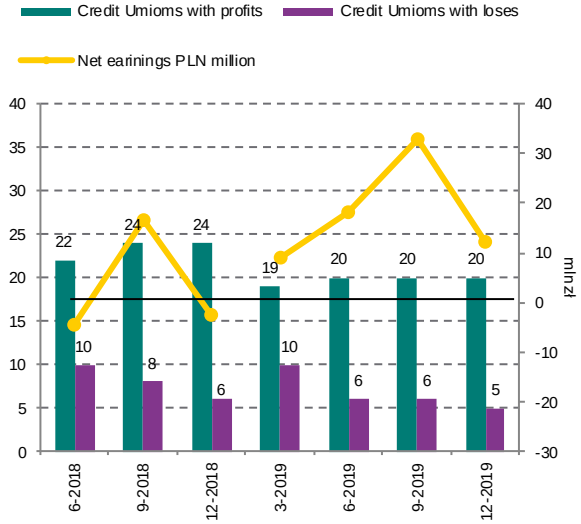
recovery programmes, poor efficiency is an additional barrier to achieving the desired recovery targets (see Figure 4.10). In the first quarter of 2020, the credit union sector suffered a loss.[57]

Figure 4.9. Portfolio structure and NPL ratio



Source: UKNF.

Figure 4.10. Net earnings of the credit unions and number of credit unions with a positive / negative financial result



Note: credit unions active at the end of the indicated period.

Source: UKNF.

Most of the credit unions met the capital requirements, however, the structure of their regulatory capital still did not allow for full loss absorption. As at the end of 2019, the value of regulatory capital amounted to 545.3 million zlotys and grew, compared to 2018, by 141 million zlotys, mainly due to the transfer of funds from the 2018 profit by some of the credit unions to cover part of the losses from previous years. An additional factor that contributed to the regulatory capital increase was the issue of subordinated bonds by one of the credit unions (purchased entirely by the National Association of Credit Unions) and a revaluation of shares in subsidiaries (which increased the value of the revaluation fund). However, the structure of regulatory capital continued to be unfavourable – the sum of the resource fund[58] and the share fund (excluding optional participations) corresponded to 34% of total uncovered losses in the credit union sector amounting to 321.2 million zlotys at the end of 2019 (see Figure 4.11).

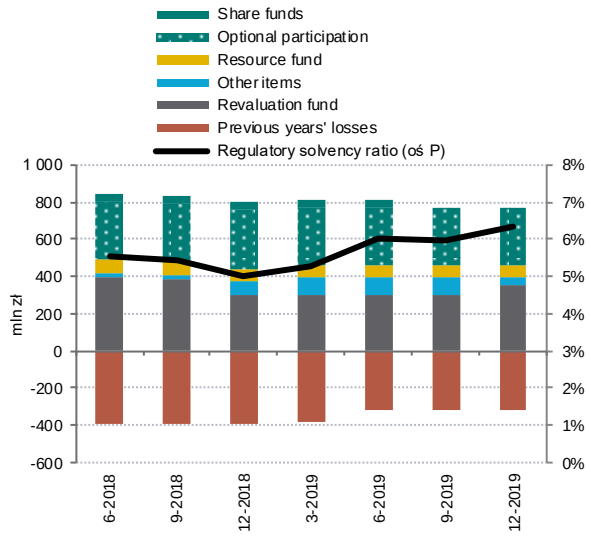
The sector's capital adequacy ratio of reached 6.34% and the majority of credit unions maintained its statutory minimum level of 5%. Only 3 credit unions showed this ratio below the statutory standard (see Figure 4.12).

[57] The sector's net loss as at the end of March 2020 amounted to 4.61 million zlotys.

[58] Resource funds of credit unions which primarily serve to cover losses, amounted to only 64.3 million zlotys and accounted for less than 11.8% of total regulatory capital.

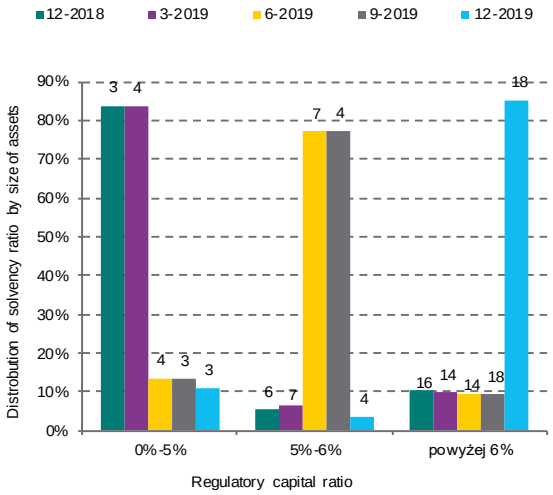
The liquidity position of the credit union sector was stable. Credit unions' liquid assets valued at 1.9 billion zlotys represented slightly more than 20% of total assets. The liquid reserve ratio remained above the regulatory minimum of 10% and at the end of December it stood at 11.5%.

Figure 4.11. Regulatory capital and capital adequacy ratio of the credit union sector



Source: UKNF.

Figure 4.12. Capital adequacy ratio broken down by credit union groups according to value of assets



Source: UKNF.

4.2.2.2. Impact of the COVID-19 pandemic on the condition of the credit union sector

The channels of COVID-19 impact on the credit union sector are similar to those occurring in the banking sector, however, the resilience of both sectors is different.

The basic challenge for the credit union sector is the persisting low efficiency of its operations, with the simultaneous low value of capital that can be used to cover losses. Unlike banks, credit unions mostly do not have capital buffers despite meeting the regulatory capital requirements. The low interest rate environment significantly limits the room available for credit unions to reduce interest rates on deposits. As in the case of banks, this will result in a further reduction of net interest margin, which will continue to impair the sector's efficiency in view of the high sensitivity of the credit unions' earnings to interest rates.

Credit risk is another challenge for the credit union sector. Due to the structure of the credit unions' loan portfolio, credit risk is mainly associated to the situation on the labour market. The launch of public measures aimed at maintaining employment should mitigate this risk, at least in the initial phase of the shock triggered by COVID-19. Nevertheless, the relatively poor quality of the portfolio before the pandemic, when the situation in the labour market was very good, may jointly with the effects of a significant economic slowdown, led to an increase in provisions for credit risk and place additional burden on credit unions' earnings.

The unions implementing recovery programmes are particularly sensitive to the adverse effects of the COVID-19 pandemic. The programme assumptions were mostly based on optimistic scenarios of economic developments and a higher interest rate path. It will therefore be much more difficult and, in some cases, virtually impossible for credit unions to implement the assumptions of the recovery proceedings.

The credit union sector's resilience is also negatively affected by the very low level of stabilisation fund resources in the National Association of Cooperative Savings and Credit Unions (KSKOK). The low level of the fund's available resources limits the possibilities of effective stabilisation activities within the KSKOK mandate.

The COVID-19 shock will additionally limit the potential for internal restructuring of the sector through mergers of credit unions. This is mainly due to the fact that the situation of some credit unions may be too difficult to perform the merger which would be beneficial for the prudent and stable management of the activity of the merged credit unions. In addition, some credit unions, which were the merging credit unions in the consolidation process and would have the potential for further mergers, continue to adapt their procedures and operational mechanisms to the increased scale of operations, which practically prevents them from continuing to participate in the sector restructuring under the current circumstances.

A portion of credit unions, which are well capitalised and whose business models are most similar to cooperative institutions, may be less exposed to the adverse effects of the pandemic.

The relatively high buffers of liquid assets in the majority of credit unions have a positive impact on their resilience to potential liquidity stress. March 2020 saw an increased balance of outflows of cash deposits, related among others to the growth of household demand for cash, however, it was much lower than in banks and did not worsen the liquidity position of the sector.

4.2.3. Non-credit financial institutions

4.2.3.1. Insurance companies

As a result of the COVID-19 pandemic, the risk of a double hit may materialise in the insurance sector. This means that the value of assets held by some insurance undertakings may decrease, with a simultaneous increase in technical provisions due to a reduction in the risk-free rate. At the beginning of 2020 there was a sharp fall in prices of equities and an increase in credit spreads and also a significant reduction in the risk-free rate. However, this was accompanied by an increase in the prices of Treasury bonds. Those changes should result in the reduction of own funds of insurance undertakings, affecting the sector's solvency which however remains satisfactory.

The sensitivity of the insurance sector is mainly related to investment activity and, to a lesser extent, to insurance activity. Companies with a large portfolio of equities and corporate debt securities are

most severely exposed to the effects of COVID-19. At the end of 2019, equities accounted for approx. 17% of the sector's assets (excluding unit-linked assets, UFK). Exposure to this asset class was one of the highest among the EEA countries and mainly referred to non-life insurance entities. At the end of 2019, the value of equities and shares in their portfolio amounted to 23.5 billion zlotys, which accounted for approx. 24% of assets in this segment. They included, in particular, strategic equity investments in other financial institutions, with a lower risk weight than other equity instruments.

The decline in profitability of Polish Treasury bonds in the first quarter of 2020, triggered by the epidemic outbreak, affected the valuation of assets and liabilities of insurance companies. In accordance with the Solvency II Directive, all balance sheet items are measured at a market value. At the end of 2019, insurance companies demonstrated a higher sensitivity to an interest rate increase than to their decrease. However, when assessing this sensitivity, it should be taken into account that, according to the methodology used by life insurance entities, the unit-linked insurance always demonstrates sensitivity to interest rate increases, which can distort the perception of the whole sector.[59] At the end of 2019, four life insurance companies with a 17% share in life insurance assets of and nine non-life insurance companies (53% share in non-life insurance assets) showed a more significant decrease in own funds in the case of a decline in rates than in the growth scenario.

The increase in the probability of credit risk materialising among non-financial enterprises should not significantly worsen the financial condition of the insurance sector. Debt securities of domestic enterprises did not have a significant share in the sector's investments while companies financed the real economy to a marginal extent. At the end of 2019, the value of these instruments in life insurance companies' portfolios (excluding unit-linked assets) amounted to 0.3 billion zlotys while in non-life insurance – to 0.8 billion zlotys. Moreover, the insurance sector granted about 1 billion zlotys worth of loans to real economy entities, 70% of which by non-life insurance companies. The insurance sector invested to a greater extent in debt securities issued by domestic banks, including subordinated bonds (2.4 billion zlotys and 0.7 billion zlotys, respectively). The latter instruments may be particularly exposed to the risk of impairment due to the possibility of using them in the resolution process. Non-life insurance companies also showed significant exposure (5.3 billion zlotys) to foreign debt securities, including mainly those issued by banks and non-financial companies (over 2 billion zlotys in each category). Additionally, unit-linked insurance funds, which invested their clients' money in investment certificates of closed-end funds (about 4.2 billion zlotys) showed significant exposure to non-Treasury debt securities. As a result of the pandemic outbreak, these investments are particularly exposed to losses and customers face difficulties in withdrawing funds.

As a result of the spread of the COVID-19 pandemic, the risk of a lower inflow of premiums has increased. In 2019, life insurance companies collected 20.8 billion zlotys of gross written premium, including 6.3 billion zlotys in unit-linked insurance, while non-life insurance companies – almost twice

[59] One company shows no sensitivity of unit-linked insurances to interest rate changes.

as much (39.6 billion zlotys). Life insurance companies in particular may experience difficulties in gaining new customers, mainly for investment products. In addition, policyholders who hold unit-linked products may suspend payment of further premiums. In non-life insurance, a greater return of premiums paid may occur as a result of withdrawals from the agreement or resignation from insurance cover. In addition, lower sales of new motor vehicles or their withdrawal from service will affect the decline in revenues.

A decline in premiums may be accompanied by a greater scale of withdrawals from agreements. In particular, this may apply to unit-linked insurance and to a lesser extent – to group insurance and continuing life insurance and health insurance. The growth in withdrawals is associated with an increased value of benefits. In 2019, life insurance companies paid out 17.8 billion zlotys in benefits and claims, including 8.9 billion zlotys in unit-linked insurance. In 2020, the negative balance of contributions and disbursements under the unit-linked insurance, observed in the previous year, is likely to grow. On the other hand, the pandemic outbreak should not lead to a significant increase in the value of claims in non-life insurance. In 2019, claims in this insurance class amounted to 21.7 billion zlotys, which accounted for only a half of the collected premiums. Restrictions on business activity and traffic may lead to a decrease in the risk of insurance events. In addition, in many business insurances the scope of cover comprises only risks triggered by natural disasters (e.g. fire, hurricane, flood), whereas the risk of a pandemic is normally excluded from the company liability, which is associated with the failure to pay out claims due to e.g. loss of profit. In compulsory civil liability insurance – despite the lack of premium payment – the insurance agreements remain in force and claims are paid out.

The outbreak of the epidemic will not cause a significant increase in liquidity risk in the insurance sector. The reversed production cycle associated with premiums paid in advance and the payment of claims only after the insured event has occurred reduces company exposure to this risk. Moreover, the insurance sector maintained a high share of liquid investments. In life insurance, they accounted for over 80% of assets, and in non-life insurance – for almost 50%. Treasury bonds and deposits prevailed (excluding unit-linked assets). Only in the case of unit-linked insurance funds clients may have difficulties in withdrawing funds, especially in those UFK which invest in less liquid financial instruments (e.g. investment certificates). If the investment fund whose units are held by the company under unit-linked insurance suspends their repurchase, the funds will be paid out only after its operation is resumed.

The expected decline in premium income and investment profits will result in the deterioration of technical and financial results of insurance companies and the ROE. In 2019, the financial and technical results of the sector were the highest since the Solvency II Directive entry into force. In life insurance, the financial result amounted to 2.6 billion zlotys, while in non-life insurance – 4.6 billion zlotys. As a result of the outbreak of the epidemic and the turmoil in financial markets, the prices of many assets, especially the share portfolio, may decrease. The application of valuation at fair value prevents the use of the adjusted purchase price to determine the value of debt securities. Moreover, the regulatory recommendations related to the withholding of dividend payment for 2019 by insurance sector

entities and banks will negatively affect results on investment activities. The companies are both owners of banks and other entities from the insurance sector. In 2018, they received over 2.2 billion zlotys in dividends. As a result of the decline in assets, the remuneration for the management of unit-linked insurance may also diminish. An increase in unit operating costs is also possible due to restrictions related to the pandemic, among others, with handling of policies and loss adjustment, which will consequently lead to an increase in COR.

At the end of 2019, insurance companies had sufficient own funds to cover their capital requirements. At the end of 2019, the SCR coverage ratio in life insurance reached 294% and in non-life insurance – 207%. As a result of the supervisory recommendations concerning the suspension of the payment of dividends for 2019, unpaid profits (about 6 billion zlotys) can be used to absorb losses generated by the crisis. However, the financial market turmoil may contribute to a decline in the value of assets and the deterioration of financial results, which will translate into depreciation of own funds. At the end of 2019, these measures met the high quality criteria. In both insurance segments, almost all of them were classified as Tier 1. Due to lower coverage of capital requirements and the significant exposure to equities, non-life insurance companies are more vulnerable to deterioration of their solvency situation.

The vulnerability of the Polish insurance sector in the face of the COVID-19 pandemic, especially in the life insurance segment, is the very high share of expected profits included in future premiums in own funds. At the end of 2019, their value amounted to 14 billion zlotys, of which as much as 12.2 billion zlotys in life insurance entities. This particular type of capital is classified as Tier 1 own funds (top quality), although it cannot be used to absorb all types of losses (e.g. losses in financial markets which do not affect the level of provisions).[60] Moreover, the share of expected profits included in future premiums in own funds of the life insurance segment reached over 50% at the end of 2019, exceeding 70% in three entities. This capital is particularly sensitive to slumps in crisis situations, especially in the case of mass withdrawals from insurance agreements.

A factor which increases the vulnerability of insurance undertakings to shocks is the fact that own funds of an insurance undertaking, which acquired material shares in financial institutions, are not decreased by their capital. This is not the case for banks which, as a rule, are not allowed to show double capital of their subsidiaries in the financial sector. Insurance companies are, however, shareholders of banks, investment fund management companies, open pension funds management companies or other insurance undertakings. It is a common practice on the Polish market for an insurance company operating in one insurance segment to become a shareholder of a company in another segment in the same capital group. The issue of double gearing of capital applies primarily to non-life insurance entities. At the end of 2019, the value of material shares they hold in other financial institutions amounted to 22.1 billion zlotys, which accounted for almost 60% of the amount of eligible own

[60] Consultation Paper on the Opinion on the 2020 review of Solvency II, EIOPA-BoS-19/465, 15 October 2019.

funds. In the case of risk materialisation in a subsidiary, an automatic depreciation of own funds in the insurance company occurs (the contagion effect between institutions or sectors).

Taking into account the likely continued downturn in the financial sector and in the real economy, it is important to take measures aimed at strengthening companies' capital as well as eliminating those attributes which increase their vulnerability. These measures are particularly important in view of the potential depreciation of the sector's own funds as a result of a reduction of the valuation of subsidiaries' shares. It is appropriate to retain the profits earned by insurance undertakings in previous years in order to strengthen their capital base. It seems necessary to create incentives for lower exposure to instruments bearing a higher investment risk. Insurance companies should also limit offering unit-linked insurance, especially with regard to the fact that in the Polish reality these products often have a significantly reduced cover component, which is sometimes the reason why insurance companies are sued as the validity of an agreement is challenged.[61] In addition, due to the lack of detailed legal regulations concerning the rules of their activity, investment limits and fees charged, these insurances are products in which the customer is less protected against abuse by a financial institution than in the case of other domestic collective investment undertakings.

4.2.3.2. Investment funds

Among the entities of the investment fund sector, the crisis triggered by the COVID-19 pandemic has most severely affected open-ended investment funds. They redeem their units on demand, therefore their assets should be liquid enough to allow capital disbursement to participants within a short time. In 2019, assets accumulated in these funds grew very dynamically. At the end of December, it amounted to 109.5 billion zlotys, which corresponded to 36% of the sector's total assets. Highly liquid assets represented approx. 75% of the capital invested in them, and this share did not change significantly over the year. Debt funds had the lowest liquidity.

However, on the verge of the crisis, open-ended investment funds had almost the lowest liquidity buffer in their history in the form of deposits and cash (3.8 billion zlotys). At the end of 2019, the share of this category of assets was only 3.2% of the capital accumulated in these funds, twice as low as at the end of 2018. Debt funds had the lowest liquidity buffer. Debt securities of non-financial enterprises (about 6 billion zlotys) and banks (about 13 billion zlotys, including 4.4 billion zlotys of subordinated bonds of domestic entities[62]) accounted for a significant part of their assets. These funds consciously took the risk by purchasing instruments showing low liquidity in exchange for a higher expected rate of return.

[61] Judgement of the Court of Appeals in Warsaw of 24 May 2019, File no. V ACa 451/18.

[62] Subordinated bonds may be redeemed due to the possibility of using them in the resolution process. The acquisition of these instruments by debt funds available to a wide range of participants exposes them to higher risks than in the case of other bonds of the same issuers.

The financial market turmoil triggered by COVID-19 have adversely affected the value of the sector's assets. Open-ended investment funds' exposure to industries most sensitive to the crisis amounted to about 3 billion zlotys in the form of debt securities and about 8 billion zlotys in the form of equities.[63] The decline in bond prices associated with uncertainty about the ability of their issuers to service the debt as well as the decline in share prices resulting from restrictions on activities of many sectors of the economy contributed to the depreciation of the net asset value and participation units of many funds.[64] In March 2020, the sector's net assets decreased by approx. 10%. The highest decrease (by approx. 16%) was experienced by open-ended and specialised open-ended investment funds, whereas the assets of closed-ended investment funds decreased to a smaller extent (by approx. 3%). Households have been hardest hit by the depreciation of participation units. This is because they were the major participants of open-ended investment funds, holding directly over 80% of their participation units. Households also invested in these instruments through unit-linked insurance funds, which held about 15% of participation units of open-ended investment funds.

Concerns about the depreciation of participation units have prompted their holders to withdraw capital from open-ended investment funds on a significant scale. In March 2020, approx. 14 billion zlotys, in net terms, was withdrawn from them (13% of the net asset value as of the end of February).[65] The sector was adversely affected by increased volatility of financial instrument prices and their decreased liquidity (reflected, among others, in the widening of share price spreads on the GPW Main Market). The highest outflows occurred in debt funds. In the first weeks of April, the scale of redemptions was significantly smaller. Some investors tried to withdraw their capital as soon as possible (before others decide to do so), when the liquidity of the funds' assets was high enough to enable them to be monetized without a significant impact on prices (first mover advantage).

Redemptions of participation units, which intensified at the end of March, resulted in the sell-out of funds' assets. Due to the increased concentration of supply of many financial instruments, their sale was sometimes difficult, required longer time or accepting prices lower than the fundamental value. That was particularly relevant for funds investing in assets which, even under normal market conditions, demonstrate limited liquidity – especially corporate debt securities. In mid-March 2020, NBP introduced the purchase of Treasury bonds on the secondary market as part of outright buy structural open market operations (in April also of government-guaranteed debt securities). These operations helped i.a. to stabilise the situation on the bond market. Investment funds had the possibility to benefit indirectly from the operations performed by NBP with banks.

[63] The values refer to financial instruments with an assigned ISIN code.

[64] The value of investment fund assets does not always reflect the appropriate assessment of the risk related to corporate bonds. Under the existing circumstances, funds which use the adjusted purchase price method to price their debt securities may overestimate their value. The reason is that this method does not take into account changes in credit risk, liquidity risk and interest rate risk related to investments in debt securities and its application results in a linear growth in the valuation of these instruments up to their maturity. Moreover, investment funds do not apply impairment write-offs of debt securities priced in this way according to uniform rules.

[65] In March 2020, the outflow of approximately PLN 20 billion from the entire sector of investment funds was recorded.

The outflow from debt funds will not significantly affect the domestic sector of non-financial enterprises. At the end of 2019, the bonds issued by them constituted only about 2% of their total liabilities and remained an insignificant source of financing for enterprises. At the end of 2019, open-ended investment funds held 5 billion zlotys worth of debt securities of non-financial enterprises and the share of these funds in the debt of non-financial enterprises due to the issue of bonds amounted to 5.5%. More of such instruments were found in portfolios of closed-ended funds (17.8 billion zlotys). At the same time, these entities often operated as part of the capital structures aimed at optimising the operations of enterprises.

Despite the deterioration of liquidity in the financial markets and increased redemptions of participation units, only one fund suspended their redemption. Funds are reluctant to use this liquidity management tool, since it is negatively perceived by investors due to the periodic blocking of access to their accumulated capital. At the same time, its application does not limit the right of the investment fund management companies to collect a management fee. In a period of market turbulence, the use of this tool may reduce the pressure on further declines in prices of financial instruments held by funds, however, this happens at the cost of increasing savers' uncertainty.

Considering the potential further impact of the COVID-19 pandemic on the sector, it is justified to take measures aimed at the safe continuation of its activities. It seems appropriate to retain the profits earned by the investment fund management companies over the past years to strengthen their capital base as a security of their primary objective of acting in the interest of fund participants. It is also worthwhile to create regulatory incentives for funds to maintain a larger liquidity buffer and to consider enabling investment funds to use additional liquidity management tools in addition to suspension of redemption of participation units. The use of an adjusted purchase price by funds as a valuation method for certain debt instruments is also an unresolved problem. This method is controversial primarily for entities redeeming units on demand, since the adjusted purchase price is not always the price at which the instrument can be sold in the event of withdrawal of funds by investors.

4.2.3.3. Open pension funds

As a consequence of the shock associated with the COVID-19 pandemic, a significant decline in the net asset value of open pension funds (OFE) occurred, however this did not change the liquidity risk assessment of the sector. The most important channel of the impact of the epidemic on the open pension fund sector is the market channel. This results from the structure of their investment portfolio in which equity instruments prevail (at the end of March 2020, they constituted 78%).[66] Among them, those issued by financial sector entities (mainly banks) and enterprises operating in the fuel and energy sector were the most important. Due to the significant exposure of OFE to GPW-listed shares, the funds cannot quickly restructure their investment portfolios without affecting the prices of these securities. As a consequence of slumps in prices of equities, the funds' net asset value decreased (from 154.8 billion

[66] As of 2018, there is no minimum limit on open pension funds' exposure to equities.

zlotys at the end of December 2019 to 116.2 billion zlotys at the end of March 2020, i.e. by 33.2%) and their investment results deteriorated. The decline in the value of assets also resulted in a decrease in transfers to the Social Insurance Institution (ZUS) under the security slider. The consequences of the decline in assets will be biggest for those OFE participants who have just a few years left to retire. The funds they have accumulated are systematically transferred to ZUS and currently their value has significantly decreased. The time remaining to retire may turn out to be too short to make up for the losses. However, there is no liquidity risk in the OFE sector since fund participants cannot withdraw funds before reaching the statutory retirement age.

The shock associated with the COVID-19 pandemic has no significant impact on the scale of financing of the economy by open pension funds. The level of debt financing of the domestic real economy by open pension funds remains low and has shown a downward trend over recent periods. A significant part of the open pension fund sector's debt portfolio is composed of securities issued by financial sector entities (mostly banks). At the end of 2019, the share of bonds of non-financial enterprises in the investment portfolio was below 2% (the highest exposure of funds involved corporate bonds from the energy and construction sectors). However, the expansion of the debt part of the investment portfolio is hindered due to the ban on investments in Treasury securities imposed on the funds and the underdeveloped domestic market of non-financial corporate bonds.

In connection with the COVID-19 pandemic, the liquidation of open pension funds scheduled for 2020 was postponed. In March 2020, the Senate rejected the Act passed by the Sejm on 13 February 2020 amending certain Acts in connection with the transfer of funds from open pension funds to individual retirement accounts.

5. Summary – systemic risk assessment

Poland's financial system entered the period of the COVID-19 pandemic in good condition and with no significant macroeconomic and financial imbalances. This made it highly resilient to shocks. However, a portion of credit institutions had previously been characterised by higher risk and poor capital endowment; in a pandemic condition their corrective actions will be even more difficult. However, the pandemic has changed the nature of risk in the financial system. First of all, the likelihood of excessive credit growth in specific market segments (consumer loans and housing loans) has decreased, and in its place the risk of a credit crunch and its negative impact on the real economy has emerged. At the same time, new risk areas have come into the picture and they result from the magnitude and nature of the current shock (see Diagram 5.1).

The future risks mainly stem from credit risk at banks. The substantial magnitude of the macroeconomic shock associated with the global COVID-19 pandemic contributes to deteriorating the financial condition of many enterprises and households. This significantly enhances the likelihood of problems with debt servicing in most credit categories. After the last financial crisis of 2008, the impaired loan ratios more than doubled – for enterprises from approx. 6% to approx. 12%, and for households from approx. 4% to almost 8%. At present, the extent of the shock is larger, but at the same time lending policy prior to the shock was much more prudent than in the period preceding the year 2008.

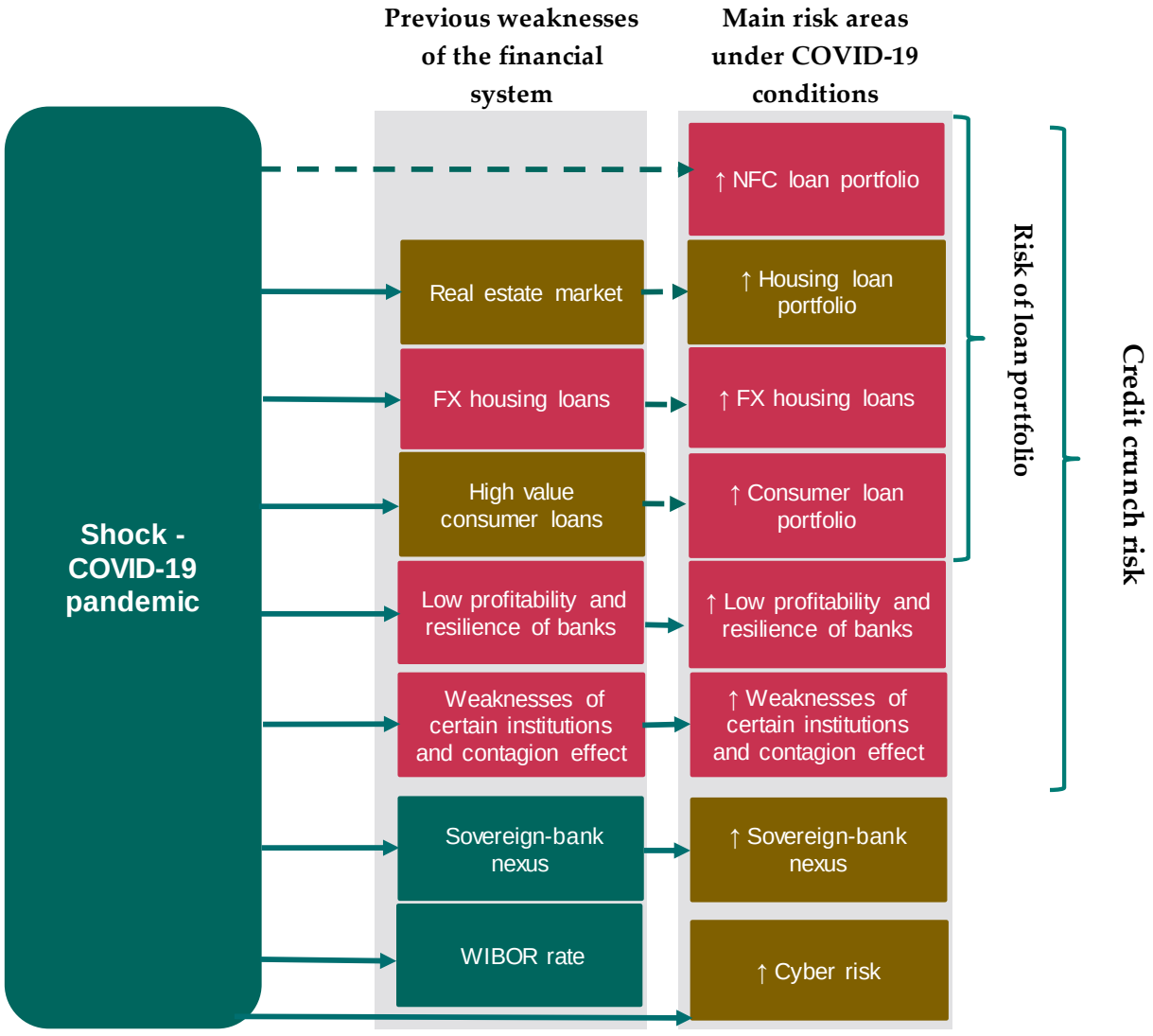
Due to elevated credit risk, coupled with lower bank profitability, the risk of a credit crunch has emerged. Lending was balanced before the current shock and, unlike during the global financial crisis of 2008, no excessive lending growth was observed. As a result of the magnitude and nature of the current shock, the risk of a credit crunch is coming into play. The value of expected credit losses is uncertain, and it makes it difficult for banks to estimate the extent of a change in their regulatory capital in the near future. As a result, banks may want to keep larger surpluses of regulatory capital over the regulatory minimum and rather invest, to a larger extent, uncommitted funds in lower risk assets than in lending. This would have a negative impact on the real economy and, consequently, on the financial system.

At the current juncture, two main factors will constrain systemic risk in the face of COVID-19: (1) the measures taken by regulatory authorities and financial institutions from 2008 and aimed at improving financial system resilience and (2) public support measures and remedial action implemented in response to the COVID-19 outbreak.

After 2008 the resilience of the banking system was substantially strengthened by increasing capital and improving the quality of risk management, including more prudent lending policy. Capital resources at banks grew from 75 bn zlotys towards the end of 2008 to more than 190 bn zlotys in early 2020, and this rise, in relation to assets, represents an increase from 8% to almost 11%. As a result of the KNF recommendations related to the need to maintain an adequate level of housing loan collateral

(maximum LtV at 80%) and the sufficient income buffer of borrowers (among others, the rules of calculating the minimum subsistence costs, creditworthiness and the recommended levels of DSTI ratios), the quality of banks' loan portfolios is higher than a decade ago and borrowers hold higher income buffers. The limitation of household access to FX housing loans led to a substantial amortisation of the portfolio and a decrease of its share in bank assets from 13% towards the end of 2008 to 6% in early 2020. This also reduces banks' demand for operations hedging their FX position and diminishes their reliance on foreign funding.

Diagram 5.1. Changes in the assessment of vulnerabilities in the financial system



Notes: horizontal arrows indicate the impact of the shock; a dashed arrow indicates a change in the nature of the shock. Colour indicates risk intensity – from low and moderate (green colour), elevated (brown colour) to high risk (red colour). A vertical arrow inside a given risk area indicates that risk has grown.

Source: NBP

The government financial support for companies launched in response to the shock triggered by COVID-19, together with loosening monetary policy by NBP (e.g. lower interest rates) mitigate the negative effects of pandemic for borrowers, thus contributing to reducing banks' credit losses. At the same time, as a result of the release of the systemic risk buffer, recommended by the FSC-M, banks hold substantial funds to underpin lending, which mitigates the risk of a credit crunch. However, the risk of a credit crunch scenario is difficult to estimate as it depends not only on the magnitude and duration of social distancing restrictions, efficiency of the government support measures, but also on decisions the banks will take and their perceived credit risk.

Before the outbreak of the crisis, the banking sector as a whole exhibited high capital endowment; however, some institutions were financially distressed and had no sufficient capital surpluses. The current shock may contribute to exacerbating the problem. Vulnerable institutions are characterised by low profitability, which additionally curbs their loss absorption capacity. Potential problems of individual entities may negatively impact the earnings of the remaining banks after the need arises to pay the costs of replenishing the deposit guarantee fund or the resolution fund. The magnitude of the shock points to a greater likelihood of such a scenario.

The sources of risk associated with the portfolio of FX mortgage loans (legal risk arising from the CJEU ruling) remained valid. However, as a result of changes in the economic activity, the risk has been amplified as new aspects have also emerged. Due to a depreciation of the zloty against the Swiss franc in the first quarter of 2020, the value of loans outstanding grew, increasing the LtV of the loans. Combined with the expected deterioration in the financial position of borrowers, this may both enhance customers' willingness to litigate (legal risk associated with the portfolio) and cause problems with debt servicing (economic risk associated with the portfolio).

The shock associated with COVID-19 has a negative influence on the pre-identified vulnerabilities of the financial system and also leads to new risk areas that will affect financial stability. The most important vulnerabilities are discussed below.

The importance of links between the banking and government sectors is growing as a result of the increased involvement of the banking sector in Treasury bonds and bonds guaranteed by the State Treasury. The increase in the budget deficit related to the need to take action aimed at directly mitigating the economic fallout of the COVID-19 shock and the reduction in bank lending will lead to a rise in the share of government bonds in bank portfolios. Therefore, the strength of linkages between the banking sector and the public sector is on the rise, both through the possible increase in the banking sector's exposure to Treasury securities (they are exempt from the bank tax and may crowd out loans in economic bad times) and through the growing importance of credit risk of the Polish government in the price of Treasury securities. Presently, the price of that risk has risen to a lesser extent than during the global financial crisis of 2008 (see Chapter 2).

The nature of risk associated with housing loans has changed and, given the size of this portfolio, it may have a significant impact on the condition of banks. Prior to the shock triggered by COVID-19, in the conditions of earlier expansion in the real estate market, housing loan-associated risk stemmed primarily from the possibility of the excessive supply of credit to the sector, excessive debt and an imbalance. Currently, the nature of this risk has changed and primarily involves a possible materialisation of credit risk. NPL ratios for housing loans have been historically very low. The interest rate decreases by the MPC resulting in an average installment decrease of approx. 10-15% and the extension of loan repayment periods limit risk growth in this area. Moreover, banks' lending policy in recent years, supported by the KNF recommendations, has been cautious – the LtV of an overwhelming majority of loans was below 90% and households hold higher income buffers than a decade ago. These factors diminish the likelihood of a strong increase in problems with servicing of housing loan. Nevertheless, due to the value of housing loans (they account for the largest portion of the loan portfolio of banks, amounting to over 20% of GDP) even a modest increase in problems with loan repayment may have significant effects for banks and, consequently, for the economy. The current economic shock is very strong and, given its consequences for the labour market, may pose a challenge even in the situation when lending policy in the past was cautious. Additionally, a significant portion of housing loans (approx. 16% of the portfolio's value) was extended to self-employed workers, who may be more sensitive to the current shock than permanent contract employees. After the last financial crisis of 2008, that is after a relatively smaller shock, the impaired housing loan ratio grew from approx. 1% to approx. 3%, although such a low pre-crisis ratio was partly due to very high credit growth in previous years.

Risk associated with consumer loans may be a significant source of credit losses for banks. According to past assessments, this risk concerned high-value loans only, while in the current shock this may apply to the whole portfolio. This happens due to the size of the portfolio, the impact of the current shock on the household sector and a stronger reaction, in historical terms, of this type of credit to shocks. At the end of 2019, consumer loan debt was the equivalent of 7.9% of GDP, which is more than the average for euro area countries (5.4% of GDP on average). This implies that the quality of consumer loans has a relatively bigger impact on the situation of Polish banks than it has in other EU countries. Consumer loans are riskier than the remaining portion of the portfolio and, following the last crisis in 2008, the impaired loan ratio rose from approx. 6.5% to approx. 18%, being the main source of provisions for banks' loan portfolio impairment. It should be noted, however, that the lending policy of some banks before 2008 in the area of consumer loans was quite liberal, and the requirements have been tightened in recent years, among others due to the introduction of the Recommendation T by the KNF.

Systemic risk has not recently stemmed from corporate loans; however, their importance is on the rise. This happens both due to the possibility of credit losses on the existing portfolio of the banking sector and the potential impact of a limited availability of new lending to enterprises on the macroeconomic situation and the capacity of borrowers to service credit. In Poland, corporate loans account for a relatively small portion of loans to the non-financial sector compared to other EU countries (see *Financial System in Poland 2018*). Nevertheless, their value amounts to around 1/3 of credit to the non-

financial sector. The data confirm their high sensitivity to economic conditions, which means that they may be a significant source of credit losses (following the 2008 crisis, impaired corporate loans grew from approx. 6% to approx. 12%). Although enterprises in Poland rely on loans and advances only to a limited extent (around 15% of liabilities), revolving loan plays an important role for corporate liquidity – almost half of loans provided to enterprises are revolving loans up to 1 year. An important tool of corporate liquidity management is also trade credit, which increases financial links between enterprises. In the conditions of the current shock and despite the support measures implemented by the government, any restricted access to short-term credit enhances the risk of liquidity risk evolving into solvency risk.

Further downward of bank profitability may be a new challenge to the financial system. The reduced profitability of the banking sector has been observed for several years. The shock associated with COVID-19 is, additionally, having a negative influence on all sources of banks' income. This diminishes their capacity to raise capital in the event of a stronger and longer slowdown, including its negative consequences for bank's asset prices. Impediments to raising capital from external sources are a special challenge to the sector of cooperative banks and credit unions, as its efficiency is lower.

The challenges for financial institutions of managing cyber risk are growing. The risk is associated with the implementation of remote working policies. Financial institutions are particularly exposed to disruptions associated with cyberattacks due to the great role of public trust and a high degree of dependence on confidential information. At present, as remote work is becoming widespread, the likelihood and the fallout of likely disruptions in the operation of IT systems have grown. At the same time, movement restrictions caused the importance of remote access channels in provision of financial services to increase and their efficient functioning becomes key to maintaining customer trust in financial institutions. When introducing new technological solutions concerning remote access channels, particular attention should be paid to ensuring their high IT security, which at their current rapid pace of implementation may pose an additional challenge. In this context, KNF guidelines play an important role, including the requirements for the customer video verification process.

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

Motor third party liability insurance – third party liability insurance for land vehicles with own drive – Class 10 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.

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).

Combined operating ratio – a relation of the sum of the claims (including the change in provisions) and expenses of operating activities to the net premium earned on the basis of the technical account. This ratio is only set for non-life insurance. In life insurance, this ratio has no economic interpretation.

Coronavirus Disease 2019 (COVID-19) – the disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It was first identified and described in central China (Wuhan, Hubei province) in November 2019 after a series of COVID-19 cases were reported, which started the COVID-19 pandemic in 2020.

Credit losses – in banks applying the IFRS – 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 Polish Accounting Standards – 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 asset written down and the value of provision/specific provision as well as recovery of assets written down earlier.

Cross-currency interest rate swap – a derivative transaction under which the parties are obliged to a periodic exchange of interest payments calculated on the basis of an agreed nominal amount for a set period of time. Interest payments are denominated in different currencies and calculated on the basis of interest rates for each currency. Such a transactions may involve the exchange of the nominal amount at the start or at the end of the transaction (at a predetermined exchange rate).

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

Earned premium – the premium payable to an insurance company within the reporting period less the change in provisions for premiums.

Funding gap – the difference between the amount of loans to the non-financial sector and the general government sector, and the amount of deposits accepted from those sectors, expressed as a percentage of the value of loans.

FX swap – a derivative transaction under which the parties are obliged to exchange an amount of currencies at an agreed exchange rate on a specified date and then repurchase the previously exchanged amounts at a predetermined exchange rate and date.

Housing loans – loans on residential real estate for households.

Interest rate gap – the difference between interest-bearing assets and liabilities repriced in a given time bucket and in a given currency.

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

Leverage (banks) – according to CRDIV/CRR, the leverage ratio is calculated as the ratio of Tier 1 capital to the exposure measure that includes both on- and off-balance-sheet exposures.

Loans with identified impairment – in banks applying the IFRS – loans from portfolio B – are credit-impaired loans, if an event/events having a negative influence on the estimated future cash flows on such loans occurred (Stage 3) (by the end of 2017 – loans from portfolio B for which objective evidence of impairment and a decrease in the value of expected cash flows); in banks applying the Polish Accounting Standards – loans from portfolio B classified as irregular pursuant to the Regulation of the Minister of Finance regarding the principles for creating provisions for the risk of banking activity.

Loan-to-value – the ratio of the value of loan outstanding to the current value of the property on which the loan was secured.

MSCI EM – the stock index calculated by Morgan Stanley Capital International on the basis of stock indices of 23 emerging markets, weighted by the free float value of these instruments in a given market.

Net charges to provisions for impaired loans – charges to provisions for impaired loans less releases of provisions for impaired loans in a given period.

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 in a given period to average assets in this period.

Non-interest income – the sum of 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 the bank's general expense 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).

Portfolio B – a portfolio of assets separated in banks' prudential reporting, comprising – since 2018 – for banks applying the IAS/IFRS the whole portfolio "Financial assets measured at amortised cost" and claims from the portfolio "Financial assets measured at fair value through other comprehensive income", and for banks applying the Polish Accounting Standards – the whole portfolio "Loans and other receivables", "Financial assets held to maturity" and claims from the portfolio "Financial assets available for sale". Until 2017, portfolio B comprised claims classified as available for sale and held to maturity as well as all financial instruments (including debt securities) classified as loans and receivables.

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 one-year Value-at-Risk (with a confidence level of 99.5%) of a change of basic own funds of an insurance or reinsurance undertaking.

Systemic risk – a risk of disruption in the functioning of the financial system, which in the case of its materialisation, 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.

Technical result – the difference between income from premiums as well as certain income from deposits and other technical income and claims and benefits paid, changes in insurance provisions, the costs of insurance activity and other technical costs.

VIX – risk index for the equity market calculated by the Chicago Board Option Exchange on the basis of a 30-day implied volatility derived from out-of-the-money options for equities included in the S&P 500 index. A high level of the index indicates an elevated level of risk aversion.

VXEEM – risk index for equity markets of emerging economies calculated by the Chicago Board Options Exchange on the basis of a 30-day implied volatility derived from the out-of-the-money options on the units of MSCI EM exchange-traded fund.

Abbreviations

BFG	Bank Guarantee Fund
BGK	Bank Gospodarstwa Krajowego
BIK	Credit Information Bureau
BRRDII	Bank Recovery and Resolution Directive II
CDS	credit default swap
CESEE	Central, Eastern and Southeastern Europe
CIRS	Cross-currency Interest Rate Swap
CJEU	Court of Justice of the European Union
COR	combined operating ratio
COVID-19	Coronavirus Disease 2019
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
CRRII	Capital Requirements Regulation II
EBA	European Banking Authority
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECB	European Central Bank
ECB-SSM	Single Supervisory Mechanism
EIB	European Investment Bank
EIOPA	European Insurance and Occupational Pensions Authority
ESMA	European Securities and Markets Authority
EU	European Union
Fed	Federal Reserve System
FGP	Liquidity Guarantee Fund
GDP	gross domestic product
GSII	global systemically important institutions
GPW	Warsaw Stock Exchange

GUS	Statistics Poland
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
IPS	institutional protection scheme
IRS	interest rate swap
ISIN	International Securities Identification Number
KNF	Polish Financial Supervisory Authority
KSKOK (National Association)	National Association of Credit Unions
LCR	liquidity coverage ratio
LtV	loan-to-value
MPC	Monetary Policy Council
MREL	minimum requirement for own funds and eligible liabilities
NBP	Narodowy Bank Polski
NIM	net interest margin
NSFR	net stable funding ratio
OFE	open pension funds
PFR	Polish Development Fund
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
SP	State Treasury
SPW	Treasury securities
SRB	Single Resolution Board
TFI	investment fund management company
TLTRO	targeted longer-term refinancing operations
UFK	unit-linked

UKNF	Office of the Polish Financial Supervision Authority
VIX	Chicago Board Options Exchange Market Volatility Index
WHO	World Health Organization
ZU	insurance companies
ZUS	Social Security Institution

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