The aim of this Report is to assess financial system stability in Poland. Financial system stability is a situation when the system performs its functions in a continuous and efficient way, even when unexpected and adverse disturbances occur on a significant scale. The maintenance of financial system stability requires the monitoring of systemic risk occurring in the financial system or in its environment, as well as the implementation of measures eliminating or reducing the risk. The stability of the financial system is a necessary condition for ensuring sustainable economic growth in the long term.

The stability of the banking system, which accounts for two thirds of assets of the Polish financial system, is of particular importance for financial system stability. Banks play a crucial role in financing the economy and settling payments. They also perform another important function by providing numerous products that allow other entities to manage their financial risk. Therefore, special emphasis is put on the analysis and assessment of banking system stability.

Financial system stability is of particular interest to NBP due to its statutory tasks to eliminate or reduce the systemic risk, establish the conditions necessary for the development of the banking system, and contribute to the stability of the domestic financial system (Article 3 paragraph 2 items 6, 6a and 6b of the Act on NBP). While fulfilling these tasks, NBP participates in macroprudential supervision of the financial system, and in the event of a direct threat to the stability of the financial system, may also participate in the implementation of crisis management measures.

Financial system stability is closely related to the primary task of the central bank, i.e. maintaining price stability. The financial system plays a key role in the transmission of monetary impulses to the real economy. Financial system instability may hamper the efficient implementation of the monetary policy. The analysis of the financial system stability also constitutes a necessary element of an efficient regulatory and supervisory policy, in the development of which NBP plays an important role and which, together with the monetary policy, contributes to maintaining sustainable economic growth. Another reason for the involvement of NBP in activities supporting the stable functioning of the financial system is the fact that the central bank is entrusted with the task of organising monetary clearing (Article 3 paragraph 2 item 1 of the Act on NBP). The stable functioning of financial institutions that are integral components of payment systems is a necessary condition for the smooth operation of these systems.

The "Financial Stability Report" is primarily addressed to financial market participants as well as to other persons and institutions interested in the subject. The aim of the Report is to present conclusions from analytical and research work on financial system stability, including the assessment of its resilience to potential disturbances. Disseminating this knowledge should support the maintenance of financial stability through, among others, better understanding of the scale and scope of risk in the financial system. This enhances the probability of a spontaneous adjustment of the behaviour of those market participants that undertake excessive risks, without the necessity of public entities' intervention into market mechanisms. Thus, the information policy of the central bank is an important instrument for maintaining financial system stability. The Report is also presented to the Financial Stability Committee, which is the macroprudential supervisory body.
The analysis conducted in this Report is based on data available up to 30 November 2015 (cut-off date). Some high-frequency data, especially relating to financial markets, and other particularly significant information, may go beyond the adopted cut-off date. The Report was approved by the Management Board of Narodowy Bank Polski at a meeting on 4 February 2016.
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Executive summary

In the period under analysis\(^1\), Poland’s financial system was functioning in a stable manner. According to the assessment in this Report, the Polish financial system is capable of absorbing the effects of shocks linked to identified future threats in the financial system and in its economic environment, although its resilience has decreased in comparison to the assessment presented in the previous edition of the Report. The assessment of financial system stability is a challenge due to the uncertainty regarding the changes in the legal environment of the financial sector. Macro stress tests performed for this Report take into account legal changes which have been implemented, such as the tax on assets of financial institutions, but do not take into account the possible effects of measures which have been proposed, such as restructuring of foreign currency loans. This issue was analysed separately.

The situation in the economic environment of the Polish financial sector was gradually improving. The global economy was growing at a moderate pace, whereby significant differences between specific countries and regions persisted. GDP accelerated in the euro zone – which from the Polish viewpoint, is the most important area – and in the United States. On the other hand, the situation in developing countries was worse – there was a protracted recession in Russia and Brazil, and the Chinese economy continued to slow down gradually.

In the period analysed, the Polish economy was growing at a pace close to the potential growth rate. In the third quarter of 2015, the pace of GDP growth accelerated primarily on the back of rising domestic demand, resulting mainly from a further improvement in the situation on the labour market. Household debt remained moderate. However, the fall in the employment growth rate, coupled with the highest ever number of job offers, indicated that employers face bigger problems finding skilled workers. The deflationary pressure is receding steadily, which is evidenced by a steady decline of the rate of fall of CPI. In 2016-2017, the NBP expects Poland’s economic growth to stabilise at the level observed in previous quarters, i.e. approx. 3.4% and the inflation to return to the vicinity of the permissible range of deviation from the inflation target.

The condition of the corporate sector remained good, and risk of insolvency diminished. Corporate debt remained at a moderate level. Industries with a financial condition significantly weaker than average did not have a big share in banks’ loan portfolios. The forward-looking indicators of the corporate sector do not indicate a substantial risk of insolvency for 2016.

\(^1\)The Report focuses on analysing the information from the period between the cut-off date of the previous edition (31 May 2015) and the cut-off date of the current edition (30 November 2015). Some high-frequency data, especially those relating to financial markets, and other particularly significant information go beyond the adopted cut-off date.
The reduction of the budget deficit continued in the public sector, which resulted in the abrogation of the excessive deficit procedure with respect to Poland. According to NBP estimates\(^2\) in 2016 the ratio of the general government deficit to GDP will amount to around 2.8%. This will however be significantly influenced by a favourable one-off factor. This means that even if the presented draft budget law does not lead to an increase in the imbalance of public finances in 2016, the changes in fiscal policy that it foresees make it more difficult to keep the budget deficit at a safe level in 2017, unless new stable sources of budget income appear.

The level of external equilibrium of the Polish economy did not change substantially. In the third quarter of 2015, after two quarters of current account surplus, the current account went into deficit, as a result of a worsening of the trade balance. However, preliminary data for the first two months of the fourth quarter show a return to a current account surplus. Together with a persisting surplus on the capital account this points to a safe situation in the area of external equilibrium. Foreign debt as a ratio of GDP fell slightly, and its nominal increase in the second quarter of 2015 was driven mostly by banks’ foreign liabilities, and in the third quarter – by exchange rate differences. The foreign debt of the corporate sector may increase if as a result of the imposition of tax on assets of financial institutions large enterprises will be able to fund themselves more cheaply on international markets than from domestic banks.

Prices of financial instruments in the domestic market were largely affected by developments in international markets. On global markets, a slump of stock prices was observed, as well as a fall of commodity prices and a depreciation of the currencies of the commodity-exporting countries. These trends were mostly driven by the slowdown in developing countries, the signs of imbalance on the Chinese equity market and expectations for action from the ECB and the Fed. The Federal Reserve decision of December 2015 to raise interest rates was expected by the markets and did not draw a major response. The decision was perceived by market participants as a sign that the recovery in the US economy had consolidated.

A gradual and slight depreciation of the zloty against the euro was observed from June to November 2015, and it strengthened in the first half of December. The relative stability of the Polish currency vis-à-vis currencies of emerging markets was underpinned by the strong fundamentals of the Polish economy and macroeconomic data that confirm its balanced nature. In December 2016 and January 2016 there were significant changes of the zloty-euro exchange rate. The weakening of the zloty in December 2015 was primarily driven by investors’ uncertainty over the fiscal policy of the new government and the ECB decision of 3 December, when the Governing Council, contrary to market expectations, did not increase the scale of securities purchases under the expanded asset purchase programme (EAPP). After a temporary strengthening in the second half of December, the zloty weakened in January 2016. In response to the unexpected downgrade of Poland’s sovereign rating by the S&P rating agency from A- to BBB+ and the change in rating outlook from positive to negative, the EURPLN exchange rate increased significantly and reached a four-year maximum.

The domestic money market functioned in a stable manner, and liquidity in the segment of deposit transactions decreased further. Perceived credit risk of banks remained low.

A significant fall of yields of domestic government bonds was observed until November 2015; it

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stemmed from expectations about the future level of interest rates in Poland and expansionary monetary policy of the ECB. In December 2015 and January 2016, prices of Polish treasury bonds fluctuated strongly. This was driven by concerns that the ECB monetary policy, which is less expansionary than expected by investors, may, in view of the anticipated interest rate hike in the United States, trigger a capital outflow from emerging markets and also by the uncertainty over the fiscal policy of the new cabinet. Consequently, the spread between yields on 10-year government bonds of Poland and Germany widened to more than 270 basis points, i.e. the highest level since March 2014. After a temporary fall in the second half of December, the yields of Polish treasury bonds returned to their June 2015 level in reaction to the downgrade of Poland by S&P and the lowering of the rating outlook. The share of non-residents in Poland's government bond market was stable, however the bondholder structure changed – the percentage of investment and hedge funds decreased substantially, and at the same time the share of central banks and public institutions, perceived as long-term investors, rose.

No imbalances were seen on the residential real estate market. Transaction prices of dwellings in the primary market remained stable. At the same time, a rise in supply was seen in this segment. The surplus of supply over demand on the commercial real estate market continued to increase. International investor activity remained robust, especially in the office real estate market, which was driven by low interest rates in developed economies. This situation does not generate risk to domestic financial stability as the role of domestic banks in the funding of this segment is limited.

Due to the nature and structure of the Polish financial system, the level of systemic risks is, to a decisive extent, determined by the situation in the banking sector. This happens because of the dominant share of banks in the financial system and in the funding of the economy. From the point of view of financial stability both risks identified at an aggregate level, as well as the distribution of risk among financial institutions are important. The analyses of the financial sector, especially banks, with regard to capital, profitability, credit risk and other important parameters are conducted both using aggregated data and – to the extent that data availability allows – at the level of individual firms. In recent years, the assets of banks increased slightly faster than the economy as a whole. In consequence, the ratio of the size of the banking sector to GDP grew, but still remains relatively low (slightly above 90% in September 2015) and does not point to an overly leveraged economy.

The growth rate of lending to the non-financial sector has been close to the nominal growth rate of GDP for around three years. However, the growth rate of particular loan categories has varied when compared with the previous issue of the Report. The growth rate of lending to enterprises was higher, the growth rate of consumer loans remained unchanged and the growth rate of housing loans dropped. The changes should not give rise to the build-up of imbalances and are safe from the point of view of financial stability.

Based on macroeconomic trends, one may expect the lending growth rate to rise moderately in the near future, which will be supported by low interest rates and stable economic growth. However, uncertainty over the direction and the strength of response of banks to the introduction of new burdens, in particular the tax on assets, makes it difficult to draw unambiguous conclusions. In turn, lower risk weights and higher profits may accelerate a growth in loans to SMEs and consumer loans. The recovery in the consumer loan market from previous quarters consolidated. In the case of housing loans, the pace
of growth observed recently will most likely be maintained.

The capital position of the Polish banking sector is good, and in particular the sector exhibits low leverage, which results both from the high value of regulatory capital and the conservative level of risk weights used to calculate capital adequacy. The results of simulations and macro stress tests confirm the sector’s high, albeit lower than in the past, resilience to a potential deterioration of operating conditions and negative shocks. However, banks’ lower profitability in the future, which will result mainly from the imposition of additional burden on banks’ earnings, makes their resilience to negative shocks potentially substantially lower, which is reflected by the results of stress tests. This particularly applies to banks that are already characterised by low or negative profitability.

In the period under analysis, the earnings and profitability ratios of the banking sector decreased. A small group of institutions posted losses; however, they were low when compared with the scale of activity and the level of regulatory capital. The decrease in the profitability of the banking sector was mainly driven by a reduction of net interest margin (following a fall of market interest rates and a slight drop of leverage) and net non-interest margin. In the environment of low interest rates and the interest rate on some liabilities close to zero, the possibility of making further adjustments of interest expense to lower market interest rates is limited. A rise in the burden of operating costs on earnings also contributed to a decrease in banks’ profitability. Without taking account of the effects of problems of SK bank, whose operations were suspended by the KNF in November, the burden of credit risk materialisation costs on the sector’s earnings has slightly declined.

The profitability of the banking sector, measured by the return on assets, may be expected to fall in the future. This may be driven by a likely fall of net interest margin in the event of a materialisation of market expectations of further interest rate cuts, the introduction of new burdens on banks (a tax on bank assets), a rise in operating costs related to, inter alia, the functioning of the Borrower Support Fund and an increase in banks’ contributions to BFG. On the other hand, a fall in the burden of loan impairment provisions on earnings following a decrease in loan costs (which, however, may be dampened by banks’ reaction to the tax on assets) and the good condition of borrowers may help improve the sector’s profitability. However, the expected impact of profitability-reducing factors, including the tax on assets in particular, is bigger than the impact of profitability-improving factors.

In recent quarters, the quality of loans to the non-financial sector slowly improved. If the impact of SK bank is excluded, then the quality of loans in cooperative banks has not changed significantly either. The deterioration in the quality of the housing loan portfolio came to a halt. The quality of consumer loans improved further, which resulted both from a fall in value of impaired loans (to which both sales of these loans and a stabilisation on the labour market contributed) and a growth of the loan portfolio. The credit risk costs of corporate loans decreased, except for those in large cooperative banks, where they increased. This segment of the banking sector will need particular attention because loans to enterprises account for a large portion of the loan portfolios of large cooperative banks, and in some of the banks the level of loan impairment provisions may be underestimated.

Interest rate risk in banks’ trading books and risk associated with the securities portfolio in the banking book is insignificant and limited mainly to fixed-rate government bonds. The risk of substantial losses
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arising from a change in the valuation of an FX position is low. Banks hold a large, long on-balance-sheet FX position related to the portfolio of foreign currency loans. However, the position is hedged with fx swap and CIRS transactions. Despite an increase in volatility, the estimated VaR for FX exchange rate is very low as compared with banks’ capital.

The current funding structure of Polish banks is favourable for banking sector stability. This is evidenced by a low funding gap, a big share of household deposits in liabilities and low reliance on the potentially less stable market funding. In the analysed period, the downward trend of the average funding gap continued. Following a period of gradual decline, the share of funding provided to banks by foreign financial institutions increased in the last four quarters. This was concentrated in a small group of banks with a diversified financial structure. The relevance of the domestic interbank market as a funding source remained minor and transactions executed in the market mainly served to manage short-term liquidity. All banks complied with the supervisory liquidity standards, both short-term and long-term. Only individual cooperative banks had problems in complying with the liquidity standards. The creation of a Institutional Protection Schemes in the cooperative banking sector will help cooperative banks and affiliating banks to meet the new liquidity standards.

The condition of the sector of credit unions (skok) remains difficult and rehabilitation processes need to be intensified. The measures undertaken so far (mainly liquidation and acquisitions, as well as taking up optional participations in some credit unions by the National Association of Credit Unions) have resulted in a reduction in the number of credit unions to 49, as well as some increase in capital of the credit unions currently operating and a reduction in the losses. However, a number of credit unions continue to post – as a result of high credit losses – capital adequacy ratios that are below the regulatory minimum, and some of them even report negative capital. Taking into account the results of the UKNF inspections in the balance sheets of the credit unions would lead to a further decline in these ratios. The value of the loan portfolio in the credit unions sector continues to decline, and it continues to be of low quality. A positive trend is the stabilisation of the liquidity situation of the credit unions – apart from incidental cases, the credit unions maintain a liquid reserve ratio above 10%.

Given the size of the sector, the possibility of substituting the services it provides and the fact that its financial ties with other financial institutions are insignificant, the problems of the credit unions sector do not pose a direct threat to the stability of the domestic financial sector; however, they have indirect repercussions. The restructuring of this sector requires the involvement of financial resources at the disposal of institutions of the financial safety net (the Bank Guarantee Fund, BFG), which reduces, ceteris paribus, the amount of funds that can be used in the event of problems of the banking sector, which is key to financial stability.

The reduction of BFG resources may produce systemic results, as can an increase in the burden on banks with the aim of building up BFG resources. In this context, the stability of those credit institutions whose scale of activity is significant in relation to the resources of the BFG, is of particular importance.

In the first three quarters of 2015 the sector of non-credit financial institutions (NIFs) was developing at a rate similar to that of the banking sector, and the ratio of assets between both sectors did not change in comparison to the end of 2014.

The NIF sector may generate systemic risk through a series of channels: a threat to maintaining the continuity of services provided by NIFs, institutional and
product concentration, the impact on the financial cycle, the impact of NIF behaviour on financial asset prices, as well as the generation of contagion effects through inter-sector linkages.

Currently, Poland’s NIF sector does not generate systemic threats due to the conservative business model and nature of offered products, the sound financial situation of the sector, which enable it to meet supervisory requirements, and the low scale of links with the banking sector.

Insurance companies have at their disposal a significant surplus of capital above the regulatory requirements (also after taking into account the regulations of the Solvency II directive) and they also achieve good financial results. A certain weakness is the negative technical results obtained by insurers in certain insurance groups (particularly car insurance), which is due to the strong price competition between insurance companies. In the insurance sector there are also no products to any significant extent that could, in specific situations (e.g. low interest rates) generate systemic risk to the sector, such as long-term insurance with a guaranteed value of benefits or guaranteed rate of return. The good condition of the Polish insurance sector has also been confirmed by the stress testing exercise carried out by EIOPA.

The degree of concentration varies in the different NIF sectors. In the insurance sector there is relatively high concentration. However, international experience shows that insurance companies are capable of taking over insurance portfolios, even of large firms, without a loss of continuity of services provision, while maintaining their terms and conditions. This concerns in particular such a situation as on the Polish market, where short-term insurance or unit-linked policies play a dominant role, and the majority of insurance companies offer similar portfolios of services. A small number of insurers offer specialist services, but their share in the market is insignificant and in the case of problems, foreign insurance companies can replace them in providing these services. In the pension fund sector the concentration is also high; however, the separation of fund management companies from the assets of the managed funds reduces the risk associated with this high level of concentration. The investment fund sector is characterised by a low concentration.

Non-credit financial institutions have a relatively low – in comparison with banks – influence on the financial cycle due to the small size of the market of non-Treasury debt securities in Poland and the small scale of investment in the real estate market.

The NIF sector is a significant investor in certain financial markets, in particular in the market of domestic Treasury securities and the domestic equity market. Therefore, the investment behaviour of the NIF sector may influence the prices of these securities, although its role is not dominant. However, the decline in liquidity of the markets observed in recent years could increase the influence of changes in investors’ behaviour, also from the NIF sector, on the management of these funds. Moreover, fund management companies have a sound financial situation and high level of capital in relation to regulatory requirements.

In the investment fund and open pension fund sector, the statutory separation of fund management companies (TFI/PTE) from the assets of the managed funds (FI/OFE) significantly reduces the impact of the financial situation of the fund management companies on the risk to the continuity of services provided. This solution ensures the possibility for a different company offering similar services to take over the management of these funds. Moreover, fund management companies have a sound financial situation and high level of capital in relation to regulatory requirements.

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market situation.

The influence of the NIF sector on the markets amid the lack of significant turmoil may result mainly in changes of preferences of clients of investment funds or changes in investment of assets by the open pension funds or insurance companies. However, these changes would be gradual. In the event of turmoil in financial markets, certain categories of NIF may be forced to monetize their assets in response to the withdrawal of funds by clients and the liquidity risk that is associated with this. This risk does not apply to OFEs due to the lack of possibility to withdraw funds earlier than stipulated. In the case of investment funds, the share of illiquid assets in the portfolios of investment funds (which has been growing gradually since 2013) increases liquidity risk, although it still remains limited. In particular, in the Polish financial system there are no functioning money market funds with a constant net asset value (CNAV), which are particularly vulnerable to liquidity risk due to the fact that their products are of a substitutive nature in relation to bank deposits. The activity of insurance companies is exposed to liquidity risk only to a small extent, due to the reversed production cycle. An exception is unit-linked policies, where liquidity risk is, however, lower than in the case of investment funds due to the greater barriers to withdrawing the investment in the case of unit-linked policies.

Inter-sector linkages arising from the activities of the NIF sector in Poland are insignificant and do not generate a significant risk associated with contagion effect. A potential source of systemic risk may be the financial ties with banks and intra-sector capital, credit and financial linkages. In the case of the Polish financial system they remain insignificant. Ownership linkages of banks and insurance companies are of a limited scale. Direct ownership linkages of non-credit financial institutions with other segments of this sector and with brokerage houses were of greater significance. The influence of the financial results of subsidiaries on the financial situation of parent companies was moderate.

It is possible to identify a series of factors and scenarios that could generate risk to its stability.

Regulatory measures already implemented or being discussed can be an important risk source, with a potentially serious negative impact on financial system stability. The initiatives aiming to change the terms of the existing foreign currency mortgage loans portfolio are particularly worrying if the cost of this change fell mostly on banks. These costs could increase further due to the possibility of a depreciation of the zloty as a result of transactions concluded by banks to close open fx positions arising from the conversion of loans. The implementation of proposed measures would also have a negative impact on the situation of public finances through the fall in dividend income from state-owned stakes in banks, as well as from corporate income tax. There would be also a significant risk of investors lodging claims for compensation against the State Treasury. The weakening of the resilience of the banking system would then lead to a revision of Poland's sovereign rating, leading in turn to a rise in sovereign debt service costs.

The legislative proposals should take into account the conditions in which the Polish financial system operates. First, the environment of low interest rates exerts a negative pressure on banks' profitability. A low level of interest rates reduces the net interest margin, which consists the major source of income from banking activity of the Polish banking sector. Second, banks face the necessity of complying with numerous new regulatory requirements. In the long term, they will be supportive for Polish financial system stability. In the short term, however, some of these solutions lead to a rise in costs incurred
by banks and a fall in their profitability. In such conditions, introducing additional financial burdens on banks may make it impossible for them to increase their capital base which is necessary for credit growth. The major source of new capital for domestic banks is profit retention.

The Polish banking sector, despite its lower profitability and resilience, functions in a stable manner, ensuring funding for the real economy. Introducing regulatory measures which would lead to a strong weakening of the resilience of banks, such as the proposal regarding the restructuring of foreign currency loans in the shape currently proposed, may threaten the stability of the banking system. The NBP underscores the need to take this important aspect into account in the work on this proposal. Any eventual measures aiming to reduce the value of the foreign currency loan portfolio should conform to the principles set out in the previous edition of the Report.

Risk factors of a cyclical character are mainly connected with the development of the situation in the environment of the Polish economy, above all in countries which are Poland’s main trading partners. Apart from the scenario of a serious geopolitical conflict, the development of a negative scenario in the euro area, together with a correction of asset prices and a sharp increase in risk aversion in emerging markets, constitutes a significant threat to the stability of Poland’s financial system. A factor which has gained in importance compared to the previous edition of the report is the situation in the emerging economies, including, above all, in China. A further decline in their growth rate could lead to an increase in risk aversion in global financial markets. Another threat of a cyclical nature is the faster than expected monetary policy tightening by the major central banks.

The maintenance of the current level of historically low interest rates should not generate a substantial risk for the stability of commercial banks, despite the downward pressure on their earnings. The potential effects of a significant interest rate increase, after a prolonged period of low interest rates, may pose some challenge, although in NBP’s view – taking into account the moderate rate of credit growth and the moderate level of public debt - they will not create a major risk to the stability of the sector.

The materialisation of the risk factors discussed above may pose a major challenge for some financial institutions. The existing uncertainty about global developments and the effects of domestic economic policy implies that banks need to keep their resilience at a high level.

The risk regarding the portfolio of foreign currency loans and, in the longer term, trends towards market concentration and the development of institutions that are too big to fail can be classified as risk sources of a structural nature. The introduced tax on assets of financial institutions may support and increase in market concentration, due to the higher profitability of large firms. A long-term structural challenge is the necessity to make changes in the model of cooperative banking. The magnitude of threats associated with the portfolio of foreign currency loans is gradually declining along with the decline in the value of the portfolio, and its quality remains good. The results of stress tests conducted by NBP show that a depreciation of the zloty against the Swiss franc, even of a substantial scale, should not jeopardise the functioning of the banking sector. In such conditions, taking any measures aimed at mitigating or eliminating the risk associated with the portfolio of foreign currency loans from banks’ balance sheets should be preceded by a thorough analysis of the benefits and costs of such measures, both in the short- and long-term. A significant challenge in the short- and medium-term is the restructuring of the credit unions sector.
Executive summary

In the analysed period, the institutional framework for financial stability was strengthened. On November 1, 2015, the act on macroprudential supervision of the financial system and crisis management went into effect. On the basis of this act, the Financial Stability Committee becomes the macroprudential authority in Poland. The tasks of the Financial Stability Committee in the area of macroprudential supervision include the identification, assessment and monitoring of systemic risk arising in the financial system or its environment. An important function of the FSC is also initiating actions aiming to mitigate the threats to financial stability.

Narodowy Bank Polski presents a number of recommendations aiming to preserve the stability of the Polish financial system. These recommendations are described in detail in the last chapter. They pertain to:

- avoiding actions constituting a threat to the stable functioning of the financial system, especially in the area of measures regarding the portfolio of foreign currency housing loans
- monitoring the influence of introduced tax burdens on financial institutions on the functioning of the financial system and counteracting adverse side effects
- continuing the restructuring of the credit unions sector
- closer integration of the cooperative banking sector and full implementation of institutional protection schemes
- need for conduction of prudent lending policies by banks, ensuring that borrowers taking out long-term variable-rate loans have adequate income buffers in case of a rise in interest rates
- need for particularly prudent lending policy of banks in the commercial property lending market
- need for investment fund management companies to pay particular care to ensuring adequate asset liquidity of open-ended investment funds.
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Financial institutions’ economic environment

1.1. Macroeconomic situation

Since the previous edition of the Report, the global economy has been developing at a moderate pace. The situation in particular regions continued to diverge significantly. Economic growth in the United States strengthened as a result of the growth in consumer demand, which was accompanied by a certain recovery in private investment. Modest growth persisted in the euro area with the situation varying from country to country. In the major emerging economies, processes which are important for the state of the global economic situation persisted, i.e. a gradual slowdown in economic growth in China and protracted recession in Brazil and Russia.

The economic situation in the euro area underwent a further moderate improvement (0.3% q/q growth of GDP in Q 3 2015 compared to 0.4% in Q 2 and 0.5% q/q in 2015 Q 1), although to a variable extent in different countries. As in previous quarters, growth was concentrated mainly in individual consumption and exports and continued to be supported by low crude oil prices, ECB’s actions and the resulting depreciation of the euro. Economic growth in Germany slowed down slightly (0.3% q/q in 2015 Q 3 compared to 0.4% in the previous quarter), and resulted from the weakening of exports, amid continuing robust growth in consumer demand. Among the remaining large economies of the euro area, moderate growth trends continued in France and Italy, while Spain maintained healthy GDP growth. The recovery strengthened in Central and Eastern Europe, particularly in the countries where no significant macroeconomic imbalances occurred, such as Poland, the Czech Republic and Slovakia. Economic growth was fuelled mainly by consumer demand and public investment, with a growing role of private investment.

According to the latest forecasts (including forecasts of the European Commission and OECD), economic growth in developed countries will gradually strengthen in 2016. However, both in the
United States, which has recorded robust growth, and in the euro area countries, which are characterised by a weaker recovery, the growth will be based above all on consumer demand. The weakness of investment, the source of which lies, among others, in the persistence of high corporate debts in certain euro area countries, raises doubts as to the sustainability of the recovery in developed countries and impacts negatively on the future growth potential. A further slowdown in GDP growth in China is expected, along with a further change in the structure of economic growth (with a tendency towards an increased share of consumption), the persistence of recession in Brazil and a slow return to positive growth in Russia. Strong economic growth will continue in India.

The Polish economy continued to experience robust, and close to potential, growth rate. In the third quarter of 2015 GDP increased by 0.9% sa on a quarterly basis (compared to 0.8% in the previous quarter), which signified an acceleration of annual growth to 3.7% sa, against 3.5% sa in the previous quarter. The growth is still of a sustainable character, with a positive contribution of both domestic demand and net exports. Domestic demand is dominated by consumption, which is growing at a significant rate, both individual (3.1% sa compared to 3.3% sa in the second quarter of 2015), supported by growing employment and rising wages, and public (2.9% sa compared to 3.0% sa in the second quarter of 2015). Attention is drawn to the declining rate of investment growth, which stood at 5.4% sa in the third quarter, compared to 6.3% sa in the second quarter and 8.2% sa in the first quarter. As the high investment growth is maintained (12.3% in constant prices) by companies filing F-01 reports (mainly medium and large enterprises), weaker data on investments may indicate lower investment activity of the public sector. Deflation persisted, and in subsequent quarters the decline in CPI steadily slowed down (~0.7% in the third quarter, compared to ~0.9% in the second quarter and ~1.5% in the first quarter of 2015). The causes of deflation did not change – the prices of commodities and food fell on global markets and low, close to zero price growth was prolonged in the environment of the Polish economy. Low core inflation also persisted (0.3% in the second and third quarters of 2015), which can be interpreted as a lack of demand pressure. Signs of cost pressure still have not been observed in the economy, as evidenced by negative readings of the producer price index in industrial production sold (~2.4% in the third quarter, compared to ~2.1% in the second quarter of 2015). The historically low (close to zero) inflation expectations of enterprises and consumers did not increase significantly.

The continuing economic recovery supported favourable trends in the labour market; however, in subsequent quarters the scale of improvement declined. According to the LFS data, the growth in employment in the second quarter of 2015 slowed markedly (annual growth fell to 1.2% y/y compared to 1.7% y/y in the first quarter of 2015), while the level of employment declined compared to the previous quarter. The LFS data for the third quarter of 2015 indicate a further slowdown in employment growth (1.1% y/y), amid a growing rate of professional activity. In the corporate sector, employment growth remained at a level similar to that observed in previous quarters (1.1% y/y compared to 1.0% y/y in the second quarter of 2015). According to the LFS, the unemployment rate continued its downward trend which has been observed for several quarters. The registered unemployment rate decreased to 10.1% in October, compared to 10.6% in June 2015. At the same time, in the third quarter of 2015 labour offices recorded the highest ever number of job offers. The growth rate of nomi-
nancial wages in the national economy remains stable. In the third quarter of 2015 it was 3.0% y/y, which signifies a slight slowdown compared to the second quarter of 2015 (3.1% y/y). After several quarters of steady growth, wages in the corporate sector clearly grew faster (3.6% y/y). In accordance with the last macroeconomic projection of NBP, the upward trend in wages will continue, but growth in employment may be limited.

The household debt to disposable income and to GDP ratios remained largely unchanged and at a moderate level. The savings rate in the second quarter of 2015 after seasonal adjustments stood at 3.4% and did not change. The voluntary savings rate continued to rise and in the second quarter of 2015 it reached its highest ever level, constituting approx. 90% of all household savings. However, a reversal of this tendency can be expected in the future, mainly as a result of the persistence of low interest rates. The balance of the household sector was still characterised by a surplus of assets over liabilities. However, lower growth of the former was observed (5.6% y/y) compared to the latter (7.5%). Low-risk liquid assets grew particularly fast (cash and short-term deposits), while new liabilities were related primarily to long-term loans.

The situation in the non-financial corporations sector (NFC) in the second quarter of 2015 was good and stable, as in the previous edition of the Report. Although in the third quarter enterprises evaluated the situation as somewhat worse than in the previous quarter, the current assessment of economic condition (BOSE) remained at a level higher than the long-term average. In the second quarter of 2015, both the nominal and real growth in sales revenue remained positive, but lower than in the first quarter of 2015. Consequently, in the second quarter the growth rate of financial result on sales fell (from 13.8% in the first quarter to 8.1% in the second quarter). The percentage of profitable companies in the next consecutive quarter remained at a very high level – in the second quarter it was approx. 77% (sa). The profitability ratios ROE and ROA were higher than in the previous quarter and at historically good levels. The gross and net turnover profitability ratios in the second quarter were seasonally adjusted and declined slightly in relation to the previous quarter, but as in the case of the return on sales ratio, they remained higher than their values a year earlier. Investment growth in the corporate sector in the second quarter of 2015 slowed down and stood at 7.7% y/y (in constant prices) compared to 15.1% in the previous quarter. In the third quarter enterprises expected investment activity to pick up, but expectations for the fourth quarter are already evidence of its slowdown. Investment demand remains, however, at a relatively high level.

Non-financial corporations were characterised by a high level of liquidity and high debt servicing capacity. All the liquidity ratios were still at levels close to their historical highs. In the third quarter, almost 78% of surveyed enterprises - the highest percentage since 2005 - declared a lack of liquidity problems. The total debt of the corporate sector in relation...
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The threat of bankruptcy has decreased in the whole corporate sector. Data for the first three quarters of 2015 indicate a fall in the number of bankruptcies in this sector by 8.6% compared to the corresponding period of 2014 (see Figure 1.1). The direction of changes in the number of corporate bankruptcies is consistent with the direction of changes in the corporate default risk ratio forecast for 2015 presented in the previous edition of the Report.

The situation of the public finance sector indicates the possibility for a further reduction of the public finance deficit. This is supported by a good situation in the real economy, translating into high growth in tax revenue from CIT and PIT. Changes in the pension system and one-off factors also contributed towards an improvement in the general government balance. Deflation which reduces income form VAT, along with problems with collecting this tax, has a depressing effect on the income side of the budget. In accordance with the fiscal notification of September 2015, the size of the general government debt (ESA2010) at the end of 2015 was to reach 51.0% of GDP compared to 50.4% of GDP at the end of 2014. However, the amendments to the budget law for 2015 prepared by the new government and the draft budget for 2016 will most likely lead to a loosening of fiscal policy.

A deficit of PLN 13 billion (preliminary data) on the current account of balance of payments was recorded in the third quarter of 2015, after two successive quarters in which a surplus was recorded. One of the reasons for this was the reduction in the positive balance of Polish foreign trade and in this, the appearance of a negative balance of trade

Figure 1.1. Number of bankruptcies of non-financial corporations in the first three quarters of the years 2006-2015

The absence of a significant bankruptcy risk is also observed in “systemically important” sectors. The results of the forecasts presented in the Report of July 2015 indicated that in the perspective of 2015 a deterioration in debt servicing capacity should not be expected in these sectors. In the first three quarters of 2015, there were similar numbers of bankruptcies recorded in these sections of economy as in the same period a year earlier, which is consistent with expectations.

See “Information on the condition of the enterprise sector, including the economic climate in 2015 Q3 and forecasts for 2015 Q4”, NBP, No 04/15 (October 2015).

“Systemically important” sectors are considered to be those sectors whose share in the whole corporate sector’s credit is the highest and whose credit is largely concentrated in several enterprises.

In the first half of 2015 two “systemically important” sectors were identified: Production and supply of electrical energy, gas, hot water, and Telecommunications and the Postal Activities.
in goods. Poland’s gross foreign debt increased in the second quarter of 2015 by 7.7% y/y, reaching PLN 1285.8 billion. There was mainly an increase in foreign liabilities of the banking sector and to a smaller extent of the general government. The foreign debt remained stable in relation to GDP (approx. 73%), after an increase of 1 percentage point in annual terms.

Poland’s economic growth outlook continues to be good. According to NBP’s central projection path presented in the November “Inflation Report”, the economy will develop in the years 2015-2017 at a rate close to that which has been observed in the last quarters (average of approx. 3.4%). The growth will be driven by domestic demand in the form of increase in consumer and investment spending. Similar predictions for Poland present the autumn forecasts of the European Commission and the Organisation for Economic Cooperation and Development. It is expected that growth will continue to be of a sustainable character, and will consist of, among others, closing the output gap, a further fall in the unemployment rate, and the limited general government deficit. The current account deficit will gradually deepen, while maintaining a safe structure of financing.

The main risks to the development of the macroeconomic situation in Poland, according to the scenario consistent with the current NBP projection, are located in the environment of the Polish economy. The expected improvement in the economic situation of Poland’s main trade partners, particularly in the euro area, will proceed slowly. One risk is a stronger slowdown of the Chinese economy than currently expected, which may weaken the economic situation in Germany through the trade channel, and also indirectly affect the export sector of the Polish economy. The expected expansion of the ECB’s programme of government bond purchases on the secondary market may act in the opposite direction. This should foster an improvement in the economic situation by enhancing liquidity of the banking sector and stimulating lending as well as export growth as a result of the expected depreciation of the euro. A risk factor in the Polish economy remains the delivery of certain election promises, if they result in a significant weakening of public finance discipline. The sustainable nature of the Polish economy over many quarters and the stability of the country’s financial system account for the resilience of the Polish economy to shocks, and thus significantly increase the likelihood of the scenario of continuing economic recovery, resulting from NBP’s November projection.

1.2. Developments in financial markets

1.2.1. Global markets

In the period analysed, price volatility in the global financial markets continued to grow (see Figure 1.2). A sharp fall of equity prices on the stock exchanges was observed, accompanied by a drop of commodity prices and a depreciation of currencies of the commodity-exporting countries. The trends were mostly affected by the slowdown in developing countries12, a collapse of prices on the Chinese equity market, devaluation of the Chinese yuan against the US dollar, and asymmetric measures taken by major central banks.

The behaviour of global investors was determined

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12The IMF revised downward its growth rate estimate for the emerging economies for 2015 to 4.0% from 4.2% (“World Economic Outlook”, IMF, October 2015). The projection for those economies for 2016 was revised downward twice: first to 4.5% from 4.7% (“World Economic Outlook”, IMF, October 2015), and then to 4.3% (“World Economic Outlook. Update”, IMF, January 2016).
by the uncertainty about economic conditions in developing countries. The expansionary monetary policy of major central banks in recent years boosted the search for yield, which resulted in an increase in exposure of global investors to the emerging markets. The debt growth of enterprises from these countries, largely financed from foreign sources, contributed to a significant increase in the sensitivity of local financial markets to external factors.\textsuperscript{13} Shifts in the monetary policy of major central banks may contribute to an outflow of foreign capital from developing countries, which could cause the GDP growth rate of these economies to drop further.

Figure 1.2. Volatility indices for selected segments of global financial markets

![Volatility indices for selected segments of global financial markets](image)


Collapse of prices in the Chinese equity market contributed to a slump of global stock exchange indices in August 2015. The structural conditions of China’s economy and financial system raised investor concerns as to whether the stock prices of Chinese companies properly reflect their fundamental value. The growth of these concerns in mid-June led to a sharp fall of the prices of these instruments. The measures taken by the Chinese authorities to halt the trend, including the suspension of trading in equity instruments of around half of the issuers and the substantial limits imposed on the sale of shares by certain investor groups, did not avert further equity price falls. August 2015 and January 2016 saw another slump of the Shanghai Composite index and indices on developing markets, including S&P500 and EUROSTOXX 50, followed suit (see Figures 1.3).

Figure 1.3. Selected stock market indices

![Selected stock market indices](image)

Note: Data normalised to 100 points as of 31 May 2015. Source: Thomson Reuters.

The behaviour of financial market participants was also heavily affected by the uncertainty over the start of the interest rate hike cycle by the Fed. At its September meeting, the Fed decided to keep interest rates unchanged, which led to a temporary fall in volatility on the global financial markets. One of the factors behind the decision were global economic and financial developments which may, in the near-term perspective, restrain economic activity in the United States.\textsuperscript{14} The stabilisation of the situation on the stock and currency markets of the emerging economies, observed in October, and the release of significantly better-than-expected labour market data in the United States, intensified investor


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expectations for the start of the interest rate hike cycle by the Fed already in 2015. In line with those expectations, on 16 December the Fed raised interest rates by 25 basis points for the first time since June 2006. The new band for the benchmark Federal Funds Rate was set at 0.25%-0.50%. In a press release after the meeting, the Fed pointed out that taking into account expected changes in economic conditions, monetary policy would be tightened gradually.\footnote{Press release after the Fed meeting of 16 December 2015, available at http://www.federalreserve.gov/newsevents/press/monetary/20151216a.htm.}

Expectations of investors for the ECB’s more expansive monetary policy and its decision to extend the duration of the expanded asset purchase programme (EAPP) were of major importance for European financial markets. The growth of expectations for the expansion of the scale of asset purchases under the EAPP resulted primarily from concerns about a negative impact of the economic slowdown in developing countries and the fall in commodity prices on the GDP growth rate and inflation in the euro area. The statement of the President of the ECB after the October meeting of the Governing Council, in which Mario Draghi signalled readiness to expand the scale or extend the duration of the EAPP,\footnote{Press release after the meeting of the Governing Council of the ECB of 22 October 2015, available at https://www.ecb.europa.eu/press/pressconf/2015/html/is151022.en.html} further exacerbated the decline in the yields on government bonds of euro area countries observed since July 2015 (see Figure 1.4). In the case of some of these countries, e.g. Germany and Italy, the yields were close to their historical lows.

A temporary rise in credit risk of the euro area peripheral countries observed in the summer was driven by political developments in Greece and investor concerns about the country’s solvency. Greece’s credit risk assessment improved after the country pledged on 13 July 2015 to meet the terms of the aid programme imposed by the European Commission and the ECB (see Figure 1.5).


after 3 December 2015, when the Governing Council of the ECB, contrary to investor expectations, did not increase the scale of monthly securities purchases under the EAPP. The ECB decided to cut the ECB deposit rate by 10 basis points to -0.3%, continue to carry out purchases under the EAPP until at least March 2017, expand the scale of the programme to include municipal bonds and reinvest the principal payments on the securities purchased under EAPP. In consequence, a rise in yields on government bonds of both developed and developing countries was observed, and the euro appreciated markedly against the US dollar.

1.2.2. Money market

In the analysed period, the Monetary Policy Council (MPC) maintained the NBP interest rates at historically low levels and the expectations of market participants regarding the direction of NBP’s monetary policy and the future level of the rates were changing visibly. In June 2015, in connection with the publication of better-than-projected macroeconomic data on the euro area and Poland, FRA rates reflected expectations of NBP interest rate hikes (see Figure 1.6). However, these expectations faded in July 2015 after, among others, the publication of the NBP inflation projection which assumed deeper-than-expected deflation in Poland in 2015. From July to November 2015, expectations of a further NBP interest rate cut grew due to unfavourable trends in the emerging economies and the announcements of a further monetary policy easing by the ECB. The expectations were strengthened by the growing uncertainty of market participants of whether the MPC during its next tenure would continue the NBP’s present monetary policy. Depreciation of the zloty against the euro in the December 2015 and January 2016 diminished market participants’ expectations regarding the scale of the NBP’s rates cuts. In mid-January, FRA rates showed that market participants expected interest rates to be cut by 25 basis points by mid-2016.

Figure 1.6. Current and expected WIBOR rates

The functioning of the domestic money market was stable, with a further gradual decrease in banks’ activity in the deposit market. The WIBOR 3M/OIS 3M spread remained in the range of 15–35 basis points, reflecting the low perceived credit risk of domestic banks. The average daily net turnover in this market in the second half of 2015 amounted to 3.9 billion zlotys, that is approx. 4% less than in the first half of the year. O/N transactions continued to prevail markedly (approx. 85% of the value of all transactions) in the term structure of the unsecured interbank deposits market. A mild fall of liquidity was also observed on the interbank PLN-denominated fx swap market and the repo market. Domestic banks could hedge open on-balance-sheet currency positions on favourable terms using swaps. As a result of the low cost of interbank financing in the euro, resulting from lenient monetary policy of the ECB, EUR/PLN CIRS basis premia from June to 18 January 2015 were negative,

which meant that domestic banks reducing market risk through operations in this market, to limit the mismatch between on-balance-sheet assets and liabilities, received from foreign banks interest payments arising from a negative (in the analysed period) reference rate for interest rates in the euro, increased by the absolute margin and payments calculated according to the WIBOR reference rate. The implied interest rate of the zloty in fx swap transactions was close to the WIBOR rates.

1.2.3. Foreign exchange market

A gradual and slight depreciation of the zloty against the euro amid the declining volatility of the EUR/PLN exchange rate was observed from June to November 2015. The aforementioned global factors, which caused a depreciation of a number of emerging economies’ currencies and a surge in volatility of their exchange rates, had a weakening effect on the zloty, but the changes in its value were moderate (see Figure 1.7). The low volatility of the EUR/PLN and USD/PLN exchange rates, when compared with the exchange rates of other developing countries’ currencies, resulted primarily from the stable condition of the Polish economy – the released macroeconomic data confirmed that it is well-balanced.

Significant changes of EUR/PLN exchange rate were observed in December 2015 and January 2016. The marked increase of the EUR/PLN exchange rate in the first half of December reflected a combination of local factors (mainly investors’ uncertainty about the economic policy of the new Polish government) and global factors (appreciation of the euro in global markets following the ECB’s decision on the EAPP). After temporary appreciation in the second half of the month, zloty depreciated in January 2016.

In reaction to an unexpected downgrade by S&P on 15 January 2016 of Poland’s credit rating from A- to BBB+, and its outlook from positive to negative, the EUR/PLN exchange rate rose significantly, reaching a 4-year maximum. It was the first rating downgrade in history of Poland. The decision was justified predominantly by the new government’s legislative measures which, in the agency’s view, negatively affect the independence and effectiveness of a number of major public institutions. On the same day Fitch confirmed Poland’s credit rating at A- (with stable outlook), while Moody’s did not release any official statement, upholding its credit rating for Poland at A2 (with stable outlook). Moreover, on 13 January 2016 the IMF published positive results of its annual review of the terms on which Poland can access the Flexible Credit Line (FCL), which was reduced in 2016 at the request of the Minister of Finance from USD 21.4 billion to USD 17.9 billion.

The zloty exchange rates against the US dollar and the Swiss franc were largely determined by the movements of, respectively, EUR/USD and EUR/CHF exchange rates, as well as the relative value of the zloty against the euro. The expected di-

![Figure 1.7. Zloty exchange rates and their volatility](image-url)
vergence in the policies of the ECB and the Fed, leading to a depreciation of the euro against the US dollar, translated into a significant rise of the USD/PLN exchange rate, which reached its highest level since 2004. The CHF/PLN rate was affected mainly by changes in the EUR/PLN exchange rate. Temporary rise of the CHF/PLN exchange rate observed at the turn of June and July 2015 was the result of investors’ higher uncertainty about the Greece’s solvency and the weakening of the euro against the Swiss franc.

Figure 1.8. Yields on domestic government bonds and the spread between yields on Polish and German government bonds

Note: Data pertain to bonds denominated in domestic currencies.
Source: Thomson Reuters.

1.2.4. Bond market

The visible downward trend in the yields on domestic government bonds observed until November 2015 across the yield curve, stemmed from expectations regarding future monetary policy of the NBP and the ECB. A steady fall of the yields on these instruments from July to November (see Figure 1.8) was the result of the mounting expectations of NBP interest rates cuts. In addition, the ECB’s announcement of a likely expansion of the scale and extension of the duration of the asset purchase programme strengthened the demand for Polish government bonds among foreign investors. Aforementioned tendencies prevailed over factors resulting in temporary increases of the yields (i.a. concerns about economic situation in developing countries, uncertainty about fiscal policy of the new Polish government). At the same time, increased volatility on global financial markets contributed to a slight increase in the cost of hedging against Poland’s credit risk (see Figure 1.5).

In December 2015 and January 2016 significant changes in prices for domestic government bonds were observed. Prices of these instruments fell sharply in the first half of December and their yields returned to the yearly highs from the end of June 2015. These developments were fuelled by concerns that the less expansive than investors projected monetary policy of the ECB may, in the context of an expected interest rate hike by the Fed, reduce the attractiveness of these instruments for investors. Local factors, i.e. market participants’ uncertainty about the size of the budget deficit, the sources of income to finance higher spending and the possibility of an increase in the supply of government bonds in 2016, had a significant impact on the rise in government bond yields and the steepening of the yield curve. After a temporary decrease in the second half of December yields on domestic government bonds returned to the levels observed in June 2015 as a reaction to the aforementioned downgrade of Poland’s credit rating and its outlook by S&P on 15 January 2016. In consequence, the spread between the yields on Polish and German 10-year government bonds widened to over 270 basis points, reaching the highest level since March 2014. Moreover, the S&P’s decision had a negative impact on the cost of hedging against Poland’s credit risk, which was reflected in a significant increase in the CDS premia.

The government bond market in Poland was char-
characterised by a diversified investor structure, with a strong position of domestic banks and a stable exposure of non-residents. Banks held the largest government bond portfolios among domestic entities. Non-residents’ exposure to the domestic government bond market was stable and exceeded 200 billion zlotys in the entire period analysed (see Figure 1.9). It was supported by a good assessment of Poland’s economic situation, confirmed by the Ecofin Council’s decision of 19 June 2015 to lift the excessive deficit procedure, and attractive yields on domestic government bonds relative to issuer’s credit risk as well as euro area bonds with the highest ratings. Among foreign investors, the share of investment and hedge funds dropped significantly, and at the same time the share of central banks and public institutions, perceived as long-term investors, increased (see Figure 1.10).

Figure 1.9. Investors’ exposure to the domestic government bond market

The gradual decline in domestic government bond market liquidity is, to a great extent, related with structural changes in the global financial system. The depth of the market, in terms of its capacity to absorb relatively large orders without significantly affecting the price, as well as its breadth measured by the value of outright transactions, have been slowly diminishing since 2013 (see Figure 1.11). Similarly unfavourable trends have been observed on a number of debt securities markets, both in developed and emerging markets. These trends are primarily the result of structural factors, which include, among others, the introduction of regulations that result in higher business costs for market makers and limitations on their activity, changes in the structure of investors (rising exposure of long-term passive investors, relevant for, inter alia, the domestic government bond market in Poland) and bond purchases by some central banks under the liquidity provision programmes. A further marked fall in the liquidity of Poland’s government debt securities market may limit its resilience to investors’ behaviour. With lower liquidity of this market, an abrupt outflow of capital or a rise in risk premium may lead to a sharp increase in the yields of these instruments and increased volatility of their prices.

Figure 1.10. Foreign investors’ exposure to the domestic government bond market

Figure 1.11. Hui-Heubela liquidity index for the domestic market for government bonds of 5- and 10-year maturities

**Note:** The Hui-Heubel liquidity index for the government bond market shows the relationship between the change in the price of those instruments in the indicated period (the difference between the highest and lowest prices over a 5-day period for the series of benchmark bonds specified in Thomson Reuters) and the total value of turnover in these instruments in the outright market in relation to the total outstanding value of those bonds. A higher value of the index implies lower market liquidity.

Source: Developed on the basis of data from KDPW and Thomson Reuters.

### 1.2.5. Equity market

Substantial falls of the WSE indices from June 2015 to January 2016 reflected, to a large extent, trends in the stock markets of other emerging economies (see Figure 1.3). The sharp fall in share prices in August 2015 and January 2016 stemmed from a global rise in risk aversion, which was fuelled by concerns about the slowdown in developing countries, declining commodity prices and the situation in the Chinese equity market. The downward trend on the WSE was accompanied by a drop in foreign investor exposure to the domestic equity market and a net outflow of funds from domestic equity investment funds.

From September until January 18, 2016, the prices of shares listed on the WSE were strongly affected by local factors. In this period, WIG and WIG20 indices dropped by 17% and 22%, respectively, whereas MSCI EM dropped by 14%. In reaction to S&P’s decision to downgrade Poland’s credit rating, the index of the largest and most liquid companies in the WSE reached its lowest value since April 2009. The changes of the aforementioned indices were largely determined by a strong decrease in the stock prices of banks and energy companies – the sub-indices WIG-banki and WIG-energia fell by approx. 23%. The falling market valuations of domestic banks were impacted by investors’ assessment of the financial consequences for these entities of the following: the introduction of a tax on some financial institutions, the additional burden arising from the need to pay out guaranteed deposits after the suspension of SK Bank in Wolomin by KNF and uncertainty over the potential costs of possible actions aimed at reducing the value of the foreign-exchange-denominated loans portfolio. In the case of companies from the energy sector, the fall in share prices largely reflected market participants’ expectations about the cost of support provided by these companies to the coal mining industry.
1.3. Situation in the real estate market

The cycle, which started with the 2004-2008 boom in the residential markets in Poland's largest cities, came to an end, and the markets have entered the upswing phase in a new cycle. The current phase is marked by a temporary balance between demand and supply. At the same time, the commercial real estate market, especially the office market, continued to see an imbalance between demand and surplus and still rising space supply resulting from the implementation of new investment projects.

Figure 1.12. Transaction prices of dwellings in the primary and secondary markets in Poland

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

Source: NBP.

Residential real estate market

Although the residential market entered a new cycle, average transaction prices in the primary markets remained stable (data concern Poland’s 17 largest cities). Amidst deflation, real average transaction prices per square meter of housing (deflated with CPI) showed a slight increase both in the primary market as well as in the secondary market. At the same time, prices in relation to growing wages in the enterprise sector stagnated. Housing prices also remained stable in the secondary markets, showing a slight decline in the Warsaw market only. This was driven by the sale of a bigger number of poorer quality or worse location dwellings. This is confirmed by the analysis of hedonic prices in the Warsaw secondary market. Rent rates, after an approx. 6-year stabilisation period posted a slight increase.

Figure 1.13. Average (offer and transaction) rent rates in Poland’s selected cities

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<tr>
<th>City</th>
<th>Gdańsk</th>
<th>Gdynia</th>
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Source: NBP.

The structural shortage of housing in some of the largest cities is a factor affecting the long-term demand for new dwellings. The demographic factor (i.e. population growth, growing number of households and migration) which had a major impact in the previous boom is currently fading away and it may be observed in Warsaw only. Economic factors, namely stable wage growth and declining unemployment, are of major importance.

\[\text{A more detailed description of developments in the residential and commercial real estate market can be found in the 2015 quarterly reports and in the annual report "Report on the situation in the residential and commercial real estate market in Poland in 2014."} \]

\[\text{The hedonic home price index is described in an article by M. Widłak (2010) "Metody wyznaczania hedonicznych indeksów cen jako sposób kontroli zmian jakości dóbr," Wiadomości Statystyczne No. 9.} \]
The short-term rebound observed in the housing market is mainly driven by the interest rate reduction and affects both via the credit channel (credit growth) and the investment channel (cash purchases supported with loans). The impact of Poland’s fiscal policy on housing demand increased (larger disbursements under the government-subsidized housing scheme MDM [Housing for the Young] were observed). Maximum price limits per square meter of housing admitted under the housing scheme MDM in the third quarter of 2015 remained unchanged in the six largest markets and increased slightly in the ten cities. As the scheme was expanded to include secondary market dwellings as of the third quarter of 2015, it may be expected that the scheme will attract more attention in subsequent quarters. At the same time, financing of interest on loans granted under the government-subsidized housing scheme RNS [Family on their Own] is coming to an end, which will increase the amount of loan instalments repay by borrowers under this scheme. However, thanks to historically low interest rates this should not pose a major problem for servicing these loans. The second quarter saw a rise, and the third quarter a decline in the estimated availability of residential loans, housing and loan-financed housing. This was driven by stable real estate prices, low (the second quarter) and somewhat higher (the third quarter) nominal interest rates on new złoty housing loans and a rise in nominal wages. The average housing availability in the largest cities at the end of the third quarter of 2015 was 0.83 square meter per average monthly wages in the enterprise sector, i.e. it was by 0.34 square meter higher than the minimum observed in the third quarter of 2007.

The analysed period saw a rise in supply in the residential real estate market. The number of applications for new housing permits, new housing permits and the number of housing under construction was rising. The rising supply was supported by the continued high profitability of residential development projects, which was driven by still high housing prices amidst the stabilization of costs of building materials and construction works observed over the past few years. The estimated return on residential development projects at the end of the third quarter of 2015 remained at the level of approx. 15-18%.

The real estate development industry also saw a declining number of bankruptcies.

Changes in the upper limits of prices of dwellings available under the government scheme MDM somewhat altered the estimates of the annual rate of return on real estate development projects sold under this scheme from 11% to 9% in the case of Kraków, from 11% to 10% in the case of Warsaw while remaining at level of approx. 14% and 7% in Gdańsk and Wrocław.

Figure 1.14. Available housing loans and the accumulated index of changes in banks’ credit standards with regard to housing loans

Note: Definition of available housing loan in Glossary.
Source: NBP, GUS.

21Financial data of real estate developers generally show low business profitability, which is also reflected in low stock market prices of the largest companies in the sector. This is driven by various factors such as the specific nature of real estate developers’ accounting books (the sale of a construction contract is not recognized as income; income is settled only after the building has been completed), historical burden of companies resulting from wrong decisions and tax optimization.
Growing demand for dwellings did not translate into dwelling price growth and the selling time of the housing unit was stable. Growing demand was set off by rising supply, which was the result of the creation of large, strong development companies having at their disposal both, building sites and investment projects, and an increase in housing production triggered by higher demand expectations. Moreover, developers increased their production as they expected a change in the act on the protection of developer’s clients.\footnote{Changes in the act on the protection of developer’s clients have been announced since the end of 2014. The proposed changes of the act aimed to increase the protection of the clients, among others by deleting the open escrow account without an additional insurance and by regulating the reservation contracts. However, the project of the new act was not voted by the previous Sejm and did not come into life. Developers increased their production, because all construction that was started before the new act would have come to life would be regulated by the old act.}

tivity, mainly among foreign investors.

Figure 1.18. The housing production indicator in Poland

![Graph showing the housing production indicator in Poland.](image)

Note: Definition of the housing production indicator in Glossary. Source: GUS.

The growing supply of commercial space boosts competition, which translates into increasing vacancy rates and falling rents. This is also reflected in the falling valuation of participation units of closed-end investment funds investing in commercial real estate.

The commercial real estate sector does not pose a threat to the stability of the banking sector due to the limited exposure of domestic banks in this market. In the case of commercial real estate financed by bank loans, the credit risk may rise and the quality of mortgage may deteriorate. If the real estate was purchased by close-end investment funds, their administrators may have problems with selling the real estate at the expected price or at a scheduled date. The banking system, considering the negative and costly experience of other countries with the commercial real estate market, should exercise particular caution when assessing the quality of the mortgage and borrowers’ capacity to repay the loan out of the income which the real estate may generate. In the first three quarters of 2015 the value of investments was close to that observed in the corresponding period of 2014. The bulk of investments concerned sales and purchases of office buildings.

Figure 1.19. Performance indicators of closed-end investment funds in the commercial real estate market

![Graph showing performance indicators of closed-end investment funds.](image)

Note: 2008 Q2 = 100. Source: NBP calculations based on data from websites of investment funds.

The growing supply of commercial space boosts competition, which translates into increasing vacancy rates and falling rents. This is also reflected in the falling valuation of participation units of closed-end investment funds investing in commercial real estate.

The commercial real estate sector does not pose a threat to the stability of the banking sector due to the limited exposure of domestic banks in this market. In the case of commercial real estate financed by bank loans, the credit risk may rise and the quality of mortgage may deteriorate. If the real estate was purchased by close-end investment funds, their administrators may have problems with selling the real estate at the expected price or at a scheduled date. The banking system, considering the negative and costly experience of other countries with the commercial real estate market, should exercise particular caution when assessing the quality of the mortgage and borrowers’ capacity to repay the loan out of the income which the real estate may generate. In the first three quarters of 2015 the value of investments was close to that observed in the corresponding period of 2014. The bulk of investments concerned sales and purchases of office buildings.

Figure 1.20. Value of investment transactions in the commercial real estate market

![Graph showing the value of investment transactions in the commercial real estate market.](image)

Source: Comparables.pl.
Chapter 2.

Banking sector

In recent years banks’ assets have been growing slightly faster than the overall economy. As a consequence, the size of the banking sector has increased relatively to GDP. However, this ratio remains comparatively low (just over 90% in September 2015), which indicates that the indebtedness of the economy is not excessive. Assets of the cooperative banks were increasing at a slightly higher pace than those of commercial banks.

2.1. Lending

Banks’ lending activity is an important source of funding for the economy and, at the same time, remains crucial for the profitability and solvency ratios of the banking sector. Given the fact that banks focus on traditional banking services, interest income contributes the most to the net income from banking activity and as a result influences banks’ capacity to increase equity. Credit-related risk is the decisive factor in determining the level of capital requirements for banks (see Figure 2.35).

Note: Loans* – annual growth rate, three-month moving average; Loans** – annual growth rate excluding the impact of foreign exchange rate changes, three-month moving average.

Source: Own calculations based on GUS and NBP data.

Lending trends have not changed substantially in comparison with those described in the previous edition of the Report. The environment of low interest rates, stable economic growth and conducive developments in the labour market have supported lending expansion. Growth in lending to the non-financial sector (4.8% y/y at the end of September 2015).

Changes in loan volumes referred to in Chapter 2.1 apply to data excluding the impact of foreign exchange rate changes. Unless otherwise indicated, the period analysed in Chapter 2.1 covers the period from 31 March to 30 September 2015.
ber 2015\textsuperscript{22}) almost mirrored nominal GDP growth (see Figure 2.1), and in consequence has not con-
strained economic growth nor generated imbalances that could endanger financial stability. When com-
pared to other European Union countries, Poland registered one of the highest lending growth in re-
cent years (see Figure 2.2).

Figure 2.2. Growth of loans to the non-financial sector in the period of December 2008 – October 2015

Source: Own calculations based on ECB data.

Loans to households

The annual growth rate of housing loans has been decreasing steadily (2.8% at the end of September
2015, see Figure 2.3). The decline was a result of slowing, albeit still high, growth in PLN loans (11.8% y/y) and lingering slump in the value of FX loans (-6.6% y/y – see Figure 2.4). At the same time, data from the ZBP indicate that the amount and value of new housing loans in 2015 was close to the levels observed in the years 2013–2014\textsuperscript{24}.

Banks have continued to tighten their lending policies in the category of housing loans, which was influenced mainly by regulatory issues. Moreover, banks have been pointing out to lower-than-expected demand for loans, arising from the in-
vestors’ increased use of alternative sources of funding when purchasing residential properties.\textsuperscript{25}

Figure 2.3. Annual growth rate of selected loans to the non-financial sector, y/y

Source: NBP.

Figure 2.4. Growth rate of housing loans, y/y

Source: NBP.

Consumer lending growth has remained stable since mid-2014 (5.2% y/y at the end of September
2015). Data provided by the Credit Information Bu-
reau (BIK) show, however, that the structure of lend-
ing is changing – the amount of higher-value loan
contracts has been rising, while for the lower-value

\textsuperscript{24} See “AMRON-SARFiN Report 2/2015. Nationwide report on housing loans and property transaction prices”, November 2015, ZBP.

\textsuperscript{25} See “Senior loan officer opinion survey on bank lending practices. 4th quarter of 2015”, October 2015, NBP.
contracts it drops – which might hint to part of the clients migrating to non-supervised financial entities.\textsuperscript{26} The average cost of loan for a borrower has not changed significantly, although some banks have raised non-interest loan costs subsequent quarter in a row\textsuperscript{27}, partially to offset the interest rate cut. On the other hand, the majority of banks have not changed their lending standards since June 2015.

Corporate loans

In the given timeframe, the annual growth in corporate loans increased significantly. The pace of growth in September was the fastest since October 2012 (7.2% y/y), which resulted from the sustained robust expansion in investment loans and a substantially faster growth in working capital loans (see Figure 2.5), mostly to large enterprises. Although the availability of loans remained high (which was reflected by the high rate of approved loan requests), the increase in corporate sector debt was accompanied by a decrease in the share of enterprises applying for loans\textsuperscript{28}. This allows to assume that lending has risen due to existing borrowers either incurring new, or revolving large-value loans. The availability of credit was supported by a slight easing of the credit standards and terms in the third quarter of 2015.

Cooperative banks

In the cooperative banking sector, hitherto identified trends in lending and changes in the loan structure portfolio have continued. From the start of 2015, growth in consumer loans has followed an upward trend (5.3% y/y) while growth in housing loans (15% y/y) has been sustained. On the other hand, corporate loans growth has decelerated, primarily due to subdued activity in this credit category of the largest cooperative banks (see Figure 2.6). A feature distinguishing these banks from the rest of the cooperative banking sector is an already high share of corporate loans in their portfolios (see Chapter 2.2.2.).

![Figure 2.5. Growth rate of corporate loans, y/y](source)

![Figure 2.6. Growth rate of corporate loans at cooperative banks, y/y](source)

\textsuperscript{26}See “Kredyt trendy. Raport Biura Informacji Kredytowej”, September 2015, BIK.

\textsuperscript{27}See “Senior loan officer opinion survey on bank lending practices. 4th quarter of 2015”, October 2015, NBP.

\textsuperscript{28}See “NBP Quick Monitoring Survey. Economic climate in the enterprise sector in 2015 Q3 and forecasts for 2015 Q4”, October 2015, NBP.
Outlook

Macroeconomic factors provide reasons to expect that lending will continue to rise at a moderate pace. However, uncertainty over the direction and scale of banks’ adjusting reactions to the introduction of new tax burdens, including a tax on some financial institutions, impedes projections casting. NBP forecasts indicate that economic growth will continue at a stable pace over the NBP projection horizon – at around 3.3–3.5%, the labour market will improve further and individual consumption will increase. Moreover, lending growth will be driven by the environment of historically low interest rates.

On the supply side, credit growth will be dampened by a further drop in banks’ profitability, reducing their capability to cumulate the capital necessary to expand lending and by the commitment to hold higher capital adequacy ratios (see Chapter 2.6.).

The fall in profitability will stem from a rise in banks’ costs (among others, payments made from the Guaranteed Deposit Protection Fund, higher contribution to the Bank Guarantee Fund in 2016 and new contribution to the Borrowers’ Support Fund) and, ceteris paribus, banks’ likely adjustment in response to a tax levy on some financial institutions (including the attempts to offset the tax burden by raising credit spreads and charges and to optimize the tax base).

It seems that future growth trends in housing loans are subject to relatively highest degree of uncertainty. The absence of visible changes in the amount of new housing loans over the past three years, amid a decrease of around 2.5 percentage points in the average interest rate in new contracts, may imply a relatively low price elasticity of demand for this type of credit. Therefore, raising credit spreads may not necessarily translate into lower loan demand. However, it is possible that banks will raise spreads in even greater scale than the corresponding tax rate, as the currently low profitability of the portfolio of housing loans (resulting from, among others, low-spread FX loans granted in the past) means that buffers in the event of loan quality deterioration are low.

Among factors supporting credit growth there are expected improvement in the labour market, price stabilisation on the residential property market, low interest rates and an extension of the government-subsidized purchase scheme “Home for the Young”. The amendments introduced to the relevant scheme, among others, allowed for the increase in the price ceilings and the amount of a subsidy for people with children as well as allowed subsidizing the purchase of properties on the secondary market (the survey data indicate that in 2014 around 54% of loans in banks’ portfolios were granted for purchase of properties on the secondary market).

On the other hand, the availability of housing loans will be constrained by regulatory factors, including lower 85% maximum permissible level of LTV and the KNF recommendation requiring that in the creditworthiness assessment, the cost of living of a household should be calculated at a level not lower than the minimum subsistence level (the survey data show that in the case of almost half of loans originated in 2014, banks assumed the cost of living equal or lower than the minimum subsistence level).

In the consumer loan category, factors conducive

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29 See “Inflation Report - November 2015”, NBP.
30 Four banks announced they would raise spreads on housing loans as early as December in response to the plan to levy a tax on some financial institutions.
to lending growth should prevail in the upcoming quarters. The robust labour market (including wage growth) and strong consumer optimism (the readings of consumer sentiment indices are their highest since 2010\(^{33}\)), amid stable savings rate and low interest rates, should encourage more loan-financed consumption. From the banks' perspective, incentives for lending expansion in this category will include low capital requirements for retail loans and high profitability of this product. In the context of new tax on some financial institutions, banks can be expected to increase the share of most profitable assets in their balance sheets.

The new method of setting the maximum interest rate, due in 2016, (the maximum annual interest rate, now equivalent to the NBP Lombard rate multiplied by four, will be replaced by the sum of the NBP reference rate and 3.5 percentage points, multiplied by two)\(^{34}\) reduces the impact of changes in the NBP interest rates on the maximum permissible interest rate. On the other hand, the adoption of new legal ceiling, in force since 2016, on non-interest costs in consumer credits can inhibit loan origination to higher-risk clients, in which cases it would be impossible to offset new tax burden by simply increasing interest rate and non-interest costs, because such an increase will violate new legal limit.

Macroeconomic circumstances and the broad system of incentives may boost lending to enterprises, while the new tax on some financial institutions and the low propensity of enterprises to use credit will have an opposite impact. The outlook seems to be positive in the context of stable economic growth projections and higher spending of EU funds under the new 2014-2020 financial framework, which will support growth in demand for investment loans (the new framework, compared with the former 2007-2013 funding period, puts more emphasis on the use of repayable instruments). The government de minimis Portfolio Guarantee Facility, presumed to last until the end of 2016, and new guarantees available from 2015 for micro-, small and medium-sized entrepreneurs under the COSME programme will also continue to support lending in the corporate sector\(^{35}\).

A response to the introduction of a tax on some financial institutions may involve relocation of credit provision to corporates to foreign parent entities of domestic banks or to other entities from the capital groups (like leasing or factoring companies) financed by parent company. Such practices could result in deterioration of the tax base of domestic banks. Furthermore, banks could also reduce long-term loan supply.

Corporates’ persistently low propensity to use external funding may also hamper lending growth. Surveys show that the group of SMEs planning to apply for a loan is diminishing, while at the same time, the share of large enterprises planning to repay their debt is rising\(^{36}\).

The recently adopted and the announced changes in the legal environment of the banking sector are adding to the uncertainty about the lending outlook. These changes may alter the lending dynamics in opposite directions. The abolishment of the bank enforcement order and the new consumer insolvency regime (see Box 1) may lead to the tightening of loan terms. From the other angle, the an-

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\(^{34}\) The Act of 9 October 2015 on amending the Act on Trade Transaction Payment Dates, the Law – Civil Code and certain other acts (Journal of Laws of 2015, item 1830).

\(^{35}\) The BGK guarantee with EIF’s counter-guarantees under the w COSME programme (PLG COSME), see https://www.bgk.pl/przedsiebiorstwa/poreczzenia-gwarancje/gwarancja-bgk-z-regwarancja-efi-w-ramach-programu-cosme-plg-cosme/.

\(^{36}\) See “NBP Quick Monitoring. Economic climate in the enterprise sector in 2015 Q3 and forecasts for 2015 Q4”, October 2015, NBP.
nounced child benefits and the planned support instruments for investment funding in enterprises (inter alia, double tax deductions on investments and accelerated depreciation of investments in innovative projects) may have a positive impact on loan demand.

2.2. Credit risk

There has been a continued slow improvement in the quality of the portfolio of loans to the non-financial sector and in credit risk materialization costs.

Excluding the impact of Spółdzielczy Bank Rolnictwa and Rzemiosła in Wolomin (hereinafter: SK bank), the quality of loans to the non-financial sector in cooperative banks has not changed substantially. Following the appointment of a receiver at SK bank, serious irregularities were identified with regard to the assignment of entities to appropriate risk groups, as a result of which the bank’s impaired loan ratios deteriorated significantly and its credit losses increased. Given the size of the loan portfolio and the scale of growth of impaired loans at this particular bank, this was of considerable significance for the quality of loans in the whole cooperative banking sector, mainly for corporate loans.

2.2.1. Credit risk of loans to households

The quality of loans to households has not changed substantially (see Figure 2.7). This assessment applies to both commercial and cooperative banks. At the same time, the quality of household loan portfolios in cooperative banks was much better than in commercial banks, especially in small and medium-sized cooperative banks.

After the period of deterioration in the quality of housing loans, the process was halted in the last two quarters (see Figure 2.8). This was driven by impaired debt sale transactions and better repayment performance of housing loans (a decline of the percentage of loans in arrears, loans in shorter arrears in particular). The improvement in loan quality was supported by the robust labour market.

The impact of the persistently high Swiss franc exchange rate on the cost of credit risk was minor, due to low Swiss franc interest rates. The situation of borrowers was also positively affected by wage growth, which had occurred from the date when most of these loans had been granted (this, in particular, applies to the people who incurred the loan before the end of 2007).

However, due to the strong Swiss franc, the degree of collateralization of some of those loans is relatively low. It can be estimated that at the end of September 2015, the share of loans with LTV above 100% in the portfolio of Swiss franc-denominated loans amounted to around 47%. Low level of credit collateralization (high LTV ratio) impacts negatively the rate of recovery in the event of default, which increases credit losses. Good quality of FX loans portfolios, despite of exchange rate shock, causes that high LTV ratios does not influence adversely banks’ earnings.

After the quality of housing loans stabilized, credit losses and their relation to credits value decreased (see Figures 2.10 and 2.11).

The quality of consumer loans has continued to improve. The fall in the impaired loan ratio (see Figures


\[39\] A dominant portion of Swiss franc-denominated housing loans are loans with a variable interest rate, where interest equals the LIBOR CHF rate increased by a fixed spread.
resulted from both a decrease in the value of impaired loans and an increase in the value of the loan portfolio. The improvement in loan quality was also supported by a better situation in the labour market and relatively good quality of new loans (see Figure 2.12). Debt sale transactions played a considerable part in reducing the value of impaired loans.

Figure 2.7. Impaired loan ratio for households at commercial banks (left-hand panel) and cooperative banks (right-hand panel)

Source: NBP.

Figure 2.8. Impaired loan ratios of main categories of loans for households

Source: NBP.

Figure 2.9. Increase in the value of Swiss franc-denominated housing loan instalment to instalment at loan origination against values of Swiss franc-denominated loans and wage growth in the enterprise sector

Assumptions: A Swiss franc-denominated housing loan with maturity of 25 years, repaid in constant total instalments, instalment calculated on the basis of the Swiss franc exchange rate and the LIBOR 3M rate of 30 September 2015 and average spread on Swiss franc-denominated loans at loan origination.

Note: Points on horizontal line mark the month of loan origination. Bars present the value in the zloty (at the end of September 2015) of Swiss franc-denominated housing loans taken out in a given month marked on the horizontal line.

Source: NBP estimates based on survey data.
Following earlier falls, the average coverage of impaired loans by provisions did not change substantially. This applies both to consumer and housing loans (see left-hand panel of Figure 2.13). Several commercial banks, mainly small and medium-sized ones, and some cooperative banks, especially large ones (see right-hand panel of Figure 2.13) demonstrate low coverage levels. Low coverage may stem from the specificity of a bank's loan portfolio (e.g. high value of collaterals), but it may also indicate underestimated provision against losses from impaired loans.

**Outlook**

The expected macroeconomic developments allows to assume that the value of credit losses in loans to households will stabilise in the coming quarters. Such a scenario will be underpinned by forecasts of further falls in unemployment, wage growth and a rise in income of private entrepreneurs. The borrowers’ capacity to service their zloty loans will also benefit from low interest rates. This factor is most critical in housing loans, where interest on the biggest portion of loans is based on the interbank market rate, increased by a fixed margin, and the share of interest instalments in the total loan instalment is the highest due to their long maturity.

The big share of foreign currency housing loans in banks’ portfolios remains a risk factor. The bor-
rowers who took out these loans are exposed to the risk of zloty depreciation and a rise in foreign interest rates.

It appears that the impact of the abolishment of the bank enforcement order and of the new rules of declaring consumer insolvency on the level of credit losses will be relatively negligible. In the longer term, these two developments may also bring about positive results like enabling borrowers to escape debt spiral, banks’ greater willingness to communicate with their clients and renegotiate debt repayment and greater diligence in assessing creditworthiness (see Box 1).

Box 1. The influence of changes in law affecting effectiveness of debt enforcement by banks on stability of financial system in Poland

In 2014 and 2015 significant changes in legal regulations were introduced, directly affecting debt enforcement by banks. The regulations in this area are particularly important because the legal environment has a direct impact on the effectiveness and speed of debt enforcement by banks and - as a consequence - on cost of credit risk. The amendments referred to three areas, i.e.:

- the declaration of bankruptcy of natural persons not conducting a business activity, often referred to as consumer insolvency;
- liquidation of the Bank Enforcement Order (BTE) (judgement of the Constitutional Tribunal, in which it ruled that the provisions of the Banking Law enabling banks to issue the BTE are not compliant with Article 32 (1) of the Constitution of the Republic of Poland and the Act amending the Banking Law of 25 September 2015, which has ultimately waived the BTE);
- adoption of the Act on Restructuring Law.

The liquidation of BTE combined with new consumer insolvency and restructuring procedures change the relations between debtor and creditor in Polish legal system. Due to that it may potentially have an influence on stability of banking sector as the key creditor in the whole economic system.
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The objective of the amendments to the provisions concerning consumer insolvency introduced in 2014 was to facilitate consumers’ access to insolvency proceedings. The amendment has strengthened the position of debtors, inter alia, through narrowing down the premises for rejection of the motion for declaration of bankruptcy and reduction of proceedings costs. At present, insolvency shall not necessarily arise as a result of exceptional circumstances, independent of the debtor. The restrictions only assume that the debtor must not lead to insolvency or increase its level deliberately or due to gross negligence. The court can conduct insolvency proceedings also if it is justified on the grounds of fairness or humanitarian reasons. The premises defined in such a manner significantly increase the potential group of persons who may benefit from the provisions on consumer insolvency. Enabling the insolvency proceedings in the situation when a given person has only one creditor is also very important. In the case of lack of funds to cover costs of insolvency proceedings, they will be provided by the State Treasury and the debtor will repay the funds within the fulfillment of the creditors’ repayment plan. In such a way, a possibility of declaring bankruptcy has been created for persons who do not hold any funds, which seems fully justified.

The facilitating measures introduced pursuant to the Act of 2014 create a realistic opportunity for the development of a consumer insolvency institution in Poland, which is confirmed by the noticeable growth of bankruptcies declared in 2015. Consumer insolvency is an institution present in the legislation of many EU countries. It appeared in the Polish legislative system in 2008. However, it was not widely used. In the years 2009–2014, a total of 2,735 motions for declaration of consumer insolvency had been filed, whereas throughout all that period, only 120 bankruptcies were declared. Accordingly, in 2014 the regulations related to Polish consumer insolvency were significantly changed. This resulted in declaring, since the beginning of 2015, of over 1,500 bankruptcies, the majority of which regarded persons with debt up to tens of thousands of zlotys. The growth in use of this institution under the new regulations should be assessed as noticeable, although it has no systemic significance so far. Those regulations may have an impact on tightening of the standards and terms of granting loans, inter alia, consumer loans. However, lending in this segment has been increasing strongly due to the relatively high profitability.

The BTE as an out-of-court title issued on the basis of banks’ books was a very convenient method of debt recovery. Banks have various possibilities of obtaining the enforcement order, inter alia, through arbitration court judgement, court settlement, notarial deed in which a debtor submits to enforcement proceedings on a voluntary basis; the bank may also acquire the enforcement order through obtaining the order for payment by way of order for payment procedure or writ-of-payment proceedings. So far a bank used the non-privileged path only if it had a problem with obtaining the enforcement order based on the BTE, i.e. when formal shortages occurred. BTE was a special privilege for banks, mainly due to the fact that it did not require the court to of exploring the actual relations between the debtor and the bank. Only a relevant objection of the debtor caused that the court had to examine a given case in terms of its substance. However, the action brought by the debtor did not suspend the enforcement. The non-mandatory time limit to declare the enforceability after examination of formal conditions by the court amounted to 3 days and, at the same time, it was not obligatory to inform the debtor of such proceedings. Consequently, the bank’s interests were strongly protected. The speed and automatic mode of court procedure related to BTE were factors limiting credit risk and supporting liquidity of banks. On the other hand, that procedure was unfavourable for debtors. The legal action to prevent enforcement did not suspend the enforcement officer’s actions, therefore the debtor defended him/herself during the binding enforcement procedure, associated with the seizure of property, conducted against him/her.

In the Polish legal system tools exist which shall enable banks to neutralise the loss of the BTE. Due to the liquidation of the BTE, more frequent application of additional collaterals may be expected – guarantee, ordinary pledge and registered pledge, transfer of ownership for collateral purposes, bank deposits and, in particular, voluntary submission to enforcement and promissory notes. In relation to new mortgage loans, a common application of the voluntary submission to enforcement should be expected, pursuant to Article 777 of the Code of Civil Procedure. Banks will probably require this collateral also in the case of approving the restructuring of loans granted...
in the past. In comments, and even in the older jurisprudence of the Constitutional Tribunal, the Tribunal points out that this procedure does not significantly differ from the BTE, i.e. it requires only the obtaining of the enforcement order after checking the specific formal conditions. In the case of consumer loans - due to the notary costs and their relatively lower amounts - the application of Article 777 of the Code of Civil Procedure will be certainly less common. On the other hand, the popularity of the promissory note will increase, including also the blank promissory note as collateral. The Act waiving the BTE also imposed certain new obligations on banks, concerning, inter alia, the necessity to determine the additional, 14-day time limit for the client in default and to consider the application for restructuring and justification of the potential rejection of the application.

The Act Restructuring Law introduces instruments which will enable to conduct the restructuring of a debtor's enterprise and to avoid its liquidation. Among the objectives of the new regulations the following were listed: providing entrepreneurs and their contractors with effective instruments for restructuring, with the simultaneous maximising the protection of creditors’ rights, ensuring the institutional autonomy of restructuring proceedings separating them from insolvency proceedings, maximising the pace and effectiveness of restructuring processes. Within the framework of the "new opportunity" policy, the Act has introduced the principle of priority of restructuring over liquidation. In the case of submission of the restructuring application and the motion for declaration of bankruptcy, the court will be bound to examine the restructuring application in the first place.

A key change implemented in the Bankruptcy and Rehabilitation Law from the perspective of banks and their debtors is the amended definition of insolvency. It introduces reasonable and flexible provisions that are focused on assessment of economic condition of enterprise. One can expect that the formal insolvency of particular company will happen later in comparison to the previously binding provisions. It will enable companies to contact the creditors, start the negotiations and prepare itself to conduct restructuring efforts. Those solutions are consistent with goals and spirit of the Restructuring Law and other new regulations presented in this analysis. The impact of the new definition on the banks should not be negative. Firstly, amended provisions contain the clarifying elements, for example the presumption that insolvency occurs, if payment arrears exceed 3 months. The amendments will contribute to clarification of different issues related to insolvency. This will be useful for all stakeholders. Moreover, in the long term the new regulations will reinforce the economic standing of enterprises and households. Due to that banks may expect the decrease in credit risk.

Separate provisions in the Restructuring Law regulate the procedure towards banks and credit unions. Restructuring of those entities takes place exclusively under the particular arrangement procedure and only on request of the KNF. The effects of the opening of the arrangement procedure will be similar to the consequences of the
former declaration of bankruptcy with a possibility of concluding the arrangement. The problems associated with insolvency of banks and credit unions (SKOK) will be, as a rule, the subject of the regulations of the Act on BFG, bank recovery and resolution and on amending of certain other acts, which is under development. The comprehensive inclusion of those issues in acts implementing the BRR Directive, whose prompt adoption is recommended by NBP in the Report, would be the best solution in terms of stability of financial institutions. This would involve repealing the relevant provisions in other acts, including in the Restructuring Law. Such a move would simplify the procedure and remove potential doubts. Moreover, it seems that the issue of bankruptcy and restructuring of financial institutions is important and specific enough to require separate regulations.

The Restructuring Law including the amendments to the Bankruptcy and Rehabilitation Law should be considered as the most important reform among those discussed. The nature of those provisions enables a certain balance between creditors and debtors in the restructuring process. However, it is a new reality for all entities involved, including the banks. They will face the necessity to adjust their policy related to the enforcement of claims. The reform means a facilitated procedure for indebted enterprises whose core business remains potentially profitable. The main beneficiary of the discussed legal changes is the real economy. Banks, as the biggest suppliers of financing, often holding good collateral in the form of mortgage and entities with no broad business contacts with the debtor (contrary to contractors), may be less interested in debtors’ restructuring. In some cases, the immediate enforcement from assets would be more favourable for them than the conclusion of the arrangement. Consumer insolvency amendment may be also important for banking sector. However, there are no reasons to suppose that it will be used excessively by courts and contribute to increase in credit losses. On the other hand, it will help the most vulnerable households to recover from excessive indebtedness. Potential impact of liquidation of BTE on debt enforcement by banks seems to be relatively small due to wide range of alternative tools that may be as effective as BTE. Because of the same reason one should not expect a significant rise in cost of credit for households as a result of the liquidation of BTE, apart from notary fee connected with voluntary submission to enforcement. Theoretically, the impact of liquidation of BTE is limited to the part of existing credit portfolio and it will expire together with repayment.

The amendments related to debt enforcement by banks are consistent and based on the same assumptions and diagnosis, therefore they will impact on financial system in a similar way. The regulatory environment of banks has changed significantly. The character of those amendments strengthens the debtor’s position. Relations between a bank as a creditor and its debtors will more balanced. In the short term it will be connected with the necessity of adjusting procedures in banks. However, these activities will not contribute to increase in cost of credit because of limited scale and time horizon. Furthermore, in the long run – due to expected improvement of enterprises’ and households’ situation – one can maintain that analysed changes in law will result in decrease in credit risk. Summing up, there are no reasons to suppose that financial system stability may be threatened due to aforementioned amendments.

Due to improvement of debtors’ legal position, one can expect a change of market practices. The loss of the BTE in connection with the more widely available consumer insolvency and new restructuring opportunities for the enterprise sector will create conditions for renegotiation of debt repayment, also outside the statutory regime. In the future banks will be more willing to establish individual contacts with debtors and consider their current ability in relation to debt servicing (particularly in the case of natural persons) without referring to procedures envisaged in the legal regulations. Depending on proposed solutions it may turn out that individual negotiations are attractive also for debtors. Moreover, changes in the scope of enforcement of claims will probably encourage banks to apply more diligence while assessing enterprises’ creditworthiness and the chances of success for the investments to be financed.

1 The Act of 29 August 2014 on amending the Act – Bankruptcy and Rehabilitation Law, the Act on the National Court Register and the Act on Judicial Costs in Civil Matters (Journal of Laws 2014, item 1306). The regulations entered into force on 31 December
2.2.2. Credit risk of corporate loans

Corporate loan quality

Credit risk costs in corporate loans in the whole banking sector have dwindled (see Figure 2.14). Impaired loan ratios, especially for loans to large enterprises, fell too (see Figure 2.15).

Figure 2.14. Quarterly net charges to provisions for impaired corporate loans and their ratio to net value of loans

Note: The ratio – annualised data. Source: NBP.

The quality of corporate loans in large cooperative banks has worsened. The situation of SK bank was a key driver of this decline, yet the quality of loans at other large cooperative banks has also deteriorated, albeit to a much lesser extent. On the other hand, recently the quality of loans in small and medium-sized banks improved slightly and was considerably better than in large cooperative banks.

Figure 2.15. Impaired loan ratios for enterprises

Note: At the end of September 2015, the value of loans to large enterprises amounted to 142.4 billion zlotys, and to SMEs – 185.9 billion zlotys. Source: NBP.

Corporate loans account for a substantial part of the loan portfolio of large cooperative banks. At the same time they represent a minor part of the total value of corporate loans extended by the whole banking sector (2.9%) (see Figure 2.16). Excluding SK bank, corporate loans accounted for approximately half of the loan portfolio of large cooperative banks group at the end of September 2015. In small and medium-sized cooperative banks this share was twice lower.

40 In November 2015, SK bank reported huge losses. They were not accounted for in its results reported for the third quarter of 2015 and in the analysis below. Had they been included, the credit losses of the whole banking sector would have been higher.

41 The share is calculated excluding SK bank.
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Figure 2.16. Coverage of impaired corporate loans by provisions, by size of enterprise (left-hand panel) and bank type (right-hand panel)

Note: At cooperative banks, coverage is estimated on the basis of the nominal value of a loan.
Source: NBP.

Figure 2.17. Loans in arrears of up to 90 days (left-hand panel) and identification of impairment of the loans (right-hand panel)

Note: Data at the end of September 2015.
Source: NBP.
At some cooperative banks, the level of loan loss provisioning may be underestimated. This applies mainly to individual large cooperative banks. Impaired loans in these banks are covered by provisions to a substantially smaller extent than at other cooperative banks and commercial banks (see Figures 2.13 and 2.16). At the same time, the banks hold large portfolios of loans in short arrears. In the case of big fraction of such loans (larger than at other cooperative banks and commercial banks) impairment has not been yet identified (see Figure 2.17), which may also provide explanation for low provisioning. Increasing provisions for impaired loans in cooperative banks to match the average level observed in commercial banks could result in shortages of capital in some – mainly large – cooperative banks (see Box 3). The other risk factor associated with some large cooperative banks is fairly high concentration ratio in the loan portfolio (big share of large value loans).

The quality of loans that finance commercial property developments remained good despite mounting imbalances in this market segment (see Chapter 2.3). In particular, the impaired loan ratio and credit losses on office property loans were still low when compared to other corporate loans (they amounted to approx. 5.1% and 0.4%, respectively). In recent quarters, the value of loans that finance office property has grown, although such loans still constitute a minor part of the whole portfolio of corporate loans (3.9%).

Corporate loan quality by sections of the national economy

In those sectors of the national economy that are largely responsible for credit risk in the enterprise sector – i.e. manufacturing, construction, real estate activities and retail trade and repairs – changes in the quality of loans over several recent quarters have been insignificant (see Table 2.1). Despite Russian sanctions, loan quality in food processing and several other industries with a significant share in exports to Russia improved slightly. On the other hand, the construction sector, after a substantial deterioration in 2012–2013, saw the quality of loans to improve. At the end of September 2015, loans with longer arrears in repayment, largely covered by provisions, prevailed in the portfolio of impaired loans.

42 The analysis is based on the so-called large exposures.
Table 2.1. Quality of claims to non-financial enterprises by sections of the economy at the end of September 2015 (%)

<table>
<thead>
<tr>
<th>Section</th>
<th>Structure of total loans by section</th>
<th>Structure of impaired loans by section</th>
<th>Impaired loan ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>A – Agriculture</td>
<td>3.8 (3.6)</td>
<td>2.1 (2.1)</td>
<td>5.8 (6.1)</td>
</tr>
<tr>
<td>B – Mining</td>
<td>3.0 (2.5)</td>
<td>6.3 (2.8)</td>
<td>21.7 (11.3)</td>
</tr>
<tr>
<td>C – Manufacturing</td>
<td>24.1 (22.8)</td>
<td>21.0 (22.9)</td>
<td>9.1 (10.2)</td>
</tr>
<tr>
<td>- Food processing</td>
<td>5.2 (4.7)</td>
<td>3.7 (4.0)</td>
<td>7.4 (8.6)</td>
</tr>
<tr>
<td>- Chemicals</td>
<td>1.2 (1.3)</td>
<td>0.4 (0.4)</td>
<td>3.4 (2.9)</td>
</tr>
<tr>
<td>- Manufacture of rubber and plastic products</td>
<td>1.8 (1.8)</td>
<td>1.2 (1.3)</td>
<td>6.8 (7.4)</td>
</tr>
<tr>
<td>- Manufacture of other non-metallic products</td>
<td>1.4 (1.3)</td>
<td>2.3 (2.2)</td>
<td>16.4 (17.9)</td>
</tr>
<tr>
<td>- Manufacture of metal products (excluding machinery and equipment)</td>
<td>2.1 (2.1)</td>
<td>1.9 (2.4)</td>
<td>9.5 (11.7)</td>
</tr>
<tr>
<td>D – Electricity, gas and heating supply</td>
<td>4.4 (4.5)</td>
<td>0.5 (0.3)</td>
<td>1.2 (0.7)</td>
</tr>
<tr>
<td>E – Water supply, sewerage, waste management</td>
<td>1.2 (1.1)</td>
<td>0.6 (0.5)</td>
<td>5.5 (4.7)</td>
</tr>
<tr>
<td>F – Construction</td>
<td>9.4 (10.6)</td>
<td>22.1 (24.3)</td>
<td>24.5 (23.3)</td>
</tr>
<tr>
<td>G – Retail trade and repairs</td>
<td>19.5 (19.9)</td>
<td>18.3 (15.4)</td>
<td>8.7 (7.9)</td>
</tr>
<tr>
<td>H – Transportation and storage</td>
<td>4.1 (3.7)</td>
<td>2.4 (1.8)</td>
<td>5.9 (5.0)</td>
</tr>
<tr>
<td>I – Hotels and restaurants</td>
<td>3.0 (3.0)</td>
<td>6.5 (6.9)</td>
<td>22.4 (23.6)</td>
</tr>
<tr>
<td>J – Information and communication</td>
<td>2.7 (3.6)</td>
<td>0.7 (0.7)</td>
<td>2.7 (1.9)</td>
</tr>
<tr>
<td>L – Real estate activities</td>
<td>15.2 (14.5)</td>
<td>14.8 (14.1)</td>
<td>10.1 (9.9)</td>
</tr>
<tr>
<td>M – Professional, scientific and technical activities</td>
<td>3.0 (3.8)</td>
<td>3.5 (5.2)</td>
<td>12.2 (14.1)</td>
</tr>
<tr>
<td>N – Administrative activities</td>
<td>3.8 (3.8)</td>
<td>0.9 (0.8)</td>
<td>2.6 (2.1)</td>
</tr>
<tr>
<td>P – Education</td>
<td>0.4 (0.4)</td>
<td>0.5 (0.4)</td>
<td>13.2 (9.6)</td>
</tr>
<tr>
<td>Q – Health care</td>
<td>1.6 (1.5)</td>
<td>0.9 (1.1)</td>
<td>6.0 (7.3)</td>
</tr>
<tr>
<td>R – Arts, entertainment and recreation</td>
<td>0.5 (0.5)</td>
<td>0.4 (0.3)</td>
<td>8.9 (6.3)</td>
</tr>
<tr>
<td>S – Other services</td>
<td>0.3 (0.3)</td>
<td>0.5 (0.5)</td>
<td>18.4 (14.7)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>10.4</td>
</tr>
</tbody>
</table>

Notes:
In brackets, data at the end of September 2014.
Claims include the following on-balance-sheet items: loans and other receivables, debt and equity instruments.
Data are based on the so-called large exposure reporting, i.e. for a bank that is a joint stock company, a state-owned bank and a non-associated cooperative bank – they mean exposures towards one enterprise in excess of 500,000 zlotys, and for an associated cooperative bank – exposures towards one client in excess of 100,000 zlotys.
Source: NBP.

In recent quarters, the quality of loans has deteriorated the most in mining and quarrying. The reason behind this deterioration has been the condition in the coal mining industry. The quality of loans in other mining and quarrying improved. Loans granted to coal mining enterprises are a relatively minor (approx. 1%) portion of corporate loans. Presently, impairment has been identified for just above half of the loans extended to coal mining companies. Nevertheless, these loans are covered by impairment provisions to a relatively lesser extent, which poses a risk of growth in credit loss in the event of deteriorating outlook for the industry.

Outlook
The level of credit risk costs should stabilize, however, a slight drop in credit losses is also likely. This will be supported by the sound financial condition of enterprises, in particular their high liquidity and profitability, the continued stable pace of economic growth and relatively low debt service costs due to interest rate decrease.

The situation of coal mining enterprises, despite the relatively low exposures of banks, may exert a negative influence on the value of credit losses for some time. This follows difficult situation of the industry and low level of provisions for these loans.
Box 2. SK bank crisis

On August 11, 2015, the Polish Financial Supervision Authority (KNF) appointed a team of receivers in the Spółdzielczy Bank Rzemiosła I Rolnictwa w Wołominie using a commercial name SK bank. The decision was preceded by a series of supervisory activities and justified by the fact that the bank had not fulfilled statutory obligation to prepare a recovery plan which could be accepted by the KNF. Furthermore, it had not fulfilled properly the recommendations from on-site inspections conducted earlier by the KNF, especially in the credit risk area.

Liquidity shock

Within a few days after publication of the decision about the appointment of the team of receivers in SK bank its clients withdrew over 960 mn zloty which amounted to over 1/3 of all deposits in the bank. It was a serious liquidity shock, none of the banks could cope unassisted, even if it had high buffers of liquid assets, as in the case of SK bank. As a result, the bank lost its ability to meet its liabilities when they fall due and carry out ongoing settlements.

In this situation the NBP engaged in the support process, granting a refinancing loan to SK bank based on the bank’s application. The central bank acted as a lender of last resort. It turned out that SK bank was not able to get funding from any alternative market sources, including the bank affiliation it belonged to. The NBP’s decision to grant emergency liquidity support was taken pursuant to Article 42 of the Act on Narodowy Bank Polski and fulfilled the tasks of the central bank as defined in Article 3 para. 2 thereof. Liquidity support from the NBP enabled the bank to carry out ongoing settlements and intended to give time for the preparation of its rehabilitation programme or to find a buyer of the bank in order to carry out its takeover and restructuring. Taking the decision to extend refinancing loan, the NBP was guided by the opinion of the KNF about the bank’s solvency and took into account the earlier appointment of the team of receivers in the bank, whose task was to make a thorough diagnosis of the situation of the bank as well as to prepare and agree with the KNF and the affiliating bank the bank restructuring process, and the development of a rehabilitation proceedings programme.

Results of the financial analysis of SK bank

In order to reliably assess the financial situation of the SK bank, the team of receivers ordered the examination of the financial statements by an independent auditor. The results of the audit, information of which was published on November 12, 2015, indicated deeply negative own funds of the bank stemming from the need to make further specific provisions and verification of the collateral. As a result, it turned out that the assessment of the financial situation of SK Bank, which so far had been based on the data from financial reporting and had shown solvency of the bank, had to be significantly corrected. The results of the audit were appropriately taken into consideration by the team of receivers in the balance sheet of SK bank prepared as of the end of October 2015. Guided by the obligation resulting from the art. 158 para. 1 of the Banking Act, on November 21, 2015, the KNF suspended the operations of SK bank and decided to file bankruptcy proceedings against the bank. The decision was based on the fact that the bank’s assets were insufficient to cover its liabilities. Furthermore, in the period determined by the KNF, no bank willing to take over SK bank came forward. On December 30, 2015, the Warsaw District Court declared SK bank bankrupt.

Conclusions

Firstly, the case of SK Bank should be carefully considered, above all, by those cooperative banks which are faced in their activities, similarly to SK bank, with the following risk areas:

- the growing exposure to investment loans for enterprises in sectors about which cooperative banks have limited knowledge and – due to the scale of their activities – limited opportunities to gain such knowledge;
the significant share of large credit exposures, both in relation to the value of total loans and to the equity capital;

- lending to mutually related entities, sometimes without full knowledge about these ties and the risk resulting from them;
- too low coverage of impaired loans with provisions, including an inadequate way of reducing the base for the creation of these provisions by the value of collateral held.

Expansion into new markets and a departure from the traditional mission, consisting in providing financial intermediation services to local communities, poses the threat of loss of ability to correctly assess credit risk. At first, such a strategy generates rapid growth of the balance sheet. After some time, it translates into increased provisions, limited capacity for generating profits, and problems meeting the capital requirements. Narodowy Bank Polski has drawn attention to these issues, among others, in its publications dedicated to financial system.

Secondly, a central bank granting a refinancing loan is aiming at avoiding the situation in which the bankruptcy of a bank would threaten the stability of the rest of the financial system. It does not mean, however, that a no-failure regime, which would result in the creation of moral hazard, is in force.

Thirdly, in the case of the crisis of SK bank, the most expensive method of “removing” the bank from the market was implemented, i.e. through bankruptcy. This was due to the lack of a possibility to apply other solutions. The search for a restructuring method had to be limited solely to methods based on a complete takeover by another bank (which de facto turned out to be unprofitable for potential acquirers), and were ultimately unsuccessful.

The costs of the bankruptcy of SK bank were borne by the rest of the banks and its unsecured creditors. Payment of guaranteed deposits by the Bank Guarantee Fund amounted to over 2 billion zlotys. These funds were paid out from the Guaranteed Deposit Protection Fund. The Guaranteed Deposit Protection Fund is kept in the balance sheets of all the banks in the form of Treasury securities or NBP bills, which had to be redeemed for cash and the appropriate amount paid to the BFG. This was a direct cost for the banks and adversely affected the financial result of the fourth quarter of 2015. The remaining liabilities of the bank -amounting to over 490 million zlotys - concerned the liabilities to owners of accounts on which amounts were held which exceeded the equivalent of 100,000 euro (including local government units, holders of escrow accounts and indirectly, their clients), and also owners of subordinated debt.

Such course of actions was due to a lack of tools in the Polish legal system which are used in the resolution process. The bankruptcy and the pay-out of guaranteed deposits is the most expensive form of ending a crisis situation in a bank. The resolution mechanism is – as a rule – less expensive form, as it allows for an appropriately prompt intervention and conducting restructuring of the bank in many ways, i.e.: through its complete takeover, partial takeover, the creation of a bridge bank or a combination of these methods. At the same time, it assumes bailing-in debt instruments and their conversion into capital or to cover losses.

The experience from attempts to rescue SK bank confirmed the necessity of prompt introduction into the Polish legal system the provisions of the Bank Recovery and Resolution Directive - BRRD). Narodowy Bank Polski has indicated many times the need to introduce these provisions both in financial stability reports and in the speeches of the NBP’s President in the Polish Parliament. In January 2016, the Lower Chamber of the Parliament began work on a draft act on the Bank Guarantee Fund, the deposit guarantee system and forced restructuring. The entrance of the draft law to the next stage of the legislative path portends well for the prompt adoption of new regulations on resolution. This should significantly improve the mechanisms of early intervention and crisis management in the Polish financial system and reduce the costs for banks and taxpayers.

1 In the case of payment of guaranteed deposits by the BFG, local government unit accounts and escrow accounts are treated as the account of one owner. For the maximum guaranteed amount it is not important how many separate accounts are held on behalf of local government units, nor how many individuals make contributions (payments) for housing purposes.

2.3. Market risk

Interest rate risk in the banking book and foreign exchange risk stem mainly from market risk undertaken by domestic banks. The scale of trading activity and, consequently, risk associated with it is, on the other hand, insignificant.

Banks’ earnings are sensitive to changes in zloty interest rates. The majority of banks, both commercial and cooperative, hold a positive interest rate gap (see Figure 2.19). The positive interest rate gap means that the interest on assets responds to changes in interest rates to a greater extent and faster than the interest on liabilities. As a result, a decrease in interest rates results ceteris paribus in a fall of banks’ earnings. The sensitivity of cooperative bank earnings to an interest rates cut is therefore higher than in the case of commercial banks. This results both from the structure of the period to the date of repricing of interest on assets and liabilities, and a higher share of net interest income in income from banking activity of cooperative banks.

The scale of bank operations classified into the trading book is minor.\textsuperscript{43} The majority of debt securities held by banks in their portfolios is not marked to market or their valuation is recognized in capital (see Table 2.2). In consequence, VaR (median) for the interest rate risk of the trading books of banks does not exceed 1\% of their regulatory capital (see Figure 2.20).

Figure 2.19. Contractual interest rate gap in the banking book at commercial banks (left-hand panel) and cooperative banks (right-hand panel)

Notes: The interest rate gap denotes the difference between zloty interest-bearing assets and liabilities in a given period range to the repricing date; d – working day, w – working week, m – month, y – year.
Source: NBP.

\textsuperscript{43}On the basis of available data, it is not possible to accurately specify the size of the trading book. The share of assets classified as “held for trading”, where most of assets from the trading book should be classified into, is, however, low and amounted to 3.7\% at the end of September 2015.
Table 2.2. Balance-sheet value of debt securities, by issuer and accounting classification (PLN billion)

<table>
<thead>
<tr>
<th></th>
<th>Held for trading</th>
<th>Fair value through P&amp;L</th>
<th>Available for sale</th>
<th>Held to maturity</th>
<th>Loans and receivables</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central banks</td>
<td>12.0</td>
<td>13.0</td>
<td>59.9</td>
<td>5.8</td>
<td>0.0</td>
<td>90.7</td>
</tr>
<tr>
<td>Central government</td>
<td>21.5</td>
<td>3.7</td>
<td>164.9</td>
<td>14.0</td>
<td>3.8</td>
<td>207.9</td>
</tr>
<tr>
<td>Municipalities</td>
<td>0.1</td>
<td>0.3</td>
<td>6.9</td>
<td>0.3</td>
<td>10.1</td>
<td>17.7</td>
</tr>
<tr>
<td>Financial sector</td>
<td>0.9</td>
<td>0.0</td>
<td>11.1</td>
<td>3.6</td>
<td>1.6</td>
<td>17.2</td>
</tr>
<tr>
<td>Non-financial sector</td>
<td>0.3</td>
<td>0.0</td>
<td>9.0</td>
<td>0.3</td>
<td>17.1</td>
<td>26.8</td>
</tr>
<tr>
<td>Total</td>
<td>34.8</td>
<td>17.0</td>
<td>251.9</td>
<td>26.8</td>
<td>32.6</td>
<td>360.4</td>
</tr>
</tbody>
</table>

Note: Balance as of the end of September 2015.
Source: NBP.

Figure 2.20. Median of Value at Risk for interest rate risk in the trading book

![Median of Value at Risk for interest rate risk in the trading book](image)

Notes: VaR at confidence level of 95% over a 10-day horizon, calculated for commercial banks and expressed as percentage of regulatory capital; from April 2014, for months that are not quarter-ending months data on regulatory capital as of the end of the last quarter-ending month were used.
Source: NBP.

The risk of substantial losses arising from changes in the valuation of the FX position is low. Although commercial banks hold a substantial long on-balance-sheet FX position (associated mainly with the portfolio of foreign currency housing loans), it is usually hedged with fx swap and CIRS transactions. As a result, the estimated VaR for FX risk still remains low (see Figure 2.21).

Polish banks invest in riskier securities to a limited extent. Domestic Treasury securities and NBP bills prevail in the portfolios of banks (see Table 2.2). Securities issued by non-residents accounted for merely around 2% of the entire portfolio of debt securities at the end of September 2015 (3% in the case of Treasury securities). The value of domestic corporate bonds issued by non-financial enterprises and purchased by banks has been rapidly growing in recent years. The portfolio of these bonds is concentrated in several large banks, but it accounts for a small portion of these banks’ assets. The majority of corporate bonds are classified by banks as loans, which means that its balance-sheet value is insensitive to changes in market valuation.

Figure 2.21. Median of Value at Risk for FX risk

![Median of Value at Risk for FX risk](image)

Notes: VaR at confidence level of 95% over a 10-day horizon, calculated for commercial banks and expressed as a percentage of regulatory capital; from April 2014, for months that are not quarter-ending months, data on regulatory capital as of the end of the last quarter-ending month were used.
Source: NBP.
2.4. Funding structure and liquidity risk

Deposits of the non-financial sector are the main source of funding of domestic banks. The pace of deposit growth remains high, despite historically low interest rates (see Figure 2.22). This can be attributed to the relatively high level of real interest rates and high volatility in the domestic capital market (see Chapter 1.2.). The strong growth of deposits results in a steady decline of the funding gap in the banking sector\(^{44}\) (see Figure 2.23), which has a positive effect on the funding stability of banks.

![Figure 2.22. Annual growth rate of deposits](image)

Note: Data for residents after excluding the impact of foreign exchange rate changes.
Source: NBP.

The suspension of business operations of SK bank (see Box 2) highlights the key importance of a stable deposit base for the liquidity risk of banks. Despite the relatively high short-term liquidity ratios, a substantial outflow of deposits has led to a loss of liquidity of that bank. Elevated risk may, in particular, concern entities characterised by a large share of depositors whose funds substantially exceed the BFG guarantee limit.

![Figure 2.23. Funding gap](image)

Note: In order to eliminate the impact of foreign exchange rate movements on the value of the funding gap, for the variable mean (fixed rate) the values of foreign currency claims and liabilities were translated into zloty according to a fixed exchange rate as at the end of March 2010.
Source: NBP.

The share of foreign funding in the funding structure of domestic commercial banks\(^ {45}\) remains stable. Following the period of a steady decline, the share of this funding increased over the last four quarters. However, the growth concerned a small group of banks with a relatively low reliance on this form of funding. On the other hand, the share of banks with a high share of foreign funding in the funding structure has been steadily diminishing (see Figure 2.24).

The average cost of funding of banks has decreased. For commercial and cooperative banks, effective interest on liabilities decreased to a larger extent than the interbank rates (see Figure 2.25). The adjustment of the funding cost of banks to lowered

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\(^{44}\)A positive funding gap (excess of loans over deposits) in the entire banking sector is mainly accounted for by commercial banks; cooperative banks have a negative funding gap (excess of deposits over loans).

\(^{45}\)Cooperative banks are not financed with foreign funds, whereas the business model of branches of credit institutions is in principle based on funding provided directly from a foreign parent entity. For this reason and taking into account the small significance of branches of credit institutions in the banking sector (2% of assets) the focus of the analysis of foreign funding is on domestic commercial banks.
interest rates is also confirmed by data on the interest on new deposits. Nevertheless, the difference between the interest on liabilities and market rates is still low.

Figure 2.24. The ratio of liabilities towards foreign financial institutions to balance-sheet total at domestic commercial banks

The short-term liquidity position of the banking sector has not changed significantly and has remained favourable. The portfolio of the most liquid assets, i.e. NBP bills and government bonds, rose at a rate similar to that of the total assets of banks. However, liquid assets remained highly concentrated and banks varied substantially in this respect (see Figure 2.26).

Figure 2.26. Share of domestic Treasury securities and NBP bills in banks’ assets

Notes: Effective interest – the ratio of annualized interest expense to average annual value of liabilities. The calculations include zloty and foreign currency liabilities.

Source: NBP.

The sound liquidity position of domestic commercial banks is confirmed by the levels of supervisory liquidity ratios.\(^{46}\) Liquidity reserves were above the level of unstable external funds at all commercial banks (M2 liquidity ratio was higher than regulatory minimum of 1.00). For all commercial banks, stable external funds and regulatory capital were also higher than illiquid assets and assets of limited liquidity (M4 liquidity ratio was higher than the regulatory minimum of 1.00). Individual cooperative banks had problems meeting the liquidity ratios. From 1 October 2015, banks are also required to comply with the Liquidity Coverage Requirement (LCR) of 60%. According to NBP’s preliminary estimates, at the end of September 2015 all commercial banks and most cooperative banks complied with this requirement. For affiliating and 36 cooperative

\(^{46}\)See Resolution No. 386/2008 of KNF on defining liquidity standards binding for banks. For more details on the KNF supervisory liquidity standards, see Box 2 in “Financial Stability Report Raport – December 2009”, 2009, NBP.
banks, the LCR was lower than 60%. Nevertheless, in the case of the affiliating banks implementing the IPS will have a positive impact on the value of the ratios. Moreover, in the case of cooperative banks liquidity shortages are relatively low and could be covered by swapping deposits at the affiliating banks for highly liquid securities.

2.5. Earnings

In Poland, positive earnings are the main source of capital for banks (since 2007 retained earnings accounted for approx. 70% of growth of regulatory capital). For this reason, the current and future level of earnings and profitability ratios is a significant input for assessment of the resilience of the banking sector to the materialization of risks. The profitability of the banking sector in the analysed period decreased. (see Table 2.3). It diminished for both domestic commercial banks and cooperative banks (see Figure 2.27). Domestic commercial banks remained, on average, more profitable than cooperative banks, which was connected with the situation of the largest entities: while in the former group profits were concentrated in large institutions, in the latter the profitability of large institutions was lower than the remaining ones.

The number of banks with negative profitability and their share in the sector’s assets have not changed substantially, whereas the sum of losses shown by such entities has increased (see Figure 2.28). The majority of banks which showed negative profitability at the start of the analysed period have continued to post losses and their profitability ratios declined. The losses posted by the majority of such institutions were low when compared with the magnitude of their operations and the value of regulatory capital. In the case of SK bank, whose operations were suspended by KNF in November 2015, its losses exceeded the value of total capital.

Figure 2.27. ROA at domestic commercial banks (left-hand panel) and cooperative banks (right-hand panel)

Note: Annualised data.
Source: NBP.

47 At the end of the analysed period, negative profitability ratios were shown by four commercial banks (a 1.5% share in the sector’s assets), seven branches of credit institutions (0.1%) and 13 cooperative banks (0.3%), against three commercial banks (1.5%), eight branches of credit institutions (0.1%) and eight cooperative banks (0.05%) at the end of March 2015.
Table 2.3. Selected operating indicators of the banking sector

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
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<tr>
<td></td>
<td>Q1</td>
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<td>Q4</td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td></td>
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</tr>
<tr>
<td>Net interest income</td>
<td>2.53</td>
<td>2.59</td>
<td>2.61</td>
<td>2.50</td>
<td>2.41</td>
<td>2.30</td>
<td>2.23</td>
<td></td>
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<tr>
<td>Net non-interest income</td>
<td>1.43</td>
<td>1.39</td>
<td>1.37</td>
<td>1.38</td>
<td>1.42</td>
<td>1.34</td>
<td>1.30</td>
<td></td>
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<tr>
<td>Net income from</td>
<td>3.96</td>
<td>3.98</td>
<td>3.98</td>
<td>3.89</td>
<td>3.83</td>
<td>3.65</td>
<td>3.53</td>
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</tr>
<tr>
<td>Operating costs (CTA)</td>
<td>2.14</td>
<td>2.12</td>
<td>2.08</td>
<td>2.01</td>
<td>1.99</td>
<td>1.95</td>
<td>1.94</td>
<td></td>
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<tr>
<td>Net charges to</td>
<td>0.56</td>
<td>0.57</td>
<td>0.56</td>
<td>0.55</td>
<td>0.53</td>
<td>0.49</td>
<td>0.48</td>
<td></td>
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<tr>
<td>provisions for</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Pre-tax earnings</td>
<td>1.32</td>
<td>1.35</td>
<td>1.39</td>
<td>1.34</td>
<td>1.32</td>
<td>1.22</td>
<td>1.14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net earnings (ROA)</td>
<td>1.07</td>
<td>1.09</td>
<td>1.12</td>
<td>1.07</td>
<td>1.06</td>
<td>0.98</td>
<td>0.92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>As % of average assets</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

1. Annualised data.
2. Operating costs = general expense and depreciation.
3. Tier 1 capital without deductions by the shortfall of specific provisions and other so-called regulatory deductions.
4. Profits of branches of credit institutions have been subtracted.

Source: NBP.

Figure 2.28. Quarterly net earnings of the banking sector

Note: Empty markers and dotted bars are used to mark the following:
– in the fourth quarter of 2012 the estimated net earnings and the sum of losses of the banking sector adjusted for the net earnings of banks that either ceased their operations or carried them on in a modified form,
– in the third quarter of 2015 the estimated net earnings and the sum of losses of the banking sector, including expected correction of the SK bank’s financial statements.
Source: NBP.

Figure 2.29. Sources and allocation of net income from banking activity

Notes: Quarterly data.
*Estimated net earnings* are the sector’s net earnings, including the "estimated influence of expected SK bank correction" related to an increase in charges to provisions for impaired loans.
Source: NBP.
The deterioration in the banking sector’s profitability was mainly attributable to a fall in interest and non-interest margins (see Table 2.3). The fall in the former resulted from an ongoing process of adjusting the interest on assets and liabilities to the March 2015 NBP interest rate cut. Unlike the period analysed in the previous edition of the Report, the downward trend of the fee margin was halted. Banks took lower profits from the sale of instruments from the “available for sale” portfolio.

The fall in net interest margin was reflected in the decreasing profitability of most credit products. (see Figure 2.30–2.33). The estimated profitability of consumer loans (the most profitable product) and loans to large enterprises deteriorated the most. In the case of consumer loans, the decrease in interest was prompted by the March 2015 lowering of the maximum permissible nominal interest on loans from 12% to 10% (the level was set at four times the NBP Lombard rate). The fall in profitability of some portfolios was cushioned by the decreasing burden of charges to provisions for impaired loans (see Chapter 2.2). The fall in profitability was also driven by a slight decrease in leverage and a higher burden of operating costs on earnings. The CTI increased due to lower net income from banking activity – the amount of operating costs remained unchanged (see Figure 2.29) despite the rising charges to BFG. Without SK bank, the burden of credit risk materialisation costs on earnings decreased slightly.

Outlook

The profitability of the Polish banking sector (measured by ROA and ROE) may be expected to decrease further and faster in the upcoming quarters. The profitability ratios will be affected by:

- The introduction of a tax on some financial institutions. According to the law on tax on some financial institutions, banks would have to pay a tax calculated according to the monthly rate of 0.0366% on the sum of assets in excess of 4 billion zlotys and diminished by the value of regulatory capital and Treasury bonds. The resulting annual expenses of commercial banks would amount to 4 billion zlotys (ceteris paribus). This expense would not be regarded as tax-deductible for the purposes of the corporate income tax, which means in particular that the introduction of the tax would result in losses for banks with an already low profitability.

In response to the tax introduced, banks may try to reduce its impact on earnings by increasing revenue or reducing other expenses, e.g. by raising margins on loans or cutting employment. Unfavourable developments may occur, e.g. an increase in cross-border funding or credit constraints (see Chapter 2.1).
Chapter 2.

Figure 2.30. Estimated profitability of consumer loans (left-hand panel), housing loans (middle panel) and other loans to households (right-hand panel)

Notes: Annualised data.
The values of the adjusted net interest margin presented in this figure should be regarded only as a proxy of the actual profitability of particular credit products. Identical funding costs ("effective interest on liabilities") were assumed for each credit category. This calculation takes no account of operating costs and cost of capital needed to cover the capital requirements. The estimate takes also no account of fees and commissions income (except for those included in effective interest rate), related, inter alia, to cross-selling of bank products, that may substantially differ depending on the type of the product. Estimated profitability takes no account of profits earned on foreign currency loans due to the difference between the bid and offer prices of currencies (FX spread).
The "result of closing an open currency position" for housing loans is the estimated net gains/losses on closing an open on-balance-sheet FX position (related to the extension of Swiss franc-denominated housing loans), assuming the use of rolled-over 3-month CHF/USD and USD/PLN fx swaps. The forward exchange transaction (the so-called second leg) of fx swap (equivalent to a respective forward transaction) is used to close the position, while the amount of foreign currency received by a bank in the spot exchange transaction (the so-called first leg) is swapped for zlotys in the FX market. The result of such a hedging strategy was estimated as the product of the sum of banks’ long positions (the quarterly average of positive differences between the value of Swiss franc-denominated housing loans and the value of liabilities valued at amortised cost in this currency) and the average quarterly difference between the WIBOR 3M rate and LIBOR CHF 3M rate, adjusted for implied spread on fx swap. Such an estimate may be overstated as it takes no account of counterparty risk margin paid by Polish banks.
Source: NBP.

Figure 2.31. Estimated profitability of loans to large enterprises (left-hand panel) and loans to SMEs (right-hand panel)

Note: For description of estimated profitability measurement, see Notes to Figure 2.30.
Source: NBP.
Figure 2.32. The share of banks with a specified estimated profitability of loans in consumer loans (left-hand panel), housing loans (middle panel) and other loans to households (right-hand panel)

Note: For description of estimated profitability measurement, see Notes to Figure 2.30.
Source: NBP.

Figure 2.33. The share of banks with a specified estimated profitability of loans in loans to large enterprises (left-hand panel) and loans to SMEs (right-hand panel) extended by the banking sector

Note: For description of estimated profitability measurement, see Notes to Figure 2.30.
Source: NBP.

- **A rise in operating costs.** In the fourth quarter of 2015, banks will be charged with the payout of around 2 billion zlotys from the Guaranteed Deposit Protection Fund due to the bankruptcy of SK bank, and at the start of 2016 – the payment of 600 million zlotys for the Borrower Support Fund. The NBP estimates show that such a level of the fund may be insufficient to cover the needs of borrowers in financial distress, which would result in additional pay-

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51The provisions of the Act on supporting borrowers in financial distress who took out housing loans (Journal of Laws of 2015, item 1925) do not explicitly state whether the status of an unemployed person of one of borrowers is sufficient to get the support. Depending on this, the estimated maximum cost of support in the period 2016–2018 may vary from 3 to 5 billion zlotys. Assistance provided by the Borrower Support Fund to these borrowers who encounter repayment problems may reduce charges to provisions for impaired housing loans.
When compared with 2015, the total rate of contributions to BFG will have increased – from 0.239% to 0.246% of the total amount of risk exposures. Charges for the BFG might increase further in subsequent years due to the planned changes in the deposit guarantee scheme and the introduction of forced restructuring proceedings.

The rise in operating cost may be partially offset by cuts in employment and its cost, as announced by some banks.

- A likely further fall of net interest margin. In the short term, in line with the aforementioned mechanism of adjusting the interest on assets and liabilities to market interest rate changes, net interest margin should stabilize or even increase slightly. However, financial market participants expect interest rates in 2016 to decrease further (see Chapter 1.2.), which would prolong the downward trend of net interest income. In the case of the interest on consumer loans, the impact of a potential cut in interest rates would be cushioned by the change of the formula of the maximum permissible interest in the Civil Code.

A decrease in interest rates would have a stronger influence on the situation of cooperative banks, as net interest income has a substantially higher share in their net income from banking activity, and a positive interest rate gap over a 1-year horizon is relatively bigger than in the case of commercial banks. The interest expenses of cooperative banks may also grow on the back of a potential rise in risk aversion related to the bankruptcy of SK bank.

The fall of net interest margin may be halted by the reaction of banks to the introduction of the tax on some financial institutions. However, it seems that the scale of the increases in loan margins would not offset tax expenditures (higher margins would only apply to new loans, and the tax – to the entire portfolio).

- Changes in factors affecting net non-interest income. The capacity to increase fees related to bank accounts will be limited by competition for clients’ funds, especially in the environment of a marked rise in the relative attractiveness of investment in the financial markets, whether directly or via investment funds. On the other hand, intermediation in the sale of financial instruments and units in investment funds may drive up commission income, as may the transfer of a part of activity to capital group companies (for example leasing or factoring firms) in response to the imposition of the tax on some financial institutions. Whether net non-interest income may be increased through the sale of “available for sale” instruments will depend on changes in government bond prices in the future. Mid-2016 could see a jump in the earnings of some banks due to recognition of income on the sale of Visa Europe shares.

- Stabilisation or a fall in the burden of charges to loan impairment provisions on earnings due to the improvement of the financial posi-

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52 The rate of banks’ annual contribution for 2016 was set at 0.167% and of a prudential fee – at 0.079% of the total amount of risk exposure. See Resolution No. 25/2015 of the BFG Council of 25 November 2015 on determining the rate of a mandatory annual contribution for 2016 paid by entities covered by the obligatory guarantee scheme to the Bank Guarantee Fund and Resolution No. 26/2015 of the BFG Council of 25 November 2015 on determining the amount of the rate of a prudential fee for 2015 paid by entities covered by the obligatory guarantee fee to the Bank Guarantee Fund.

53 See draft law of 9 October 2015 on the Bank Guarantee Fund, the deposit guarantee scheme and forced restructuring proceedings available on the Government Legislation Centre website.
tion of enterprises and households as well as a likely further fall in interest on loans. The unfolding of such a scenario could be threatened by a potential increase in coverage of impaired loans by provisions at banks, where such coverage substantially deviates from the average for the sector (see Chapter 2.2, and Box 3). Such a situation could be particularly dangerous for some cooperative banks due to their low efficiency\(^\text{54}\) – in the case of these banks a portion of net income from banking activity, which could be used to cover additional provisions, is lower than at commercial banks.

- Implementation by cooperative bank affiliations of rules allowing to regard them as an institutional protection scheme (IPS). In such a situation, affiliated cooperative banks will pay lower fees for supervision and lower contributions to BFG (both under the present legal regime and after implementing the abovementioned changes). The requests of both affiliating banks (SGB Bank and BPS) to establish institutional protection schemes were approved by the KNF.\(^\text{55}\)

- Limited possibility of increasing leverage, which results from the supervisory recommendation of October 2015 with regard to the capital adequacy of banks (see Chapter 2.6).

The potential forced restructuring of foreign currency housing loans is the factor which, if materialised, may additionally strongly diminish banks’ profitability.

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**Box 3. The simulation of impact of increase in loan provisions on the capital adequacy of cooperative banks**

In large cooperative banks the average coverage of impaired loans by provisions is lower than in commercial banks and smaller cooperative banks. This stems, inter alia, from high value of collateral reported by these banks, which decrease the basis for creation of provisions. In the opinion of KNF, the realisation of collateral is often problematic and almost always time-consuming.\(^\text{1}\) Due to the use of reporting data covering whole loan portfolios, the simulation only provides an approximate assessment of risk arising from the low level of loan impairment provisions in certain cooperative banks.

The amount of additional provisions was calculated assuming that the coverage of impaired loans with provisions and the percentage of impaired loans in shorter arrears increases to the average level in commercial banks. The loss due to this first lowers the gross profit in the current period, and then lowers regulatory capital.

Increasing loan impairment provisions to the average level in commercial banks would mean a significant increase in the costs of some cooperative banks, and in the case of certain banks, could result in a shortfall of capital. In seven cooperative banks after the creation of additional provisions the total capital ratios would fall below the level of 8%. This concerns four large cooperative banks (out of a total of 33 large cooperative banks), two medium-sized cooperative banks (out of 133) and one small cooperative bank (out of 396). However, the regulatory capital shortfall would not be large (see Figure 1). With the exception of one very small cooperative bank, the remaining six of the above-mentioned banks would have capital ratios between 6-8%. If the results of the sim-

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\(^{54}\)See Box 4.1.3 in: “Financial System in Poland 2014”, 2015, NBP.

ulation were to apply not to the regulatory capital ratio standards, but to the levels recommended by the KNF, the influence of additional costs would be much greater.

Figure 1. Distribution of the number of cooperative banks (left-hand panel) and their share of the cooperative banking sector (right-hand panel) according to the value of the total capital ratio before and after the simulation of increasing provisions for impaired loans to the average level in commercial banks.

![Graph showing distribution of total capital ratio for cooperative banks before and after the simulation of increasing provisions.](image)

Notes: Calculation based on data from the end of September 2015. The simulation does not include SK Bank. Source: NBP.

However, it should be noted that a full assessment of the adequacy of the level of the provisions would require an analysis of individual loan portfolios and verification of the values of the collateral applied. The specificity of loan portfolios in individual banks may allow the creation of provisions at a different level than in the remaining cooperative banks or in commercial banks. This may concern banks having large loan portfolios guaranteed by the Agency for Restructuring and Modernisation of Agriculture. However, these are predominantly household loans (individual farmers). Meanwhile, the problem with the possible underestimation of provisions in cooperative banks mainly concerns corporate loans (the vast majority – 81% – of additional provisions in seven banks with the lowest capital ratios in the above-mentioned simulation would apply to corporate loans). While in cooperative banks these loans are more often secured by mortgages, this can only partially explain such small coverage of provisions in certain banks. Mortgage-backed impaired loans in commercial banks have much higher average coverage with provisions (this coverage is lower than the average for all corporate loans; however, the difference is small) than the corresponding loans in cooperative banks.

For example, increasing in the above-mentioned method of provisions in commercial banks would not result in a shortfall of regulatory capital. Apart from one medium-sized bank, in which the total capital ratio would fall slightly below 8%, in all the remaining banks it would be higher than 10%.

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1 See “Informacja o sytuacji banków spółdzielczych I zrzeszających w III kwartale 2015 r. ”, 2015, UKNF.
2.6. Banks’ capital position

In the period analysed, banks’ regulatory capital continued to grow (see Figure 2.34). The sector’s regulatory capital – excluding SK bank – rose by a total of 5.2%, mainly due to the increase of Common Equity Tier 1. The growth of the sector’s capital results largely from the retention of earned profits and – to a minor extent – from the establishment of two new commercial banks and new share issues at existing banks. Tier 2 capital, which is mainly composed of subordinated debt, declined by 2.5%.

Figure 2.34. Main components of regulatory capital and selected capital adequacy ratios

Note: Tier 2 capital by the end of 2013 calculated as the difference between capital for the needs of the capital adequacy ratio and core capital.
Source: NBP.

The total capital requirement did not change substantially (an increase of 0.5%). The increase in requirements applied only to credit risk (see Figure 2.35), which was associated with lending growth.

Figure 2.35. Capital requirements

Note: The value of the capital requirements for counterparty credit risk by the end of 2013, shown jointly with the capital requirement for credit risk. Since 2014, a decrease in the amount of “capital requirements for other risk” results from changes in the composition of capital requirements as of entry into force of CRDIV/CRR.
Source: NBP.

The domestic banking sector was characterised by high average credit risk weights reflecting the conservative methods of estimating the capital requirements for credit risk (see Figure 2.36 i 2.37). Most banks used the Standardised Approach, based on supervisory parameters and the exposure classification rules. This method produces, in principle, more conservative estimates of capital requirements for given credit exposures than advanced methods permitted in the CRDIV/CRR package. Four banks (with a 20.9% share in the sector’s assets) used the Internal Ratings Based Approach (IRB). These banks are subject to the so-called gradual implementation and use the IRB approach for some types of credit exposures (from around 40 to 60% of credit exposures at these banks are subject to advanced methods). It can be estimated that the application of

56 The analysis includes commercial banks with their foreign branches and cooperative banks (the foreign branches’ assets account for less than 0.2% of the banking sector’s assets and around 1% of the three banks that have foreign branches). Branches of credit institutions and BGK were excluded from the analysis. BGK is not subject to the CRDIV/CRR regulatory package and is a special state-run bank carrying out the government social policy and development programmes.

57 The audit carried out by an independent auditor upon the request of receiver of SK bank has shown that at the end of October 2015 the bank’s regulatory capital was negative and amounted to minus 1.3 billion zlotys. In the latter part of the chapter, unless otherwise indicated, September 2015 data include the estimates of a revision of components of the SK bank’s regulatory capital.
the IRB approach helped these banks increase their total capital ratios by, on average, 2.4 percentage points (as compared with the situation, if they used an exclusively Standardised Approach). After the end of the transitional phase, these banks can benefit more from the use of advanced methods (the advanced-method-using banks cannot lower the capital requirements below the reference amount arising from the application of the Standardised Approach or Basel I methodology58).

The capital requirement for credit risk, apart from using the IRB approach, was also influenced by the so-called SMEs supporting factor. This factor was utilised, to a greater extent, at cooperative banks where the share of exposures towards SMEs in assets was larger. This helped cooperative banks reduce the capital requirement for credit risk by over 11%. The application of the supporting factor reduced the average credit risk weight used for such exposures towards SMEs to a level lower than risk weight assigned to retail exposures class (inter alia, consumer loans) under the Standardised Approach for calculating the capital requirement (see Figure 2.36).

Note: The SMEs supporting factor is used for loans extended to enterprises with the annual turnover below 50 million euros. Source: NBP.


Figure 2.36. Average credit risk weights: exposures towards the non-financial sector (left-hand panel) and assets under the SMEs supporting factor (right-hand panel)

Note: Calculations do not include possible adjustments concerning SK bank. Source: NBP.
The average total capital ratio (TCR) in the domestic banking sector increased slightly. At the end of September 2015, the ratio was 15.4%, and the Common Equity Tier 1 and Tier 1 capital ratios – 14.1%59.

Most banks more than met the regulatory capital adequacy ratios. Banks with the total capital ratio (TCR) above 12% represented 97.7% of domestic banks assets (see Figure 2.38). Banks with the Tier 1 ratio above 9% represented 98.6% of domestic banks assets (see Figure 2.39). At the end of September, two banks failed to comply with the basic capital adequacy ratios: one was subject to recovery programme, and in the case of the other, in November 2015 KNF suspended its activity and filed to court for bankruptcy.

59In accordance with CRD IV/CRR, the minimum levels of the ratios, effective since 2015, are respectively: 4.5% and 6%, and the total capital ratio – 8%. In 2014, the levels amounted to 4%, 5.5% and 8%, respectively.
Chapter 2.

Figure 2.40. Leverage ratio at commercial banks (left-hand panel) and cooperative banks (right-hand panel)

<table>
<thead>
<tr>
<th>Year</th>
<th>Leverage Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>5%</td>
</tr>
<tr>
<td>2009</td>
<td>6%</td>
</tr>
<tr>
<td>2010</td>
<td>7%</td>
</tr>
<tr>
<td>2011</td>
<td>8%</td>
</tr>
<tr>
<td>2012</td>
<td>9%</td>
</tr>
<tr>
<td>2013</td>
<td>10%</td>
</tr>
<tr>
<td>2014</td>
<td>11%</td>
</tr>
<tr>
<td>2015</td>
<td>12%</td>
</tr>
</tbody>
</table>

Note: The leverage ratio prior to 2014 based on estimates.

the leverage ratio at cooperative banks is characterized by cyclical changes as an effect of a one-off retention during the year of all profits earned in the previous financial year, amid stable growth of credit exposures in the whole year. The lowering of the ratio since 2014 results largely from the amortisation of the grandfathered components of Tier 1.

Source: NBP.

KNF expects banks to maintain their capital ratios at levels that are higher than the regulatory standards. Minimum levels recommended by KNF in 2015 are 9% for Tier 1 capital ratio and 12% for Total Capital Ratio (TCR). Banks substantially engaged in Swiss franc-denominated housing loans are required to maintain the individually assigned additional own funds requirement. Furthermore, in its dividend payout guidelines KNF recommended that banks with substantial BFG-guaranteed deposits (banks with at least a 5% share in the deposit market of the non-financial sector) keep the capital ratios increased by 3 percentage points. Banks not complying with the KNF-recommended levels (and/or other terms) have restrictions on dividend payments.

Given the present level of lending, a surplus in

60 In September 2015, UKNF issued to banks substantially engaged in Swiss franc-denominated housing loans individual recommendations, under the so-called pillar II, to maintain higher capital ratios.

61 According to the Act of 5 August 2015 on macroprudential oversight of the financial system and crisis management in the financial system, in 2016-2017 capital conservation buffer is to constitute 1.25% of total risk exposure amount. Only a portion of Common Equity Tier 1, left after complying with the basic capital standards (Common Equity Tier 1 standard, Tier 1 capital standard and Total Capital Ratio) can serve as a capital buffer. This implies that high capital Tier 1 ratios or a Total Capital Ratios do not guarantee compliance with the required capital buffer standard.

62 According to CRDIV/CRR, the leverage ratio is calculated as expressed in a percentage the quotient of Tier 1 capital to the exposure measure that includes both on- and off-balance-sheet exposures.

The Polish banking sector is characterised by low leverage, which confirms the positive standing of its capital position. At the end of September 2015, the traditional leverage ratio, i.e. the ratio of banks’ assets to Tier 1 capital, amounted to 10.8, and the ratio calculated according to definitions included...
in CRDIV/CRR amounted to 8.6%. The leverage ratio calculated according to CRDIV/CRR did not change substantially in the surveyed period (see Figure 2.40).

The EU standard for the leverage ratio, defined in the CRDIV/CRR regulatory package, is yet to be set. Its value should be determined by the European Parliament by the end of 2017. According to the Basel Committee proposal, the minimum leverage ratio should amount to 3%. The leverage ratio standards at this level would not be presently met by only two banks (with a 1.3% share in assets of the banking sector).

Box 4. Capital adequacy of cooperative banks

The structure of regulatory capital and capital requirements in co-operative banks in Poland is different than in commercial banks. Due to the traditionally large role of retained profits in regulatory capital, achieving adequate profitability by cooperative banks is very important for their capital position in the future.

Retained profits have a larger share in the structure of cooperative banks’ regulatory capital than in the case of commercial banks (see Figure 1). It is because the reserve capital constitutes over 90% of Common Equity Tier I. The only instruments which in cooperative banks can be included as capital instruments in Common Equity Tier I, as in the case of commercial banks, are paid-up member’s share funds. After entry into force of the provisions of CRDIV/CRR, these funds – in part, which were obtained before 2012 – are classified as grandfathered capital (they currently constitute approx. 60% of all paid-up member’s share funds that are on the balance sheets of cooperative banks). The share of grandfathered instruments in Tier 2 capital is also larger than in commercial banks (23%). Grandfathered regulatory capital is subject to gradual amortisation until the end of 2021.1

Figure 1. Structure of regulatory capital of commercial banks and cooperative banks, end of September 2015.

Note: Data excluding SK bank. The other reserves do not include current period eligible profits and minority interest and accumulated other comprehensive income; however, it does include adjustments of profits not eligible as regulatory capital. Source: NBP.

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The insignificant share of paid-up member’s share in regulatory capital means that amortisation of this component does not seem to be a problem for the majority of cooperative banks. Deduction of this item would result in a reduction of the regulatory capital of cooperative banks by approx. 0.6 billion zlotys (i.e. by 5.8%), and consequently six cooperative banks would have problems meeting the basic capital adequacy standards. For a larger number of cooperative banks it could be a challenge to meet the minimum level of initial capital at 1 million euro. Eleven cooperative banks would not meet this minimum in this case. The actual decrease in capital and its possible shortfalls could, however, be smaller after making use of the possibilities provided by the recent amendments to the Act on the Operation of Cooperative Banks, their Affiliation, and Affiliating Banks and accession of the bank to the Institutional Protection Scheme (IPS)².

In the capital requirements of cooperative banks, the requirement for credit risk is predominant, while the average credit risk weights are higher than in commercial banks (see Figure 2.36).

- In cooperative banks, the share of exposures classified into exposures classes with the lowest risk weight (e.g. exposures to central government and central bank) is much smaller, while in the remaining most numerous exposure classes (exposures to corporates, exposures secured by mortgages on immovable property) they often apply the highest risk weights. This is due, among others, to the smaller participation of cooperative banks in the government de minimis programme, whereby a smaller share of exposure to corporates with 0% risk weight is seen³ in their group. Moreover, in corporate loan portfolios, there are less exposures of entities with an external credit assessment from rating agency. This is why a 100% risk weight is assigned to the majority of credit exposures of enterprises in cooperative banks.
- In turn, the focus of activity of many cooperative banks on the territory of one county or voivodeship) hinders the diversification of risk in loan portfolio and in combination with a more individualised assessment of loan applications over the years, this made it more difficult to classify loans to the class "retail exposures" and assign them the risk weight of 75%. The current regulations are slightly more lenient in the classification of exposure⁴, and additionally, in the case of some loans it is possible to make use of relief afforded by the SMEs supporting factor. In cooperative banks, its use is relatively greater than in commercial banks (larger share of exposures to which the supporting factor can be applied).

Figure 2. Structure of credit exposures of commercial banks and cooperative banks, end of September 2015.

Note: The adopted division of exposures does not coincide with the CRR exposures classes, due to the definition differences between classes from the Standardised Approach and the IRB approach.
Source: NBP.
Accession to the Institutional Protection Scheme (IPS) allows cooperative banks to improve their capital adequacy without increasing the value of regulatory capital. IPS allows banks taking part in the scheme not to reduce regulatory capital by the value of significant investment in equity holdings in banks making up the IPS and apply lower risk weights for mutual exposures of participants of a given affiliation. Assuming that, most of the cooperative banks will join the IPS approved by the KNF, their capital ratios will rise by on average 1.7 percentage points due to reduction of capital requirements (by approximately 520 million zlotys).

1 In accordance with Article 486 of Regulation CRR and Article 171a (9) of the Banking Law Act, the share of these items is to be reduced linearly and may reach a maximum of 70% in 2015 and 10% in 2021.


3 Credit in a portion covered by the de minimis guarantee receives a risk weight similar to exposures to the State Treasury.

4 The provisions concerning the calculation of capital requirements that were in force before the regulatory package CRDIV / CRR – Resolution No. 76/2010 of the Polish Financial Supervision Authority of 10 March 2010 on the scope and detailed procedures for determining capital requirements for particular risks – it was required from bank in the classification of exposure to the retail exposure class that the exposure is one of a significant number of exposures with similar characteristics and is not managed as individually as exposures belonging to the class of exposures to corporates. The existing provisions - Article 123 of the CRR – no longer points to the need for the so-called portfolio management of such exposures.

2.7. Market assessment of Polish banks

Market assessment of Polish banks has worsened. Since May 2015, the WIG-banki index has been in the downward trend (see Figure 2.41) on the back of investor expectations of banks’ lower profits following the introduction of a new tax and a decline in interest margin (see Chapter 2.5.) along with deteriorating mood on major global stock exchanges.

Uncertainty about a possible restructuring of foreign currency-denominated loans and the proposal to levy a tax on some financial institutions made investors’ valuation of banks shares difficult. The adoption on 5 August 2015 by the Sejm the act on the restructuring of foreign currency loans brought about falls, of a few to a dozen or so percent, in the share prices of banks holding substantial portfolios of these loans. Investors also responded negatively to the increase in banks’ burden related to the need to finance payments of guaranteed deposits of SK bank, suspended by KNF. The share prices of some banks hit their all-time lows.

Figure 2.41. Index prices of Polish and European banks

Note: Index prices rescaled to 100 at the start of September 2012.
Source: NBP calculations based on Thomson Reuters.

Sharp declines in share prices of Polish banks in early January 2016 resulted from an interaction of several important external and domestic factors. Valuation of banks shares reflected mounting global investors’ worries about the pace of development of emerging market countries. In addition, the market value of banks was negatively affected by adoption by the Sejm of the Act on Tax on Certain Financial Institutions and proposal of a draft law on the restruc-

turing of foreign currency loans prepared by the President’s Office, as well as downgrade of Poland’s credit rating by Standard and Poor’s to BBB+.

The “price to book value” ratio of Polish banks has fallen significantly. Weaker conditions in which banks carried out their business operations triggered a slump in this ratio to substantially below the long-term average. Despite this, in line with investor assessment, the capacity of Polish banks to generate profits was better than that of European banks (see Figure 2.42).

Figure 2.42. The “price to book value” ratios of Polish and European banks

Market analysts expect the 2015 earnings per share in the majority of Polish banks to drop. Banks holding a substantial number of foreign currency loans in their portfolios receive the poorest assessments.

Rating agencies positively assessed the situation of the Polish banking sector. Sound capitalisation, high liquidity, diversification of funding sources and the good situation in the macroeconomic environment led Moody’s to change the Polish banking sector outlook from negative to stable in September 2015. The individual ratings of Polish banks were largely dependent on their parent bank ratings (see Table 2.4). Therefore, Moody’s upgraded the baseline credit assessment of Bank Millennium and Fitch – the viability rating of Bank Zachodni WBK after upgrading the ratings of Banco Comercial Portugues and Banco Santander, respectively.

Downgrade in ratings of some Polish banks by S&Ps was not due to the deterioration of their financial position. In June 2015, Standard and Poor’s downgraded the long-term rating of PKO BP and mBank and lowered the rating outlook of Bank Pekao following the entry into force of the BRR directive65 which limits the possibility of European banks receiving government assistance. At the same time, the agency positively assessed the financial situation and capitalisation of the banks under analysis.

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Table 2.4. Ratings of Polish banks by Moody’s, Fitch and S&P

<table>
<thead>
<tr>
<th>Moody’s</th>
<th>Baseline credit assessment</th>
<th>Long-term deposit rating</th>
<th>Short-term deposit rating</th>
<th>Outlook</th>
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<td>PKO BP</td>
<td>baa2 (baa2)</td>
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<td>P-1 (P-1)</td>
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<td>P-1 (P-1)</td>
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<td>A3 (A3)</td>
<td>P-2 (P-2)</td>
<td>STA (STA)</td>
</tr>
<tr>
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<td>Ba2 (Ba2)</td>
<td>NP (NP)</td>
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<td>F3 (F3)</td>
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<td>F1 (F1)</td>
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<td>B (B)</td>
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<td>B (B)</td>
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<tr>
<td>BOŚ</td>
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Notes: In brackets – as of the end of May 2015. For definitions of the ratings, see Glossary. The banks are listed according to total assets. Ratings assigned only on the basis of publicly available data are not included in the Table. Source: www.moodys.com, www.fitchpolska.com, www.standardandpoors.com
2.8. Selected indicators of banking sector’s condition

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<td>Financial leverage (multiple)</td>
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1 Annualised data.
2 Domestic banking sector.
3 For definition, see Glossary.
4 Loans to residents, data after excluding the impact of foreign exchange rate changes.
5 Domestic commercial banks.
Source: NBP.
### 2.9. Selected indicators of the condition of domestic commercial banks

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<td><strong>Return on assets (ROA)</strong></td>
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<td><strong>Loan growth rate (y/y)</strong></td>
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<td>enterprises</td>
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<tr>
<td><strong>Impaired loan ratios</strong></td>
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<td>6.5</td>
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<tr>
<td>consumer loans</td>
<td>13.7</td>
<td>12.6</td>
</tr>
<tr>
<td>housing loans</td>
<td>3.2</td>
<td>3.1</td>
</tr>
<tr>
<td>enterprises</td>
<td>10.7</td>
<td>11.4</td>
</tr>
<tr>
<td>large enterprises</td>
<td>8.5</td>
<td>9.4</td>
</tr>
<tr>
<td>SMEs</td>
<td>12.5</td>
<td>13.1</td>
</tr>
<tr>
<td><strong>Charges to provisions for impaired loans to net value of loans</strong></td>
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<td>Long-term liquidity standard M4</td>
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<tr>
<td>Tier 1 capital ratio</td>
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<tr>
<td>Common Equity Tier 1 capital ratio</td>
<td>13.6</td>
<td>13.4</td>
</tr>
<tr>
<td>Financial leverage (multiple)</td>
<td>11.13</td>
<td>11.26</td>
</tr>
</tbody>
</table>

---

1 Annualised data.
2 For definition, see Glossary.
3 Loans to residents, data after excluding the impact of foreign exchange rate changes.

Source: NBP.
## 2.10. Selected indicators of the condition of cooperative banks

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>III kw.</td>
<td>IV kw.</td>
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<tr>
<td>Return on assets (ROA)¹</td>
<td>0.82</td>
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<tr>
<td>Return on Tier 1 capital (ROE)¹</td>
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<td>Net interest margin (NIM)¹</td>
<td>3.40</td>
<td>3.35</td>
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<td>Operating cost² to net income from banking activity² (CTI)²</td>
<td>70.1</td>
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<tr>
<td>Burden of charges to provisions for impaired loans² to net income from banking activity²</td>
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<td>7.4</td>
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<td>Loan growth rate (y/y)³</td>
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<td>10.3</td>
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<td>households</td>
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<td>consumer loans</td>
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<td>housing loans</td>
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<td>16.8</td>
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<td>enterprises</td>
<td>18.6</td>
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<tr>
<td>Impaired loan ratios²</td>
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<td>7.1</td>
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<td>households</td>
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<tr>
<td>consumer loans</td>
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<td>6.3</td>
</tr>
<tr>
<td>housing loans</td>
<td>2.8</td>
<td>2.6</td>
</tr>
<tr>
<td>enterprises</td>
<td>11.5</td>
<td>11.9</td>
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<tr>
<td>large enterprises</td>
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<td>12.2</td>
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<td>SMEs</td>
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<td>11.9</td>
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<tr>
<td>nonfinancial sector</td>
<td>0.54</td>
<td>0.59</td>
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<tr>
<td>households</td>
<td>0.26</td>
<td>0.30</td>
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<td>consumer loans</td>
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<td>housing loans</td>
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<tr>
<td>enterprises</td>
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<td>1.18</td>
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<td>large enterprises</td>
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<td>SMEs</td>
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<td>1.21</td>
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<tr>
<td>Funding gap²</td>
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<td>-40.2</td>
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<tr>
<td>Short-term liquidity standard M2⁴</td>
<td>1.75</td>
<td>1.77</td>
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<td>Long-term liquidity standard M4⁴</td>
<td>1.23</td>
<td>1.25</td>
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<tr>
<td>The share of core and supplementary liquidity reserves in total assets – M1²,⁵</td>
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<td>0.35</td>
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<tr>
<td>Total capital ratio</td>
<td>15.8</td>
<td>15.7</td>
</tr>
<tr>
<td>Tier 1 capital ratio</td>
<td>14.7</td>
<td>14.6</td>
</tr>
<tr>
<td>Common Equity Tier 1 capital ratio</td>
<td>14.6</td>
<td>14.5</td>
</tr>
<tr>
<td>Financial leverage (multiple)²</td>
<td>10.88</td>
<td>11.12</td>
</tr>
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</table>

¹ Annualised data.
² For definition, see Glossary.
³ Loans to residents.
⁴ Cooperative banks with assets over 200 million złotys.
⁵ Cooperative banks with assets up to 200 million złotys.

Source: NBP.
Chapter 3.

Credit unions sector

The restructuring process of the credit unions sector was continued. Out of 49 credit unions which carried out their operations at the end of 2015, 40 were obliged to prepare a recovery programme, of which 10 were accepted by KNF. An administrator was appointed at six credit unions, whereas administration proceedings were started by KNF at another 19 credit unions in order to initiate this procedure.

The restructuring activities led to a reduction in the scale of the sector’s operations. The total balance sheet of credit unions that conducted their operations as at the end of September 2015 stood at 12.4 billion zloty. It dropped by 3.6% (see Figure 3.1) compared with the assets of credit unions that conducted their operations as at the end of March 2015. Also the level of loans and credits was significantly declined – by 5.2% to 6.6 billion zloty. In the case of deposits, the scale of changes was smaller – their value decreased by 1.7% to 11.6 billion zloty. The membership of the credit unions as well as the number of branches and subsidiaries have markedly fallen likewise.

The scale of interconnectedness between the banking sector and the credit unions sector remains insignificant. The ratio of assets of credit unions to assets of the banking sector is declining and currently amounts to 0.77%. The value of funds deposited

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66 In the period analysed, the number of credit unions fell from 50 to 49 – in August 2015 SKOK Wesoła was taken over by PKO BP. In addition, in November 2015 two credit unions (SKOK Siarkopol and SKOK Kwiatkowski) merged, whereas in December 2015 KNF invited banks to restructure SKOK Kujawiak.

67 In March 2014, under the KNF obligation the National Association of Credit Unions (KSKOK) was required to draw up a recovery programme due to the loss reported in January 2014. None of the KSKOK-prepared versions of the programme has so far been accepted by KNF.

68 SKOK Kujawiak (on 15 June), SKOK im. S. Kardynała Wyszyńskiego (on 10 July), Powszechna SKOK and SKOK Polska (on 28 July), SKOK Jowisz (on 11 August) and SKOK Arka (on 28 August).

69 On 28 October, KNF decided to appoint an administrator at SKOK Skarbiec.

70 The assets of credit unions that conducted their operations as at the end of March and September 2015 (excluding data of the credit union acquired by the bank) increased by 2.2%.

71 Including data of the credit union acquired by the bank.

72 Conclusions presented later in this chapter are based on an analysis of statistical data of credit unions that conducted their operations as at the end of September 2015. In order to maintain comparability, historical data do not comprise the financial statements of the credit unions that were taken over by banks or credit unions under bankruptcy. Data of some credit unions do not include the KNF reservations made during audits, and the adjustments proposed by the auditor after the KNF-ordered reexamination of the 2013 financial statements.
by credit unions in the banking systems is also declining. At the end of the third quarter, the value of current accounts and deposits at banks fell by almost 25% to less than 0.5 billion zlotys. At the same time, credit unions do not show financial liabilities to banks. On the other hand, the National Association's receivables at banks are growing – at the end of September 2015 the balance of current accounts and deposits at banks amounted to 1.3 billion zlotys, which represented an increase of over 60% on the first quarter figure.

The credit unions sector is characterised by high concentration. The share of the three largest credit unions (with their balance sheet above 0.5 billion zlotys) in the assets of all credit unions amounts to almost 70%. Due to the high concentration level, the financial condition of the largest unions has a major impact on the results and directions of changes in the indicators of the whole sector.

**The capital position of credit unions**

![Figure 3.1. The assets of the credit unions operated at the end of the reporting period and the end of September 2015, respectively](image)

Source: KNF.

Despite the difficult capital position of the whole sector, the number of credit unions with capital ad-

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73The verification outcome shows that the credit unions’ results need to be significantly adjusted, which would result in a decrease in the whole sector’s earnings by 243 million zlotys, and of the sector’s regulatory capital by almost 1 billion zlotys.
Credit unions sector

equacy ratios above 5% is increasing. At the end of September 2015, 29 out of 49 active credit unions reported the capital adequacy ratio above the regulatory minimum level (see Figure 3.3). If the inspection adjustments were accounted for by credit unions in the capital account, the number of such credit unions in the group would fall; however, the number of credit unions complying with the regulatory capital adequacy would continue to grow.

Figure 3.3. Distribution of assets of credit unions continuing operations by the capital adequacy ratio

The earnings of credit unions

The credit unions sector continued to generate losses. After the first three quarters of 2015, credit unions reported a combined loss of -92 million złotys. The sector’s earnings were primarily driven by the poor quality of its loan portfolio and the decreasing interest margin. However, the trend of a growing number of credit unions reporting negative results was halted – at the end of September 2015, a profit was reported by 21 credit unions (see Figure 3.4). Negative impact on the performance of the sector in the future - due to the risk of assets revaluation - may have the significant share of capital instruments (i.e. participation in subsidiaries) and non-government securities (received for the sold receivables) in assets.

Figure 3.4. Net earnings of credit unions

Lending and credit risk in credit unions

The value of the credit unions’ loan portfolio is decreasing. At the end of September 2015, credit unions reported the net value of loans at 6.6 billion złotys, i.e. down 0.1 billion złotys on the end of March 2015 figure. The share of loans in assets also declined. This decline resulted both from revaluation of the deteriorating part of the portfolio and another sale of overdue debt.

Consumer loans prevail in the loan portfolio of credit unions. At the end of September 2015, their share in the loan portfolio was 85% (see Figure 3.5). In the second half of 2015, the value of the loans rose by approximately 4% and amounted to 5.6 billion złotys at the end of the third quarter of 2015. In terms of loan maturity, the percentage of loans with maturity of over 5 years, now accounting for over 66% of the consumer loan portfolio, have been increasing. Taking into account the value of the loan, 33% are loans ranging from 10,000 to 30,000 złotys.\(^{24}\)

Due to the large exposures to real estate loans and high value loans of credit unions taken over by banks and under liquidation the (credit and product) structure of the credit unions sector’s loan portfolio changed substantially.
Figure 3.5. The structure of credit unions’ loan portfolio

Source: KNF.

The quality of the loan portfolio of credit unions remains poor. Overdue loans accounted for 20.8% of total loans, and their value amounted to almost 1.7 billion zlotys. As credit unions sold overdue debt, its level did not increase significantly. If credit unions had kept in their portfolio the debt they sold in the second half of the year, the overdue loan ratio would have grown to almost 34%.

The majority of overdue loans are loans with arrears in repayment of more than 12 months. A dominant share in the portfolio of overdue loans is held by consumer loans (56%), of which 70% were loans with arrears in repayment of more than 12 months. Real estate loans accounted for 38% of overdue loans (see Figure 3.6).

Credit unions keep a high level of coverage of overdue loans with provisions. The value of provisions created by credit unions was 1.5 billion zlotys, which covered almost 87% of the value of overdue loans.

For receivables with arrears in repayment of over 12 months, credit unions show an almost 97% coverage with provisions.

Figure 3.6. The structure of overdue loans

Source: KNF.

Liquidity risk at credit unions

Deposits remain the main source of funding for credit unions. After a substantial outflow of deposits towards the end of March 2015, their growth was observed in subsequent periods. At the end of September 2015, credit unions reported 11.6 billion zlotys, i.e. almost 4% more than at the end of the first quarter of 2015 (see Figure 3.7). At the same time, the share of term deposits increased and they currently account for over 83% of the value of credit union members’ accounts.

Liquid assets of the credit unions sector have increased. The value of liquid assets at the end of September 2015 amounted to 3.1 billion zlotys and was by almost 16% higher than at the end of the first quarter of the year (see Figure 3.8). Liquid assets accounted for 24.6% of total assets and, in the half of the year under analysis, their share rose by 3 percentage points. The sector’s liquid reserve ratio also

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The data cited here refer to loans with arrears in repayment of more than 3 months.

In the second and third quarters of 2015, credit unions sold debt with the value of 182 million zlotys, of which 95% were debt overdue more than 12 months.
increased and stood at the level of approx. 12% at the end of September 2015. In the second half of the year, most credit unions – apart from individual cases – maintained the liquid reserve ratio above 10% of the regulatory minimum.

Figure 3.7. The structure of credit unions' deposits and quarterly rate of changes in the balance of deposits

![Graph showing the structure of credit unions' deposits and quarterly rate of changes in the balance of deposits.](image)

Source: KNF.

Figure 3.8. Liquid assets and liquid reserve of credit unions

![Graph showing liquid assets and liquid reserve of credit unions.](image)

Source: KNF.

Deposits at the National Association are the major component of liquid assets of credit unions. In the half of the year under discussion, the value of deposits rose by 30% to almost 2 billion zlotys (see Figure 3.9). The remaining components of liquid assets are current accounts and bank deposits (0.9 billion zlotys) and cash and government bonds (0.2 billion zlotys).

Figure 3.9. Structure of liquid assets of credit unions and the liquid assets to total assets ratio

![Graph showing the structure of liquid assets of credit unions and the liquid assets to total assets ratio.](image)

Source: KNF.

* The item also comprises debt instruments guaranteed by the State Treasury.

** Units of money market funds.

Source: KNF.

The National Association

The main objective of the National Association is to ensure financial stability of credit unions and their oversight, which is designed to guarantee the safety of the savings accumulated by credit union members. Given the role of the National Association in the credit union system, its financial position is significant both due to the stability of the National Association itself and its potential to conduct assistance actions that have a stabilising effect on the credit unions sector. The Association's is becoming increasingly important as a source of capital support and a place for allocation of free funds by credit unions\(^77\).

The activities of the National Association are fi-

\(^77\)The stabilisation fund, set up from contributions of credit unions and a balance sheet surplus of the National Association, is an instrument through which financial support and stabilisation are provided in the sector.
nanced with funds from the credit unions. The value of (mandatory and non-mandatory) funds is growing, although the number of credit unions is decreasing. At the end of the third quarter of 2015, the Association’s liabilities to credit unions rose by over 27% compared to the first quarter and amounted to 2.2 billion zlotys (see Figure 3.10). Over 60% of that amount were deposits forming part of the liquid reserve.

The main source of increasing stabilization fund is profit of the National Association. The fund’s value stood at 0.3 billion zlotys at the end of September 2015 (10% of the Association’s liabilities) and grew by approx. 15% as a result of the inclusion of part of the Association’s 2014 profit. In the first nine months of 2015, the National Association earned a net profit of 15.1 million zlotys.

The National Association invested funds received from credit unions in the second half of the year mainly in liquid assets. Liquid assets of the National Association comprise mainly funds on current accounts at banks and at NBP, debt instruments of the State Treasury and deposits at domestic banks. The rise in financing with the use of funds received from credit unions helped increase both the value of liquid assets and their share in the Association’s assets. In the second half of 2015, liquid assets increased by 537 million zlotys and at the end of September accounted for approx. 77% of assets of the Association.

Capital instruments are a significant and growing item of assets of the National Association. At the end of September 2015, the value of shares and stocks held by the Association amounted to 0.5 billion zlotys, which represented approx. 16.7% of its assets. In the second half of the year, the Association’s investment in these instruments increased, mainly as a result of the taking up of shares in credit unions. At the end of the third quarter of 2015, shares held by the Association in credit unions constituted 55% of sector’s own funds.

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78 The taking up of shares in credit unions is effected via the use of funds from the stabilisation fund and constitutes a form of support (a capital increase) provided to the credit unions.
Chapter 4.

Non-credit financial institutions

In the first three quarters of 2015, the non-credit financial institutions sector (NIF) was developing at a rate similar to that observed in the banking sector (see Table 4.1). The asset growth of insurance companies and investment funds occurred, with a simultaneous decline in the value of funds deposited in open pension funds. As compared with the end of 2014, the ratio of non-credit financial institution assets to banking sector assets has not changed significantly.

The impact of the non-financial institutions sector on systemic risk is analysed in several dimensions:

- the extent of the NIF sector’s resilience to risks related to its maintaining the continuity of its unique financial services provided for the real economy,
- the capacity of NIF investment behaviour to influence asset prices,
- the extent and type of linkages with the banking sector (ownership linkages, liabilities incurred in banks and financing granted to banks).

Additionally, areas of risk specific for each of these segments are analysed.

4.1. Insurance companies

The insurance sector significantly affects the functioning of households. The share of unit-linked insurance and the savings premium in life insurance in household savings as at the end of September 2015 reached 8.3%. In the first half of 2015, the ratio of gross written premium to GDP for life insurance was 1.7%, and for non-life insurance – 1.6%.

Insurance companies operating in Poland carry out mainly traditional insurance activities, which do not generate systemic risk. These activities

### Table 4.1. Assets of open pension funds (OFE), insurance companies (ZU), investment funds (FI) and banks (PLN billion)

<table>
<thead>
<tr>
<th>Year</th>
<th>OFE</th>
<th>ZU</th>
<th>FI</th>
<th>NIF</th>
<th>Banks</th>
<th>NIF / Banks</th>
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<tr>
<td>2013</td>
<td>299.3</td>
<td>167.2</td>
<td>195.0</td>
<td>661.5</td>
<td>1,404.7</td>
<td>47.1%</td>
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<td>2014</td>
<td>149.1</td>
<td>178.6</td>
<td>219.5</td>
<td>547.2</td>
<td>1,529.3</td>
<td>35.8%</td>
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<tr>
<td>2015</td>
<td>145.4</td>
<td>180.2</td>
<td>251.2</td>
<td>576.8</td>
<td>1,605.8</td>
<td>35.9%</td>
</tr>
</tbody>
</table>

Note: Data for OFEs and FIs refer to net assets as at the end of September 2015. For ZUs, data as at the end of June 2015. Due to the adjustments made, the data may differ from those presented in the previous editions of the Report.

Source: UKNF, NBP.
consist in providing insurance coverage to the insured against the effects of specific fortuitous events. Within the basic business model, insurance companies pool the non-correlated insurance risks together, which they manage and whose financial effects they distribute. Payment of claims arises from fortuitous events and, to a lesser extent, from financial cycles.

Due to the reversed production cycle, domestic insurance companies are exposed to liquidity risk to a minor extent. Insurance premiums are paid in advance and allocated for the payment of claims and for coverage of future liabilities. Effects of insurance events resulting in payment of claims are often distributed over time. Entities of the insurance sector in Poland have a positive cash flow balance and a high share of liquid assets (as at the end of June 2015, government bonds and term deposits constituted 58% of assets). In the case of unit-linked insurance, companies may be exposed to liquidity risk; however, to a lesser extent than in the case of similar investment products offered by open-end investment funds. This results from the application of liquidation fees by insurance companies as well as from the longer period of notice in the case of contract termination. Such insurance is usually concluded for many years and also includes the cover.

The product offer of individual insurance companies within the sectors was rather homogeneous. All domestic life insurance companies offered products in subsectors 1 and 5. The majority of entities offered unit-linked insurance. The biggest number of non-life insurance companies offered their clients to conclude contracts for insurance against fire and other losses, and the majority of motor OC (third party liability insurance) and AC (auto casco insurance) contracts. The companies competed mainly in prices. In the case of a change of offer by the market leader (e.g. supplementing the offer by adding direct liquidation of claims) other insurance companies adjusted their contracts in order to be able to compete with the largest domestic insurance company effectively.

The cessation of activities by any of the domestic entities should not have a significant impact on real economy entities. In the case of bankruptcy of a single insurance company, other entities should be capable of taking over its insurance portfolio and maintaining the continuity of the services provided. The risk of insurance cover loss could occur if domestic companies offered long-term life and endowment insurance. The potential bankruptcy of an entity having liabilities due to such insurance could mean the lack of a possibility for the insured to conclude another insurance contract under the same terms and conditions.

Only for selected insurance classes (marine and aviation insurance, financial insurance) was the product group limited to several companies with relevant experience and human resources. However, due to the possibility to acquire insurance cover abroad, the cessation of insurance company activity also in those insurance classes should not significantly affect the availability of a given service or the growth of its prices.

The Polish insurance sector demonstrated considerable concentration, higher than in the case of the banking sector. In the first half of 2015, the largest insurance group collected almost 30% of the premium (see Figure 4.1).

Premiums represent the major source of funding of insurance activity. The companies use other sources of financing to a lesser extent. Life insurance companies collected 1.3%, and non-life insurance compa-

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79Pursuant to Article 321 (1) of the Act on Insurance and Reinsurance, in the case of voluntary liquidation, along with the application to strike it off the register, the insurance company submits an agreement to transfer the whole of the insurance portfolio.
Non-credit financial institutions – 1.4% more premium than in the first half of 2014 (see Figure 4.2).

Figure 4.1. Structure of the insurance sector according to gross written premium

![Insurance Sector Structure Chart]

Source: UKNF.

Figure 4.2. Growth rate of gross written premium

![Growth Rate Chart]

Source: UKNF.

The bulk of the domestic insurance companies’ insurance activities is unit-linked insurance. In the Polish life insurance sector, a gradual decline in the role of classic insurance types can be observed. They are replaced by unit-linked insurance, where investment risk is borne by the insured. Revenue on sales of unit-linked life insurance accounted for almost a half of premium in life insurance, whereas assets allocated for covering the liabilities associated with unit-linked products made over a half of the balance sheet total.

In the first half of 2015, life insurance companies reported worse technical and financial results despite the growth of gross written premium in this sector. (see Table 4.2). The decline in profits on investments and the growth of insurance activity costs affected the decline of the technical result. A lower decline of the financial result than the technical result, as compared with the first half of 2014, was associated with higher profit on investment of insurance companies’ own funds.

In the non-life insurance sector, motor insurance (AC and OC) was most significant. Over a half of the premium in the non-life insurance sector was collected in connection with concluding insurance contracts classified in subsectors 3 and 10. In those classes, a technical loss was recorded, which resulted from the higher value of claims paid as compared to the premium collected.

The technical loss in motor insurance had generated a significant deterioration of the technical result in the non-life insurance sector, which was reflected in the deterioration of the loss ratio and the COR (see Figure 4.3 and Figure 4.4). The decline in net profit of the sector resulted mainly from the lower dividend paid by PZU Życie. The reason is that the results of investment activity in non-life insurance are recognised in the general profit and loss account. Therefore, they do not affect the technical result but the financial result. The decline in the non-life insurance sector’s financial result also led to a deterioration in the ROE ratio. This ratio decreased significantly, in particular, in comparison with 2013, however, its value still remained at a level higher than the average for European insurance companies.
Table 4.2. Earnings and basic indicators of the insurance sector

<table>
<thead>
<tr>
<th></th>
<th>6-2013 (zl million)</th>
<th>6-2014 (zl million)</th>
<th>6-2015 (zl million)</th>
<th>6-2015/6-2014 (in %)</th>
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</thead>
<tbody>
<tr>
<td><strong>Life Insurance (Sector I)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Written Premium</td>
<td>16 055</td>
<td>14 242</td>
<td>14 429</td>
<td>1.3</td>
</tr>
<tr>
<td>Technical Result</td>
<td>1 460</td>
<td>1 722</td>
<td>1 329</td>
<td>-22.9</td>
</tr>
<tr>
<td>Financial Result</td>
<td>1 393</td>
<td>1 836</td>
<td>1 699</td>
<td>-7.5</td>
</tr>
<tr>
<td>Own capital</td>
<td>11 445</td>
<td>12 072</td>
<td>11 659</td>
<td>-3.4</td>
</tr>
<tr>
<td>Technical profitability</td>
<td>9.3</td>
<td>12.3</td>
<td>9.4</td>
<td>-2.9 pp.</td>
</tr>
<tr>
<td>ROE (%)</td>
<td>21.0</td>
<td>26.8</td>
<td>23.3</td>
<td>-2.5 pp.</td>
</tr>
<tr>
<td><strong>Ubezpieczenia majątkowe (Dział II)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Written Premium</td>
<td>13 886</td>
<td>13 481</td>
<td>13 665</td>
<td>1.4</td>
</tr>
<tr>
<td>Technical Result</td>
<td>826</td>
<td>887</td>
<td>494</td>
<td>-44.3</td>
</tr>
<tr>
<td>Financial Result</td>
<td>5 223</td>
<td>2 569</td>
<td>1 789</td>
<td>-30.4</td>
</tr>
<tr>
<td>Own capital</td>
<td>20 416</td>
<td>19 975</td>
<td>19 969</td>
<td>0.0</td>
</tr>
<tr>
<td>Technical profitability</td>
<td>7.5</td>
<td>8.2</td>
<td>4.5</td>
<td>-3.7 pp.</td>
</tr>
<tr>
<td>ROE (%)</td>
<td>29.0</td>
<td>16.8</td>
<td>13.5</td>
<td>-3.3 pp.</td>
</tr>
</tbody>
</table>

Note: ROE annualised. Due to the adjustments made, the data may differ from those presented in the previous editions of the Report. Source: UKNF.

Figure 4.3. Efficiency ratios in the non-life insurance sector

Figure 4.4. Selected loss ratios in non-life insurance

In financial insurance, the loss ratio is highly volatile. Such products may create a potential source of risk for entities which have a high share of such insurance in their liabilities, particularly in the case of an inadequate level of contract portfolio reinsurance. However, such insurance currently has a limited impact on the stability of the entire sector, since the gross written premium and the associated provisions make a limited part of the non-life insurance sector.

Insurance companies competed with each other with regard to insurance prices. Results of inspections conducted by UKNF confirmed the existence of threats associated with underestimation of premium rates in subsectors 3 and 10 by domestic non-life insurance companies.80 In the long-term, further price competition could lead to a decline in equity and a

deterioration of insurance companies’ solvency parameters. However, it seems that price competition among insurance companies in the recent quarters became weaker and premium rates of AC and OC started to grow.

The average asset maturity, among which financial deposits prevailed (see Figure 4.5), was shorter than the maturity of liabilities. Accordingly, a potential further decline of interest rates could lead to a decrease in solvency parameters, particularly for such companies where for the purpose of calculating the technical insurance provisions a higher technical rate has been taken into account than the rate on investments attainable on the financial market.

Besides typical insurance risk, some life insurance companies may be exposed to interest rate risk. This happens especially when insurance companies offer products with a high guaranteed rate of return. Due to prolonged low interest rates environment, revenues on deposits of such companies may be lower than the guaranteed level of claims, which may lead to problems related to covering liabilities in the future. In the domestic insurance sector, the share of products with a guaranteed rate of return (for calculation of premiums and the calculation of technical provisions the technical interest rate is used) is significantly lower than in the majority of EU member states. Moreover, in the calculations a low interest rate is applied, which makes such products less sensitive to an interest rate decline as compared to many member states. Based on results of stress tests performed by EIOPA (European Insurance and Occupational Pensions Authority) examining the impact of low interest rates on the financial situation of insurance companies, it may be said that the solvency ratio for the domestic insurance sector was the highest in Europe.

Insurance companies invested their funds mainly in liquid deposits. In the portfolio of those entities government bonds prevailed (see Figure 4.6). Insurance companies also purchased units of investment funds, established usually for the needs of entities from their capital group. Moreover, the decline in sales of insurance-wrapped deposits resulted in the decline of term deposit value, which affected the decrease in linkages of the insurance sector with the banking sector. On the other hand, investments in real estate and shares represented a marginal part of the investment portfolio. Domestic insurance companies invested 95% of funds in the domestic market.

The extent of insurance companies’ impact on the prices of financial assets is the result of the activity they conduct, methods of their financing, regulatory requirements, investment policy and the level of exposure to liquidity risk. Insurance companies belonged (besides banks and foreign entities) to the largest investors in the Treasury debt securities market. Their share in debt due to the issue of domestic government bonds at the end of Septem-

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81 Up to now, in Poland the technical interest rates applied for the calculation of the liabilities of insurance companies have been lower than the rate of return obtained from investments in the financial markets.
ber 2015 reached almost 10%.

Figure 4.6. Structure of investments of insurance companies

Note: In life insurance, unit-linked insurance investments were not taken into account.
Source: UKNF.

Figure 4.7. Equity capital in the insurance sector

Source: UKNF.

Unit-linked insurance does not directly affect the solvency of the insurance sector. This is because they are products of an investment type rather than a cover. The design of such insurance products is close to investment funds; however, they are usually characterised by higher costs.

The solvency of insurance companies was at a level much higher than the level required by law. All insurance companies and reinsurance companies fulfilled the statutory solvency requirements. In 2013—2015, the downward trend in the solvency ratio was observed. This decline resulted from dividends paid by insurance companies, leading to a reduction of own funds and equity capital (see Figure 4.7). On the other hand, the growth in the scale of activity had a limited impact on the value of the solvency margin. At the end of the first half of 2015, the average value of own funds in relation to the solvency margin was several times higher than the level required by law (see Figure 4.8). This ratio also exceeded the European average.

The reinsurance programmes have a significant impact on the scale of insurance risk of the insurance sector. The basic goal of reinsurance is to mitigate the financial effects of fortuitous events and to stabilise earnings of the insurance companies. The reinsurance cover applies mainly to non-life insurance contracts with high insured sums, it should also mitigate the impact of cat risks on solvency of insurance companies. The reinsurance cover enables to reduce risk of earnings volatility and liquidity risk. Reinsurers undertake to cover the surplus of claims over the limit determined in the reinsurance programme, which protects individual insurance companies against high payments of claims and increases the security of domestic insurance sector activity. However, reinsurance is associated with additional costs. Insurance companies and reinsurers share the risk on a joint and several basis and have similar averaged technical results.

83 EIOPA Risk Dashboard – March 2015, Profitability and solvency, www.eiopa.europa.eu; the European average for life insurance reached 200%, and for non-life insurance – 300%.
Non-credit financial institutions

Reinsurance cover to domestic entities was mainly granted by foreign insurance and reinsurance companies. It resulted from the necessity of geographical risk distribution, favourable conditions laid down in the long-term reinsurance contracts and the limited capital capacity of domestic reinsurers. On the Polish insurance market, one reinsurance company carried out its operating activity. A limited scope of reinsurance cover was also provided by some domestic insurance companies. Reinsurance agreements were concluded mainly within international capital groups.

As of 1 January 2016, new principles of setting capital requirements became effective. It can be expected that the application of the new principles will result in a growth of requirements and a fall in the solvency ratios for some entities (see Box 5). This may mean the necessity for some insurance companies to increase their equity capital.

As of February 2016 a tax will become effective on some financial institutions, whose assets are to be taxed, inter alia, domestic insurance and reinsurance companies as well as the branches and main branches of foreign insurance companies and foreign reinsurance companies. The tax base is to be the surplus of total assets above PLN 2 billion, determined at the end of each month, and the tax rate is to be 0.44% on an annual basis. It is estimated that approximately one half of the entities will be subject to the tax. Almost half of the revenue from the tax will come from the largest insurance capital group. The introduction of the tax in the short term will not significantly affect the solvency of the domestic insurance sector. However, in the case of some insurance companies, the level of the tax may be higher than the profit generated, which may give rise to losses. Also, the taxation of the assets of insurance companies which last year recorded losses may lead to an increase in their losses and give rise to the need to cover them with own funds. In the long term this could result in lowered capital requirements coverage ratios.

Box 5. Effects of legal changes in the insurance sector associated with the entry into force of the Act of 11 September 2015 on Insurance and Reinsurance Activity implementing the Solvency II Directive

Provisions of the Solvency II directive¹, which introduces the new and uniform solvency rules for the whole European insurance sector, began to take effect as of January 2016. The new solvency regime is based on the structure of three interrelated pillars. The first pillar determines the quantitative capital requirements and lays down the principles for the valuation of assets and liabilities, including technical provisions. The new capital requirements take into account the risk that a given insurance company is exposed to and introduce the principle of the market valuation of assets and liabilities. The second pillar lays down the qualitative requirements related to the risk management system, including implementation of the internal control system and the audit function. It also determines the procedures and rules of supervision and the rules of Own Risk and Solvency Assessment–(ORSA) to

Figure 4.8. Solvency ratio in the insurance sector

Source: UKNF.


89
be conducted by insurance companies. Duties for insurance companies to provide information to the supervisory authorities and to release data on solvency and the financial condition of an insurance company are defined in the third pillar.

**All European Union member states were obliged to apply the Directive from 1 January 2016.** On 11 September 2015, Polish Parliament passed the Act on Insurance and Reinsurance Activity, which superseded the Act of 22 May 2003 on Insurance Activity. The legislation introduces, among others, the new principles for the calculation of solvency, determines the reporting requirements for insurance companies, broadens the scope of the domestic supervisory authority and increases the scope of control over capital groups. The entry into force of the new provisions also entails enhanced reporting requirements for insurance companies. They are required to draw up separate reports for accounting and solvency purposes.

**In line with the provisions of the Solvency II directive, insurance companies are obliged to hold appropriate amounts of eligible own funds to cover the Solvency Capital Requirement (SCR).** The adequate level of capital is to ensure proper protection of the policyholders and beneficiaries. Insurance companies should calculate the SCR at least once a year according to the standard formula or by applying a (full or partial) internal model. The SCR calculated on the basis of the standard formula is the sum of the Basic Solvency Capital Requirement, the capital requirement for operational risk and the adjustments for the capacity to absorb unexpected losses of technical provisions and deferred taxes. The Basic Solvency Capital Requirement consists of at least the following modules: life underwriting risk, non-life underwriting risk, health underwriting risk, market risk and counterparty default risk.

Insurance companies should also hold eligible basic own funds in the amount not lower than the Minimum Capital Requirement—(MCR). The MCR should be calculated at least quarterly and it can neither be lower than 25% of the SCR nor exceed 45% of the SCR. If a given insurance company holds insufficient funds to cover the MCR, the supervisory authority may withdraw the authorisation granted to the insurance undertaking to pursue insurance business.

The **provisions of the Solvency II directive do not set the limits or categories of assets that cover the technical provisions.** These provisions only indicate that assets should be invested in a manner appropriate to the nature and duration of the insurance and reinsurance liabilities. On the other hand, all financial assets should be invested in accordance with the prudent person principle. This principle means that an insurance company is required to only invest in such assets whose risks it can identify, measure, monitor, manage, control and report.

The new solvency regime also introduces regulatory solutions for long-term insurance products with guarantees (Long-Term Guarantee Measures). They are supposed to mitigate the effects of volatility of the technical provisions, capital requirements and own funds resulting from the market valuation of liabilities. The key mechanisms proposed in this package are matching adjustment (MA) and volatility adjustment (VA).

A full impact assessment of the new regulations on the financial condition of undertakings of the insurance sector can only be made after they have submitted the first financial statements for 2016. Some insurance companies, with the consent of the supervisory authority, may apply transitional measures that extend the period of adaptation to the Solvency II requirements for as long as 16 years. On the basis of QIS and LTGA studies conducted by Polish Financial Suprevision Authority (UKNF), one may foresee how the new solvency requirements impact the insurance sector.

The capital requirement coverage ratio of the domestic insurance sector was almost three times higher than the ratio required by the Solvency II directive. The results of the study conducted by EIOPA, based on end-of-2013 data, have shown that the Polish insurance sector exhibited the highest degree of SCR coverage among EU countries (over 320%). This resulted, among others, from the use of low interest rates in the existing regime, the short duration of the liabilities and the absence of the embedded options and guarantees in insurance products. The results of the QIS2014 have shown that the capital requirements in the new solvency regime rose by 167.3% for...
the whole sector. The capital requirements for life insurance, calculated according to the principles laid down in the Directive, were 102.5% higher than the requirements calculated according to the existing principles, whereas for non-life insurance they were 233.2% higher. Because of the changes in the calculation of liabilities, the value of technical provisions has fallen. At the same time, the value of eligible own funds to cover the capital requirements has risen (by 105.4%)(see Figure 1).

Figure 1. The ratio of coverage of the capital requirements calculated according to the existing solvency principles and the standard formula laid down in the Solvency II directive

Source: UKNF.

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4 Article 103 of the Directive.
5 Article 104 (1) of the Directive.
6 The results of the quantitative impact study in the insurance sector for 2013; UKNF, Warsaw, 8 December 2014; these are the latest data showing the impact of Solvency II on Polish insurance sector.
7 The results of the study of the impact of potential regulatory solutions for the so-called long-term insurance product with guarantees (long-term guarantee assessment – LTGA) on the domestic insurance market; UKNF, Warsaw, July 2013
8 EIOPA Insurance stress test 2014; November 2014. There are not further studies which present influence of Solvency II directive on solvency of European insurance sector.
4.2. Investment fund management companies and investment funds

Investment funds assets were growing rapidly, reaching once again their historic high. As at the end of June 2015, net assets of investment funds amounted to 242.1 billion zlotys. In the first half of 2015, the assets grew by 22.6 billion zlotys, mainly as a result of net inflows (20.2 billion zlotys). The most part was allocated in funds classified as other funds, which constituted the most important part of the sector at the end of June 2015.\(^{84}\)

Given the implemented business model and specific nature of services offered, domestic investment funds do not pose a risk to financial system stability. Investment funds and investment fund management companies are linked to the banking sector to a limited extent. Unlike in countries such as the United States, France, Luxembourg or Ireland, constant net asset value (CNAV) money market funds do not operate in Poland. Given their significant role as the source of short-term financing for banks, as well as their offer of products which may be considered to be substitutes of bank deposits, such funds are regarded as systemically important.

No threats to the continuity of services provided by the investment fund sector were identified. Services provided by investment funds with a similar investment policy are in a certain sense, substitutive. In the case of a potential cessation of activity by some funds (e.g. those managed by the specific investment fund management companies - TFIs), other funds will be able to provide services fulfilling the same functions to investors.

The funds do not guarantee the achievement of the set investment target. Risk associated with the activity of investment funds is borne by investors. Thus, the investment fund management companies do not bear the risk associated with the investment activity of funds as it is fully borne by participation unit holders. As at the end of June 2015, nearly a half of investment funds units was owned by households (see Figure 4.9). These instruments constituted 11.2% of household savings.

Investment funds were important players in the financial markets. As at the end of June 2015, domestic government bonds constituted the biggest part of their assets (see Figure 4.10). The share of investment funds in debt due to the issue of such securities reached approximately 10%. The portfolio of shares held by investment funds quoted on the Warsaw Stock Exchange Main Market and NewConnect reached 35.4 billion zlotys, and the share of funds in capitalisation of domestic companies quoted on the WSE – approximately 6%. During financial market turmoil, the funds may be forced to perform fire sales of the assets held. In particular, this may apply to open-end funds which redeem participation units at the request of participants. The impact on prices may be stronger in the case of investment on mar-

\(^{84}\)Other funds are funds other than equity funds, balanced funds, stable growth funds and debt funds.
kets of less liquid financial instruments. Over the last years, the share of less liquid instruments in open-end investment funds assets increased considerably (see Box 6).

Figure 4.10. The asset structure of investment funds

| Source: NBP |

Instruments financing the real economy, i.e. other equities and other debt securities, made up a significant part of fund assets. Shares not listed on organised markets were of major importance in the portfolio of other equities. The biggest change in this portfolio referred to shares listed outside WSE markets, whose value increased in the first half of 2015 by over two-fold. Among other debt securities, instruments issued by non-financial enterprises prevailed; however, they were not a significant source of finance compared to lending to enterprises by banks. The impact of investment funds on the financial cycle was therefore limited.

Investment funds invested the growing part of funds in participation units of foreign investment funds. As compared to the end of December 2014, the value of portfolio of those instruments increased by almost 30%. Accordingly, managers of domestic funds were able to invest in markets whose specific nature was not very well known to them. As in previous years, participation units of funds based in Luxembourg prevailed in this investment category. A significant part of entities investing in participation units of other investment funds operated in the form of fund of funds. Involvement in this category of investments allowed investors to geographically diversify risk.

The safety of funds accumulated in investment funds is independent of the financial standing of the TFIs and entities acting as depositaries. The potential deterioration of financial results of investment fund management companies does not affect the level of investment fund assets. The reason is that investment fund management companies and the investment funds they manage have a separate legal personality while fund assets are separated from the TFI’s assets. In addition, unit holders should not bear the consequences of potential bankruptcy of investment fund depositaries, since fund assets are not included in their bankruptcy estate.

The financial and capital situation of investment fund management companies did not generate risk for the stability of this sector. The revenue and profit of management companies increased, mainly due to the growth in assets of investment funds managed by the TFIs (see Table 4.3). The aggregate equity capital of the TFIs increased, as compared with the end of June 2014, by almost 25%.

The aggregate equity capital of the TFIs was much higher than required by law; however, in relation to net asset value of investment funds it remained low. As at the end of June 2015, the equity capital of the sector was almost five times higher than the ag-

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85 Other debt securities are securities other than domestic Treasury securities, while other equities are instruments other than those quoted on the Warsaw Stock Exchange Main Market and NewConnect, and participation units of investment funds.

86 The main source of the TFI’s revenue is the fee for investment fund management. In the first half of 2015, revenues from investment fund management fees accounted for 92.2% of the sector’s total revenue.
Chapter 4.

Table 4.3. Financial results and basic indicators of the TFI sector vs. average net asset value of investment fund

<table>
<thead>
<tr>
<th></th>
<th>6-2013 (zloty million)</th>
<th>6-2014 (zloty million)</th>
<th>6-2015 (zloty million)</th>
<th>6-2015/6-2014 (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total revenues:</td>
<td>1 161</td>
<td>1 353</td>
<td>1 587</td>
<td>17.3</td>
</tr>
<tr>
<td>- management fee</td>
<td>1 057</td>
<td>1 257</td>
<td>1 463</td>
<td>16.4</td>
</tr>
<tr>
<td>Total costs</td>
<td>945</td>
<td>1 080</td>
<td>1 259</td>
<td>16.6</td>
</tr>
<tr>
<td>Pre-tax profit</td>
<td>216</td>
<td>273</td>
<td>327</td>
<td>20.1</td>
</tr>
<tr>
<td>Net profit</td>
<td>176</td>
<td>224</td>
<td>265</td>
<td>18.3</td>
</tr>
<tr>
<td>Equity capital</td>
<td>880</td>
<td>1 056</td>
<td>1 314</td>
<td>24.4</td>
</tr>
<tr>
<td>Average value of investment funds net assets</td>
<td>166 475</td>
<td>205 394</td>
<td>236 647</td>
<td>15.2</td>
</tr>
<tr>
<td>Pre-tax profit margin (%)</td>
<td>18.6</td>
<td>20.2</td>
<td>20.6</td>
<td>0.5 pp.</td>
</tr>
<tr>
<td>ROE (%)</td>
<td>34.8</td>
<td>43.6</td>
<td>37.3</td>
<td>-6.3 pp.</td>
</tr>
</tbody>
</table>

Note: ROE annualised.  
Source: UKNF, NBP.

Aggregate capital requirements. In relation to the total net assets of investment funds the aggregate equity capital of the TFIs did not exceed 1%. In case the need arises to cover claims of unit holders towards the TFIs or the investment funds they manage, the financial situation of management companies, for which the value of this ratio is low, may deteriorate significantly.

Box 6. Liquidity risk in the investment fund sector

The investment fund liquidity risk is defined as the lack of possibility to sell, liquidate or close the position of fund assets, with limited costs and within the adequately short time, as a result of which the capacity of permanent redemption of participation units by the fund is threatened, in accordance with the rules determined in the statutes. Some investment funds perform liquidity transformation on a considerable scale. Participation units constituting the fund’s capital may be redeemed on the request of participants, whereas fund assets demonstrate a significantly lower liquidity.

Maintenance of an adequate level of liquid assets is particularly important for funds which redeem participation units on request. If participants decide to withdraw a considerable part of resources entrusted to funds, they may be forced to prompt the sale of the assets held at low prices (fire sale). This may contribute to a (further) decline in prices of financial instruments, especially those less liquid. As a result, it will lead to increased losses of both participation unit holders and other participants of the financial market holding such financial instruments in their assets. In the situation of financial turmoil, the withdrawal of some fund investors may result in a run. Early notification of the demand to redeem participation units increases the chance that the fund will redeem them.

As provided by Articles 49 and 50 of the Act of 27 May 2004 on Investment Funds, the TFI is bound to keep its equity capital at a level not lower than 25% of the difference between the value of overall costs and the value of variable distribution costs incurred in the preceding financial year, and at the same time, at a level not lower than the zloty equivalent of euro 125 thousand, or euro 730 thousand, if the object of its activity has been extended to include managing portfolios comprising one or more financial instruments. Moreover, from the time when the value of assets of investment funds and the value of assets of collective portfolios of securities managed by an investment fund management company exceed the zloty equivalent of euro 250 million, such management company is obliged to increase the level of its equity capital by an additional amount, equal to 0.02% of the difference between the sum of the value of assets of the investment funds and the value of assets of collective portfolios of securities, and the zloty equivalent of euro 250 million.

The TFI is not obliged to increase its equity capital if the sum of the initial capital of such a management company and the additional amounts exceeds the zloty equivalent of euro 10 million.

In accordance with Article 64 (1) of the Act on Investment Funds, the TFI is liable towards participants of the collective portfolio of securities and participants of the investment fund for any damages caused by non-performance or undue performance of its obligations related to management of collective portfolio of securities or the fund and its representation, unless such non-performance or undue performance of the obligations is caused by circumstances for which the management company is not liable.
without the necessity to sell assets at a reduced price, which will enable to mitigate the losses incurred by investors (first mover advantage).

In Poland, open-end investment funds are obliged to redeem participation units on participants’ request. Those funds must redeem participation units at a frequency defined in the statutes, however, at least once per seven days. In practice it usually happens on each valuation day of fund assets (on each business day). The time from notifying the demand for redemption of participation units by the participant to the day of their redemption by the fund also must not exceed seven days, and the payment of the amount due should take place immediately. Similar principles apply to specialised open-end investment funds, excluding those which limit the group of purchasers of their participation units. They may determine the conditions whose fulfilment enables the participant to submit the order for redemption of participation units.

National legal regulations concerning the liquidity of investment funds are of a general nature. The provisions of the Act on Investment Funds indicate that the instruments in which open-end investment funds can invest should be transferable without any limitations and their liquidity should enable the sale and redemption of participation units on participant’s request. This condition shall be deemed fulfilled unless information held by the fund states otherwise. In the case of closed-end investment funds, the Act requires only that the purchased securities should be transferable. Moreover, investment fund management companies are obliged to develop and implement the liquidity risk management procedure for each investment fund, in order to ensure the compliance of its operations with the provisions related to redemption of participation units, as well as the procedure of conducting stress tests in the area of fund liquidity.

In order to examine the liquidity level of domestic investment funds, it has been assumed that liquid assets of investment funds include bank deposits, Treasury securities and shares listed on organised markets. The liquidity of other assets has been assessed as limited. Only assets of open-end investment funds were analysed because the maintenance of an adequately high liquidity level in their case is particularly significant.

Figure 1. Share of liquid assets in total assets of domestic open-end investment funds

![Figure 1](chart.png)

Source: Calculated based on NBP data.

Over the last five years, the liquidity level of domestic open-end investment funds has decreased. The liquidity ratio illustrating the share of liquid assets in total assets dropped from over 80% at the end of June 2010 to approximately 70% at the end of June 2015 (see Figure 1). The most liquid assets were held by equity funds and mixed funds, whereas the least liquid assets were held by debt funds. Among assets held by the latter, debt securities issued by monetary financial institutions (debt funds owned 55% of banks’ debt securities purchased by the investment fund sector), enterprises and other institutions as well as participation units of other investment funds constituted a
significant part. The growing share of limited liquidity assets could be associated with the search for potentially more profitable investments by the managers (search for yield) in response to the decline in interest rates as well as the growth of competitive pressure.

In the European Union member states, many tools are available to investment fund managers, to be used in the case of sudden redemption of participation units. They include the following:

1. redemption gates – when orders for redemption of participation units exceed the defined threshold, their execution is postponed to consecutive days.
2. redemption in kind – orders for redemption of participation units are executed through the transfer of financial instruments to investors instead of cash payments.
3. side pockets – the illiquid part of fund assets is separated from the liquid part and transferred to a separate portfolio, and investors receive shares in both portfolios.
4. anti-dilution levy – clients (particularly big investors) are obliged to incur transaction costs associated with the sale of fund assets required for redemption of their participation units.
5. redemption fees – higher costs of redemption should discourage investors from continuing the withdrawal of funds.
6. temporary suspension of redemptions – if the fund is unable to execute the orders for redemption of participation units, it is possible to suspend their redemption for a defined period of time.

In accordance with the national regulations, the scope of solutions applicable in the event of problems connected with liquidity management is limited. Open-end investment funds may suspend redemption of participation units only on a temporary basis. This may take place when participants demand large-scale redemption of units, i.e. at a value higher than 10% of fund assets during two weeks. The suspension of the redemption of units may last two weeks and, under the approval of the Polish Financial Supervision Authority, it may be extended up to two months. In this period, the funds should improve the liquidity level of assets and acquire funds for the settlement of liabilities towards the participants.

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1 § 2 item 9 of the Regulation of the Minister of Finance of 30 April 2013 concerning the method, procedure and conditions of conducting the activity by investment fund management companies (Journal of Laws of 2013, item 538).

2 The requirement of being transferable also refers, inter alia, to claims, shares in limited liability companies, foreign currency, derivative instruments and money market instruments.

3 NBP does not hold data concerning investment fund assets according to terms during which their sale at a limited cost is possible.

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4.3. Pension fund management companies and open pension funds

The nature and operating principles of Open Pension Funds mean that like investment funds, they do not generate risks for the stability of the financial system. The whole of the investment risk is borne by OFE participants. However, unlike investors in participation units of investment funds, OFE members have no possibility to withdraw funds and resign from this form of investment in the event of financial market turmoil. Therefore, OFE may only reallocate funds between asset categories avail-

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89 Starting from 2016, every four years, from April to July, OFE members will have the possibility to decide whether to cease transferring a part of their pension contribution to OFEs. In such a case, the full contribution will be transferred to ZUS. In the same periods, it will be possible to take a decision on the commencement (or renewal) of the transfer of a portion of pension contribution to OFEs.
able to them, and thus influence demand for financial instruments and their prices. Due to the applicable investment limits and the associated structure of OFE investment portfolios, the funds may mainly affect the prices of shares quoted on the domestic market and, to a lesser extent, Non-Treasury debt securities.

The applicable legal solutions guarantee the security of funds accumulated in open pension funds irrespective of the financial standing of management companies and depositaries. A potential deterioration of the financial situation of the PTE (pension fund management company) has no impact on the value of OFE assets, since those entities have a separate legal personality and fund assets are separated from the assets of management companies. Fund resources are also not included in the depositaries’ bankruptcy estate, due to which OFE members should not bear the consequences of a potential bankruptcy of the depositaries.

In the PTE and OFE sector no risks are generated to the continuity of providing services. Companies in this sector provide services of an identical function, and in the case of a possible bankruptcy of one of the companies, the law guarantees the takeover of the management of the fund by another company. As at the end of September of 2015, 12 pension fund management companies operated in Poland, whereas open pension funds managed by them held net assets with the value of 145.4 billion zlotys.

The OFE sector demonstrated a high level of concentration. The share of the three largest funds measured by the value of net assets amounted to 60%, and the share of the five largest funds – 74%. The potential impact on asset prices was therefore concentrated in less than half of the companies in the sector.

The structure of the investment portfolio of open pension funds was similar to the structure of the investment portfolio of domestic equity mutual funds. Among OFE investments, domestic equities prevailed, mainly shares quoted on the WSE.\(^9^0\) (see Figure 4.11). Open pension funds represented the biggest domestic institutional investor on the Warsaw Stock Exchange Main Market in terms of their share in capitalisation of companies. As at the end of September 2015, this share amounted to 9.8%. As at the end of the third quarter of 2015, their share in the investment portfolio of funds slightly decreased.\(^9^1\)

![Figure 4.11. Structure of investment portfolios of open pension funds](image)

Source: UKNF.

Due to statutory restrictions, Treasury debt securities accounted for a marginal part of the investment portfolio of open pension funds.\(^9^2\) At the end of the third quarter of 2015, their share amounted to 0.7%. On the basis of legal regulations effective since 2014, OFEs may hold Treasury debt securities

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\(^9^0\) They also comprise shares of foreign issuers quoted on the WSE.

\(^9^1\) In accordance with the Act of 6 December 2013 on Amending Certain Acts in Connection with the Determination of Principles for Old-age Payments from Funds Collected in Open Pension Funds, the minimum limit for investments in equities in 2015 amounted to 55% of assets.

\(^9^2\) This item comprises government bonds and bonds guaranteed by the State Treasury.
Table 4.4. Earnings and basic indicators of the PTE sector vs. average net asset value of open pension funds

|                                | 6-2013 (zloty million) | 6-2014 (zloty million) | 6-2015 (zloty million) | 6-2015/6-2014 (% in %)
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues from funds’ management</td>
<td>760</td>
<td>961</td>
<td>459</td>
<td>-52.2</td>
</tr>
<tr>
<td>– contribution fee</td>
<td>167</td>
<td>125</td>
<td>26</td>
<td>-79.2</td>
</tr>
<tr>
<td>– management fee</td>
<td>542</td>
<td>403</td>
<td>379</td>
<td>-6.0</td>
</tr>
<tr>
<td>– payments from Guarantee Fund</td>
<td>0</td>
<td>331</td>
<td>5</td>
<td>-98.5</td>
</tr>
<tr>
<td>Funds’ management costs</td>
<td>327</td>
<td>419</td>
<td>218</td>
<td>-48.0</td>
</tr>
<tr>
<td>Technical profit on funds’ management</td>
<td>432</td>
<td>542</td>
<td>240</td>
<td>-55.7</td>
</tr>
<tr>
<td>Net profit</td>
<td>393</td>
<td>496</td>
<td>227</td>
<td>-54.2</td>
</tr>
<tr>
<td>Equity capital</td>
<td>3 631</td>
<td>3 103</td>
<td>2 489</td>
<td>-19.8</td>
</tr>
<tr>
<td>Average value of OFE’s net assets</td>
<td>271 938</td>
<td>176 810</td>
<td>155 776</td>
<td>-12.0</td>
</tr>
<tr>
<td>Technical profitability on funds’ management (%)</td>
<td>56.8</td>
<td>56.4</td>
<td>52.4</td>
<td>-4.1 pp.</td>
</tr>
<tr>
<td>ROE (%)</td>
<td>20.8</td>
<td>13.2</td>
<td>25.5</td>
<td>12.3 ppm.</td>
</tr>
</tbody>
</table>

Note: ROE annualised. Due to the adjustments made, the data may differ from those presented in the previous editions of the Report. Due to the lack of the possibility to split some items of the PTE profit and loss account between the activity related to OFE and the voluntary pension funds, the results presented refer to overall pension fund management. However, revenues on voluntary pension funds management accounted for only a marginal part (less than 0.3%) of the revenues on pension fund management. Source: UKNF.

until 4 February 2016.\textsuperscript{93}

In the first three quarters of 2015, the share of foreign investments in OFE portfolios increased from 3.9\% to 7.1\%, and their nominal value exceeded 10 billion zlotys.\textsuperscript{94} In the category of other OFE deposits, non-Treasury debt securities and bank deposits were of major importance.

The financial and technical result of the pension fund management companies sector for the first half of 2015 decreased significantly as compared with the first half of 2014 (see Table 4.4). This decline partly resulted from a one-off inclusion of funds from the liquidated part of the Guarantee Funds in PTE revenues in 2014. In the financial statements for 2015, it is possible to observe fully – for the first time – the effects of legal changes in the pension system which entered into force in 2014.\textsuperscript{95}

Despite a significant decline of revenues, the average technical profitability in the PTE sector has only slightly deteriorated as compared with the first half of 2014. (see Figure 4.12). This was possible due to a reduction of pension fund management costs by almost a half. This decline was primarily affected by the lower value of payments to the Guarantee Fund, which resulted from the change in its structure and the lower value of assets managed by the PTEs. The decrease in commission paid to ZUS against contributions transferred to OFEs also played a significant role in cost reduction. Both factors resulted from changes in the pension system effective since 2014.

The net profit of the sector dropped by over a half; however, the ROE ratio increased significantly. In the first half of 2015, PTEs recorded the lowest nominal net profit since 2005. The value of the annualised ROE ratio for management companies was, however, determined by the high earnings in the second half of 2014 and the decline in the value of equity capital in the first half of 2015. Due to these factors, ROE increased to the level of over 25\%.

In the long term, the profits of the PTE sector will correlate with the value of assets under management. This value may periodically decrease due to

\textsuperscript{93} Article 32 of the Act of 6 December 2013 on Amending Certain Acts in Connection with the Determination of Principles for Old-age Payments from Funds Collected in Open Pension Funds.

\textsuperscript{94} This item does not comprise foreign issuers’ shares which are quoted on the WSE and bank deposits denominated in foreign currency.

\textsuperscript{95} The aforementioned legal changes and their consequences were described in the previous editions of the Report.
the decline in prices of shares quoted on the WSE and the negative balance of cash flow from the Social Security Institution (ZUS). The reason is that the amounts transferred to OFEs on account of contributions are lower than the amounts transferred from OFEs due to the so-called security slider mechanism. However, the revenues from dividends should offset the negative balance of cash flows from ZUS.

Figure 4.12. Technical profitability of pension fund management companies

![Graph showing technical profitability of pension fund management companies]

Note: Due to the adjustments made, the data may differ from those presented in the previous editions of the Report. Source: NBP calculations based on UKNF data.

The equity capital of pension fund management companies in the first half of 2015 decreased significantly. A similar change was also observed in 2014. It resulted from dividend payment to PTE shareholders. In 2015, all management companies decided to pay the dividend. In the case of some PTEs, funds for that purpose originated not only from the profit of the previous years, but also from the supplementary capital. It seems that the downward trend of equity capital of management companies may continue irrespective of the change in the value of assets under management.

As a result of the decrease in equity capital, the ratio of the PTE equity capital to the value of assets under management significantly decreased (see Figure 4.13). However, it remained at a level higher than prior to the changes in the pension system of 2014. It was also markedly higher than in the TFI sector.

Figure 4.13. Ratio of pension fund management companies' equity capital to the value of net assets managed by open pension funds

![Graph showing ratio of pension fund management companies' equity capital to assets]

Note: Due to the adjustments made, the data may differ from those presented in the previous editions of the Report. Source: NBP calculations based on UKNF data.

4.4. Inter-sector linkages of non-credit financial institutions

Financial links with banks and intra-sector capital, credit and financial linkages may be a potential systemic risk factor. In the case of the Polish financial system, the ties remain insignificant. Ownership linkages of banks and insurance companies consisted in belonging to the same capital groups and were of a limited character (see Table 4.5).

Direct ownership linkages of entities belonging to the non-credit financial institutions sector with
other participants of this sector and with brokerage houses were more significant. Brokerage houses were the sole shareholders of six TFIs. Their share in the equity capital of the sector amounted to approximately 16%, and the net assets of investment funds managed by those TFIs constituted 28% of all funds’ assets.

Table 4.5. Inter-sector capital linkages

<table>
<thead>
<tr>
<th>Subsidiaries</th>
<th>Parent companies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Banks</td>
</tr>
<tr>
<td>TFIs</td>
<td></td>
</tr>
<tr>
<td>- number of entities</td>
<td>6</td>
</tr>
<tr>
<td>(majority share)</td>
<td></td>
</tr>
<tr>
<td>(minority share)</td>
<td></td>
</tr>
<tr>
<td>- share in capital of TFIs (in %)</td>
<td>10.0</td>
</tr>
<tr>
<td>- share in net assets of TFIs (in %)</td>
<td>12.7</td>
</tr>
<tr>
<td>PTEs</td>
<td></td>
</tr>
<tr>
<td>- number of entities</td>
<td>2</td>
</tr>
<tr>
<td>(majority share)</td>
<td></td>
</tr>
<tr>
<td>(minority share)</td>
<td></td>
</tr>
<tr>
<td>- share in capital of PTEs (in %)</td>
<td>22.4</td>
</tr>
<tr>
<td>- share in net assets of PTEs (in %)</td>
<td>12.5</td>
</tr>
<tr>
<td>ZUs</td>
<td></td>
</tr>
<tr>
<td>- number of entities</td>
<td>1</td>
</tr>
<tr>
<td>(majority share)</td>
<td></td>
</tr>
<tr>
<td>(minority share)</td>
<td></td>
</tr>
<tr>
<td>- share in capital (in %)</td>
<td>3.6</td>
</tr>
<tr>
<td>- share in gross written premium (in %)</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Note: NBP estimation; for TFIs, data refer only to sole shareholders; for PTEs data as at the end of 2014.
Source: For TFI – KRS, UKNF and NBP; for PTE and ZU – UKNF.

The impact of earnings of subsidiaries on the financial situation of parent companies was moderate. Banks and insurance companies, which usually act as owners, in the first half of 2015 reported earnings at a level of, respectively, 8.7 billion zlotys and 2.6 billion zlotys (taking into consideration the consolidated results of PZU group), whereas the profit of sectors to which the subsidiaries belong amounted to 0.3 billion zlotys for TFIs and 0.2 billion zlotys for PTEs. Similarly, exposures associated with off-balance-sheet transactions (open credit lines, other granted liabilities related to financing and issued guarantees) concluded with these three categories of entities were also insignificant.\(^\text{97}\)

The impact of non-credit financial institutions on the banking sector through the lending and financing channel was also insignificant. The share of loans to NIFs as at the end of September 2015 amounted to approximately 1% of the value of loans granted by banks (see Table 4.6). The role of non-credit financial institutions in the financing of banks was also limited. The ratio of deposits placed by NIF to the value of deposits in the banking sector was less than 4%. The assets associated with the banking sector did not have a key importance for the sector of non-credit financial institutions. The share of deposits in NIF assets did not exceed 10%.

Table 4.6. Ownership linkages of pension funds (FEs), insurance companies (ZUs), and investment funds (FIs) to banks (PLN billion)

<table>
<thead>
<tr>
<th>Loans and other banks’ receivables from NIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZU</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td>2013</td>
</tr>
<tr>
<td>2014</td>
</tr>
<tr>
<td>2015</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Deposits and banks’ liabilities to NIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZU</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td>2013</td>
</tr>
<tr>
<td>2014</td>
</tr>
<tr>
<td>2015</td>
</tr>
</tbody>
</table>

Note: Data as at the end of September 2015.
Source: NBP.

\(^{97}\) Exposure due to derivatives was not included.
Box 7. Creating banking and insurance groups and financial system stability

The aim of this box is to present an assessment of the possible influence of direct ownership linkages between banks and insurance companies on the stability of the financial system. On 30 May 2015, PZU signed an agreement to acquire a 25.25% of shares of Alior Bank, admitting at the same time that it was considering acquiring shares in other banks. On 6 October the Polish Financial Supervision Authority (KNF) unanimously concluded that there were no grounds to object to this transaction. There have not been any ownership linkages between the two sectors of the financial market in Poland on such a large scale until now, so it is reasonable to examine their potential impact on financial stability. The literature on this issue is very modest. Lelyveld and Knot (2009), Mälkönen (2009) and Chen et al. (2014) analysed this problem directly. The problem of banks alone merging in capital groups has been analysed much more thoroughly (among others, by Laeven and Levine, 2007; Schmid and Walter, 2009) as has the case of non-financial enterprises. Analysis of the literature leads to the conclusion that the creation of banking-insurance groups has an ambiguous influence on stability, because it causes both effects that reduce systemic risk and effects that increase systemic risk.

Effects reducing the level of systemic risk include the following:

- **Potential increase in profitability** resulting from higher cost efficiency, which – if it were to materialize – would translate into an increase in the capacity to absorb shocks. This argument is often raised as justification for M&A transactions; however, there is no strong empirical evidence confirming it. Lelyveld and Knot (2009) find no evidence of the existence of a statistically significant influence of merging banks and insurance companies on profitability, but draw attention to the very wide variation in results. The literature solely on banks or non-financial enterprises indicates a statistically negative influence of mergers and acquisitions on market valuation (being a derivative of financial performance) of the merging entities.

- **Increase in the financial stability of banking activity** due to the "complementing" of the balance sheets of banks and insurance companies. Lelyveld and Knot (2009) argue that banks have “short” liabilities and relatively “long” assets, while insurers have “long” liabilities, thanks to which the insurance company may, if needed, supply stable financing to the bank which is part of the same capital group. However, this effect would be limited in Poland compared to that in western countries due to the shorter average maturity of liabilities of insurance companies – according to EIOPA data (2014, Figure 78, p. 102) it is approx. 8 years in Poland and is shorter than in most EU countries, due to the greater share of insurance such as unit-linked insurance or group insurance and employee life insurance.

- **Synergy of information** resulting from the merger of a bank and insurance company, which according to Mälkönen (2009) may translate into higher quality of granted loans (lower value of NPL). However, the author indicates that the creation of bank-insurance conglomerates increases competition and lowers the price of financial services, which has an adverse effect on the value of the total profits of the banking and insurance sectors. The result is consistent with the conclusions drawn from the models of multiproduct oligopolies.

- **Better diversification of risk** (BIS, 1999) and more stable profit stream in the scale of the group due to the fact that the revenues stemming from different products are usually imperfectly correlated (Vander Vennet, 2002, p. 259).

Effects increasing the level of systemic risk include the following:

- Potential problems related to the creation of entities “too ... to fail” (large, connected, complicated etc.), which could lead to them taking excessive risks. Schmid and Walter (2009) examined the influence of bank mergers on their market valuation and show strong evidence of a fall in valuation, along with a marked increase in market valuation in the case of the largest entities. The authors explain that this is due to implied...
government guarantees for entities “too big to fail”. In Poland, however, this problem is much smaller than in many western countries – for example, the total balance sheet of the ING Group in 2008 was as much as 208% of the GDP of the Netherlands, while a hypothetical banking-insurance conglomerate created as a result of a merger of the largest bank group (PKO BP) and insurance group (PZU) on the Polish market would have a total balance sheet at the end of 2014 valued at 16.45% of Poland’s GDP.

- **Apparent diversification and transfer of risk** – in principle, an insurance contract (e.g. life, unemployment, property insurance) is aimed at protecting the bank from the effects of fortuitous events which could adversely affect the ability of borrowers to service loans. However, if such a contract is signed with a related insurance company, the loss that is generated remains in the same capital group and is only transferred from one entity to another, thus the transfer of risk is illusory.

- **Possible occurrence of a contagion affect**, not only due to purely financial effects, but also psychological (e.g. a run on a bank belonging to the same capital group as an insurance company experiencing financial problems – risk of a common brand). Chen et al. (2014) show, on the basis of market data (CDS premia and share prices of companies from the banking and insurance sectors), that linkages with banks increase systemic risk in the insurance sector.

**Bibliography**


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Chapter 5.

Risk assessment

This chapter presents a summary assessment of risk to financial system stability. Due to the special role of the banking system for the functioning of the economy, as well as its dominant role in the financial system, a key element of this assessment is the investigation of banking sector’s resilience to adverse shocks. Together with the analysis presented in the other chapters of the Report it allows to assess the resilience of the banking system and determine whether risks identified in the Report have a systemic character.

5.1. The resilience of the banking sector to shocks

Two approaches, namely simulations and macroeconomic stress tests, have been applied to determine the resilience of the banking sector to shocks. The first approach investigates the impact of standardized shocks that are not assigned to the macroeconomic scenario, but are comparable over time. The second approach considers a specific, consistent macroeconomic shock scenario and tests the resilience of banks to its materialisation.

5.1.1. Single-factor simulations of credit loss absorption capacity

In order to determine whether banks’ capital would be sufficient to absorb potential losses stemming from the materialisation of credit risk, a simulation was performed\(^\text{98}\) the results of which indicate the scale of the deterioration in the quality of performing loans to the non-financial sector that individual banks may absorb without breaching any of the capital adequacy standards or capital ratio level recommended by KNF. The results of the simulation allow to rank the banks by their resilience to a deterioration in the quality of their loan portfolios.

The simulation performed on September 2015 data (see Figure 5.1) points to a deterioration in the resilience of cooperative banks to an arbitrarily assumed shock. For domestic commercial banks, a deterioration in the quality of 5% of the loan portfo-

\(^{98}\)The simulations were performed on data of domestic commercial banks with their foreign branches and on data of cooperative banks. Branches of credit institutions and branches of BGK were excluded from the simulations. The estimated deductions of components of the regulatory capital of SK bank were included in the simulations.
Figure 5.1. Results of the single-factor simulation of decrease in loan portfolio quality on the banking sector: commercial banks (left-hand panel), cooperative banks (right-hand panel)

Assumptions of the simulation:
1. Deterioration in loan quality means 50% impairment is recorded for the loans. 2. Hypothetical charges to impairment provisions decrease, firstly, the bank’s current profit not recognized as Tier 1 capital, and then the bank’s Tier 1 capital. 3. Impaired loans carry risk weight equal to the average risk weight for the loan portfolio for the non-financial sector of the particular bank. 4. No release of impairment provisions.

Note: Banks’ assets ranked according to a percentage of loans without identified impairments for the non-financial sector, a deterioration in quality of would result in a breach of any regulatory capital standards (dashed lines) or of capital ratios recommended by KNF (solid lines).

Source: NBP.

The decline in the resilience of banks results mostly from losses posted by several banks (some of them held negative regulatory capital and ceased operations) and a further amortisation of grandfathered components of regulatory capital. However, other banks held sufficient funds to be able to absorb the effects of a potential deterioration in loan portfolio quality and their resilience improved.

At most banks, the same shock would have caused a breach of the levels of the capital ratios recommended by KNF for 2016, which are higher than the regulatory standards. The levels of the supervision authority-recommended ratios for 2016 would not be met by commercial banks with a 41% share in assets of all commercial banks and cooperative banks with a 54% share in assets of all cooperative banks.

5.1.2. Stress tests

Methodology and assumptions

Stress tests that take into account a macroeconomic shock, a market shock and a liquidity shock were used to assess the resilience of banks to negative shocks. The central path of the NBP macroeconomic projection from “Inflation Report. November 2015”, developed under the assumption of constant interest rates, served as a reference scenario. The analysis was aimed at quantifying the effects of hypothetical shocks on domestic commer-

99This, to a greater extent, related to cooperative banks than commercial banks, as one of larger part of regulatory capital of cooperative banks – paid-up member’s share fund – is grandfathered
100BGK and PKO Bank Hipoteczny were excluded from the analysis.
cial banks in the period from the fourth quarter of 2015 to the end of 2017. The outcome of the simulation for the reference scenario and results of other simulations contained in this section should not be regarded as a forecast of the condition of the banking sector.

Stress tests were performed as a three-stage examination consisting in the analysis of, respectively: macroeconomic scenarios, a market shock and a liquidity shock. The first stage comprised an assessment of the impact of two macroeconomic (reference and shock) scenarios on credit risk materialisation costs and on net interest income of banks. The introduction of a tax on some financial institutions (according to a version of the draft law approved on 29.12.2015 by the Sejm and submitted to the Senat), as well as contributions to the Borrower Support Fund and to payments from the Guaranteed Deposit Protection Fund following the lodging of a file to declare SK bank bankrupt, were taken into account in each of the scenarios. The simulation did not allow for potential reactions of banks to the introduction of the tax, such as diminished lending, an increase in spreads on new loans and the related change in demand, as well as the transfer of a portion of loans to other members of the capital group or other form of deleveraging (see Box 8). In the second stage, the analysis of macroeconomic shock scenario was accompanied by an additional market shock influencing the capital position of banks. In the third stage, the impact of a market shock on the liquidity position of banks was analysed.

The hypothetical capital needs of banks under both scenarios were calculated under the assumption that all the analysed banks had to hold sufficient regulatory capital to keep their total capital ratio and Tier 1 capital ratio at the levels recommended by the KNF, including additional own funds requirement for the risk of FX loans. KNF recommends banks with no additional own funds requirement to keep their capital ratios at 13.25% and 10.25%, respectively. The criteria for capital adequacy ratios assumed in the analysis are more restrictive than regulatory standards (minima) in force, inter alia, due to assessment of risk of individual banks.

For banks complying with the above mentioned criteria, it was assumed that in a subsequent quarter they would increase their portfolios of loans and securities, as well as other assets, at the quarterly growth rate of nominal GDP. In addition, the growth rates for particular banks depended on their capital buffers above the supervisory recommendations.

The balance sheet value of the loan portfolio was also affected by charges to loan impairment provisions, while the value of the debt securities’ portfolio – by a market shock. The banks’ costs resulting from the annual contribution and the prudential fee for BFG in the years 2016–2017 were calculated according to the 2016 rates. A decreasing relation to assets was assumed for net fees and commissions income, and a constant relation to assets was assumed for other unmodelled items of the profit and loss account.

Banks complying with the supervisory recommendations for capital adequacy were also allowed to pay out dividends from profits earned from the first quarter of 2015. The dividend rate depended on the criteria for capital ratios proposed in the KNF stance of 15 December 2015 on the dividend policy of banks.

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101 See “Stanowisko KNF z 15 grudnia 2015 r. w sprawie polityki dywidendowej banków” [The KNF stance of 15 December 2015 on the dividend policy of banks].
102 In a vast majority of the banks analysed, Tier I capital is composed almost exclusively of Common Equity Tier I capital, therefore no separate criterion was assumed in the simulation for the Common Equity Tier I ratio.
103 As long as GDP growth was positive.
The following assumptions were made for the macroeconomic shock scenario:

- A deterioration in the economic outlook worldwide will be driven by a collapse of economic growth in developing countries, which will spread to developed countries through a decline in demand and a slump on asset markets. This will lead to a fall in the GDP growth of Poland’s main trading partners.

- The economic situation will be further dragged by an increase in energy commodity prices back to their 2014 level and an appreciation of the US dollar and Swiss franc against other currencies related to the tightening of monetary policy in the United States and capital inflows to countries viewed as safe havens during market turbulence.

Given such assumptions, Poland would see a substantial slowdown in the pace of economic growth (see Table 5.1). Yet the likelihood of such a combination of shocks and of a slowdown as grave as envisaged by the shock scenario can be assessed as minor (see Figure 5.2).

A market shock was added to the macroeconomic shock scenario in order to assess the impact of a potential rise in foreign investors’ risk aversion towards emerging markets and the region (resulting in capital outflow from Poland) on the situation of banks. The capital outflow would be reflected in an increase in the yields on Polish Treasury debt securities and in a depreciation of the zloty. The depreciation would, in turn, bring about an increase in the capital requirements and a deterioration in the quality of banks’ loan portfolios as a result of the rising zloty value of foreign currency loans and the resulting higher loan repayment burden on borrowers. The simulation assumed a 300 basis point rise in bond yields and a 30% depreciation of the zloty against all major currencies.104

<table>
<thead>
<tr>
<th>Major economic indicators in macroeconomic scenarios (%)</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP growth y/y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference scenario</td>
<td>3.4</td>
<td>3.3</td>
<td>3.5</td>
</tr>
<tr>
<td>Shock scenario</td>
<td>3.2</td>
<td>0.5</td>
<td>1.9</td>
</tr>
<tr>
<td>LFS unemployment rate, annual average</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference scenario</td>
<td>7.4</td>
<td>6.8</td>
<td>6.7</td>
</tr>
<tr>
<td>Shock scenario</td>
<td>7.4</td>
<td>7.9</td>
<td>9.7</td>
</tr>
<tr>
<td>CPI inflation y/y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference scenario</td>
<td>-0.8</td>
<td>1.1</td>
<td>1.5</td>
</tr>
<tr>
<td>Shock scenario</td>
<td>-0.5</td>
<td>3.7</td>
<td>0.6</td>
</tr>
<tr>
<td>WIBOR3M</td>
<td></td>
<td></td>
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<tr>
<td>Reference scenario</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Shock scenario</td>
<td>1.8</td>
<td>2.3</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Source: NBP.

Figure 5.2. Macroeconomic shock scenario against the fan chart of GDP from “Inflation Report. November 2015”

Note: Red line marks the shock scenario. Source: NBP.

The impact of a market shock and additional liquidity-related turmoil on the liquidity condition of banks was also analysed. The aim of the simulation was to test whether banks had an adequate buffer of liquid assets in the event of developments assumed by the scenario: a depreciation in the zloty,

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104 Against the bond yields and the zloty exchange rate as of the end of September 2015.
a rise in Polish government bond yields and, in addition, an outflow of a portion of foreign funding and falling confidence of both other domestic financial institutions and real sector entities, resulting in a withdrawal of a part of their deposits\textsuperscript{105}.

The last element of the simulation was the analysis of the impact of a potential bankruptcy of one bank on the condition of other banks via the domino effect under both macroeconomic scenarios.

Results

The majority of banks would meet the adopted capital adequacy criteria if the reference scenario were to unfold and if lending were to expand at a slower pace than in recent years. The estimated value of a hypothetical increase in banks’ regulatory capital, which would be required if the reference scenario were to unfold, would amount to 2.8 billion zlotys at the end of the simulation period (i.e. approx. 13% of regulatory capital of these banks at the end of September 2015) (see Table 5.2). Losses arising from interbank market exposures would not push banks’ capital needs. The share of banks, which would have to raise the level of their regulatory capital to meet the criteria adopted for the analysis, in the banking sector’s assets would be 13.4%. A large part of banks which do not currently meet the KNF recommendations would be unable to obtain the missing portion of capital by profit accumulation, in particular facing the burden resulting from tax on some financial institutions (see Box 8). The problems of banks which already display low profitability would intensify substantially.

On the other hand, the materialization of the shock scenario would lead to a situation, where the average ROA of analysed banks would be negative and more than half of domestic commercial banks (with a total 45.5% share in assets of the banking sector) would not meet the KNF recommendations on minimum levels of capital ratios. The estimated value of a hypothetical increase in regulatory capital by banks, which would be required in the event of a shock scenario, would amount to 13.9 billion zlotys at the end of the simulation period (i.e. around 20% of their regulatory capital at the end of September 2015). Losses arising from exposures to the interbank market would slightly increase banks’ capital needs, which, however, would not lead to the domino effect.

The simulation of liquidity risk has shown that, should a very restrictive shock scenario materialise, a group of domestic commercial banks with an around 9% share in assets of the sector would not have sufficiently high buffers of liquid assets to cover the liabilities associated with foreign capital outflow, zloty depreciation and falling customer confidence (see Figure 5.4). The majority of these banks are largely financed with foreign funds or hold substantial foreign currency loan portfolios. The shortfall of liquid funds at the banks would total around 19 billion zlotys. When compared with the results of the simulation performed in the previous edition of the Report, the resilience of the banking sector has not changed considerably.

\textsuperscript{105}The following, \textit{inter alia}, was assumed: a withdrawal of 100% of deposits, 10% of loans and 25% of other liabilities toward foreign financial institutions, and an outflow of an unstable (not classified as core deposits) part of deposits of households, non-financial enterprises and the general government sector and, respectively, 5%, 10% and 10% of their other deposits.
Table 5.2. The results of macro stress tests

<table>
<thead>
<tr>
<th>Historical data for the period Q4 2014 – Q3 2015</th>
<th>Simulation results for the period Q4 2015 – Q4 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charges to loan impairment provisions</td>
<td>0.56</td>
</tr>
<tr>
<td>Net interest income</td>
<td>2.17</td>
</tr>
<tr>
<td>Net earnings</td>
<td>1.00</td>
</tr>
<tr>
<td>Macroeconomic and market shocks</td>
<td>3.7</td>
</tr>
<tr>
<td>Domino effect</td>
<td>n/a</td>
</tr>
<tr>
<td>Capital needs (zloty billion)</td>
<td>4.0</td>
</tr>
<tr>
<td>Change in bond value recognized in the profit and loss account</td>
<td>n/a</td>
</tr>
<tr>
<td>Change in bond value recognized in capital</td>
<td>n/a</td>
</tr>
<tr>
<td>Zloty depreciation impact (impairment charges to FX loans to households) recognized in the profit and loss account</td>
<td>n/a</td>
</tr>
</tbody>
</table>

1 Scenario based on the central path of the NBP macroeconomic projection from “Inflation Report. November 2015”.
2 “Net interest income” includes fees and commission income on extended loans, but does not include interest income on debt securities.
3 The value of capital injection necessary to ensure that total capital ratios remains above 13.25% and Tier 1 capital ratios above 10.25% (for banks with additional own funds requirement for the risk of FX loans, set by the KNF; the criteria were increased accordingly).
4 At the end of September 2015, one bank under analysis did not comply with the regulatory capital standards. The share in assets of the banking sector of banks analysed, which did not comply with the regulatory recommendations for capital adequacy, amounted to 10.3%.

Note: The results of the simulation for the reference scenario and other simulations contained in this section should not be regarded as a forecast of the condition of the banking sector.
Source: NBP.

Figure 5.3. Cumulated changes in the total capital ratio under the shock scenario (% of risk-weighted assets)

Notes: Green bars mark the total capital ratio of the banks analysed in the beginning and at the end of the simulation period under the shock scenario. Factors with a positive influence on the average total capital ratio over the simulation period are marked with purple bars, and those with an adverse influence – with yellow bars. The influence of these factors is expressed in percentage points.

“Retained earnings of Q1-Q3 2015” is an assumed increase in banks’ capital by a part of undistributed (at the end of September 2015) profit earned prior to the start of the simulation.

“Earnings before impairment charges and tax on assets” are equivalent to net income from banking activity less, inter alia, operating costs. A “tax on assets” is an estimated amount of tax on some financial institutions banks would pay in the simulation period.

The simulation assumed that banks with positive earnings and complying with the assumed minimum capital adequacy levels would pay out dividends. The dividend rate would depend on the criteria for capital ratios proposed in the KNF stance of 15 December 2015 on the dividend policy of banks.

Source: NBP.
Risk assessment

Figure 5.4. Assets of domestic commercial banks by coverage of funds’ outflow with a buffer of liquid funds under the shock scenario

Source: NBP.

However, it has to be pointed out that even banks, which would maintain liquidity in the simulation, would have to use a significant portion of their liquid assets. The total current value of Treasury bonds that banks would have to sell or pledge in repo transactions is approx. 44 billion zlotys. Under the conditions analysed in the shock scenario, the central bank would most likely have to be involved to carry out the major part of these transactions.

The results of the stress tests and loss absorption capacity simulation indicate that the banking sector’s resilience to shocks has weakened substantially, mainly as a result of additional fiscal burdens imposed on banks. The materialization of a restrictive scenario of a major economic slowdown accompanied by additional fiscal burden would lead to a significant deterioration of capital ratios. A number of commercial banks (including some large ones), would face high deficits of regulatory funds together with permanent unprofitability. In such an environment, lending could be seriously curbed, which would amplify the adverse impact of the shock on the real economy and, as a consequence, on credit risk borne by banks.

The results of the liquidity shock simulation have shown that the resilience of the banking sector has remained sound, but there is a group of banks with an elevated liquidity risk profile. To ensure the stable operation of the domestic financial system, it is desirable that banks have a diversified funding structure and, therefore, do not rely too heavily on funding provided by their foreign parent entities.

The implementation of the proposed restructuring of FX housing loans portfolio is an additional factor, materialization of which would strongly hamper the resilience of banks and their ability to provide funding, as it would burden banks with high cost (see Box 9). This factor was not taken into account in stress tests due to high sensitivity of cost estimates for such operation to assumptions on its conditions.

Box 8. The impact of introduction of a tax on assets on the situation of the banking sector

One of the most important among proposed legislative initiatives affecting the activity of banks is the introduction of the so-called bank tax. According to the Act on Tax on Certain Financial Institutions signed by the President of the Republic of Poland on 15th of January 2016, the tax would apply to credit institutions, lending companies and insurance undertakings. Banks would be charged a tax at the monthly rate of 0.0366% based on total value of assets reduced by the sum of PLN 4bn, own funds and purchased sovereign debt. Excluded from the taxation are state owned banks and banks under recovery proceedings, in receivership, in liquidation and those, which activity has been suspended and filed for bankruptcy. The tax shall enter into force in February 2016. The threshold
relating to the value of taxable assets means that the tax would currently not apply to any cooperative bank.

Since 2009, additional taxation of banks has been introduced in many EU countries, however, its purpose was distinctive. In the EU countries the aim of the tax was primarily to recover the costs of earlier fiscal support provided to the banking system during the financial crisis by the taxpayers. Among other equally relevant objectives were strengthening the stability of the banking system (by allocating tax contributions to recovery and resolution funds) and penalisation of unwanted or risky behaviour (when tax base was determined by the amount of unstable liabilities or risk-weighted assets). Presented goals were valid even when the tax contributions were channelled directly to the state budget. The tax envisaged in the Act on Tax on Certain Financial Institutions is however of purely fiscal nature.

According to the authors of the legislation, the justification for the introduction of the tax is high profitability of the financial sector and the need to increase its tax burden and the. It should be noted, however, that in recent years bank profitability has decreased and it is currently only slightly higher than in non-financial enterprises. Moreover, in the coming years the trend of declining bank profitability will most likely continue, among others, due to other additional burdens imposed on banks, including:

- disbursement of approximately PLN 2bn from the Guaranteed Deposit Protection Fund due to the bankruptcy of Spółdzielczy Bank Rzemiosła i Rolnictwa, known as SK Bank,
- an increase in regular contributions to the BFG on account of the planned changes in the deposit guarantee system and the introduction of recovery and resolution regime,
- contributions to the Borrowers’ Support Fund, which according to the NBP estimates may amount to much more than the initial PLN 600 million.

Banks will also have to meet additional regulatory burdens with regard to the capital conservation buffer, MREL requirements, LCR standard (since October 2015), NSFR standards, leverage ratio (2018 at the earliest) and capital surcharges under the so-called pillar II for banks with significant portfolios of foreign currency housing loans.

The introduction of tax will have a negative effect on the banking sector. Apart from the aforementioned declining profitability of the sector, which negatively affects banks’ ability to build capital buffers, tax-liability will be irrespective from the actual profitability of individual institutions. This means that the effect of introducing the proposed tax will be particularly negative for weaker banks with lower profitability and relatively low capital adequacy ratios. Therefore, the group of banks in difficult situation will grow. The results of the simulation show that in a one-year horizon, taking into account other factors affecting banks’ earnings, after the introduction of the tax commercial banks with a negative net earnings would increase their share in the sector’s assets from approx. 2% to 22%. In these banks a fall in the value of regulatory capital would also be observed. There would also be a serious increase in the number banks remaining profitable but with very low-profitability. The net earnings of the whole commercial banks sector would decline in such scenario by approx. 60%.

Reducing the profitability of banks will negatively affect banks’ resilience and their lending capacity. In Poland net profits are the primary source of equity build-up, which in turn determines banks’ resilience to external threats and the scale of prospective credit supply. The additional charge on profits reduces the possibility to raise equity both from internal sources and external sources through the issue of shares (investors expect a certain return on equity). This will reduce the ability of banks to absorb losses. Limited prospects for the increase in regulatory capital also means that some banks would be forced to cut lending, while the loss-making banks would be forced to deleverage.
Figure 1. Results of the simulation of the impact of the assets tax on commercial banks’ ROA

Notes: The simulation assumes that the earnings of the banks would be the same as in the previous four quarters (fourth quarter of 2014 – third quarter of 2015), except for the impact of the analysed burdens, i.e. the assets tax, the contributions to the BFG for the payout of guaranteed deposits from SK Bank, the increase in regular contributions to the BFG, the payments to the Borrowers’ Support Fund and the decrease in interest rates in line with market expectations on the basis of FRA contracts.

Source: NBP.

Apart from immediate upshots of the tax with respect to the earnings of banks, it could also generate a handful of other adverse side effects. It can be expected that banks will want to reduce the tax base and limit the dent in profitability, which could result in the following:

- **increase in the cost of credit**, particularly in the case of loans with low spreads and low profitability, such as housing loans;
- **decrease of the credit supply in favour of increased purchase of government bonds**, due to the exclusion of the latter from the tax base;
- **decline in the availability of credit** since the rise in the cost of credit would lead to a lower creditworthiness of small and medium entrepreneurs, which could deepen further the financial gap in this segment. Consumer credit offer to some clients with higher risk profile would probably be restricted as well, because elevating interest margin or non-interest costs to compensate for higher risk will be limited by the maximum statutory level established in the banking law.
- **reduction of low-interest assets**, including housing loans, corporate loans and government bonds, in favour of high margin products, such as consumer loans for households. From the point of view of economic growth, this would result in disadvantageous changes in the structure of lending;
- **rise in cross-border lending** directly by foreign parent companies of Polish banks, which would translate into an increase in the external debt of enterprises and unfavourable changes in Poland’s balance of payments;
- **higher exposure of banks to high risk assets**. Reallocation may boil down to the expansion of portfolio of financial instruments reported in the trading book as well as engaging in other non-traditional banking activities, which would be detrimental to financial stability;
- **increase in the appeal of securitisation and off-balance sheet transactions as well as the growth in significance of shadow banking sector**, to which the tax does not apply to. This will translate into limiting the ability to identify possible threats and assess the stability of the financial sector;
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- **changes in the deposit offer for clients**, towards investment funds and structured products. This would result in an increase in the share of instruments with higher investment risk in households’ assets.

Introduction of the assets tax may also impair budget revenues received from the banking sector. Because of additional weigh on profit or loss, the prospective revenues from dividends from partly state-owned banks will be lessened. Even though the tax will not be deductible for the purposes of corporate tax, the decrease in corporate tax intake is probable, especially in medium- and longterm horizon. That would be an indirect result of aforementioned potential banks’ and clients’ reactions, mainly lower activity of local banks and increased cross-border provision of credit.

1 Legislative text states that ‘total value of taxpayer's assets, derived from the trial balance prepared at the end of the month on the basis of general ledger accounts, and should at the same time stay in conformity with the accounting rules applicable to the taxpayer. As of yet, it isn’t clear whether such a definition corresponds with the carrying value of assets, which appears to be the original intention of the legislators and what has been used for the purpose of calculations presented in this frame. Accepting other interpretation could result in significant increase in the tax burden, exceeding presented estimations, which would deepen described negative effects of the tax even further.

2 Additionally, in the case of associating cooperative banks the tax base will be reduced by the amount of funds deposited by cooperative banks.

3 The analysed factors are the following: contributions to the BFG for the payout of guaranteed deposits from SK Bank, increase in regular contributions to the BFG, contributions to the Borrowers’ Support Fund and the reduction in interest rates in accordance with market expectations on the basis of FRA contracts.

4 Since 2007 retained profits accounted for 70% of the growth in equity.

**Box 9. Restructuring of foreign currency housing loans – the analysis of potential effects on the financial stability**

The significant depreciation of the zloty against the Swiss franc in early 2015 increased the intensity of the public debate on the issue of foreign currency loans, which led to the creation of draft laws for the statutory restructuring of these loans. During its seventh term, the Parliament worked on the draft law on specific terms of restructuring of home loans denominated in foreign currency and amending certain other acts, however, they were not completed before the end of the term of parliament. On 15 January 2016, the Office of the President of the Republic of Poland published its proposal.

The draft law on the methods of restoring equality of parties to certain credit agreements and loan agreements published by the President's Office provides for two main solutions that a borrower who repays foreign currency loans can benefit from:

- refund of FX spreads,
- loan restructuring.

At the request of the borrower, the bank will have to refund FX spreads used in the drawdown and repayment of the loan. The spread is to be calculated against the average NBP exchange rate and, in addition, statutory interest is to be charged on it. The calculated amount is to reduce the value of the outstanding loan principal.

Borrowers can also apply to the bank for one of two options of loan restructuring:

- voluntary restructuring – consists in changing the credit agreement (restructuring) and replacing the currency loan by a zloty loan by converting the outstanding principal at “the exchange rate” (KWO) defined in the act and replacing the base interest rate by WIBOR. The loan margin would remain the same as in the original currency loan. The bank may refuse to apply voluntary restructuring.
compulsory restructuring - in the concept of the initiators of the draft law, it does not interfere with the content of the loan agreement, but – as in the case of voluntary restructuring – it assumes conversion of the outstanding capital at the KWO rate and the repayment of further instalments based on the repayment schedule set for the converted principal. The interest rate on the loan remains unchanged in this variant of restructuring, i.e. it is based on the LIBOR rate. The bank is required to apply compulsory restructuring upon a borrower’s request.

According to the provisions of the draft act, the borrower can apply for any of the possible options of loan restructuring. Therefore, before applying for compulsory restructuring, the borrower does not need to apply for voluntary restructuring.

The KWO rate is determined individually for each borrower. It is determined by an algorithm that is designed to ensure that the value of outstanding principal after conversion to the zloty corresponds to the value of the principal of a hypothetical loan in the zloty drawn on the same day as the foreign currency loan (taking into account the difference in the amount of actually paid instalments and those owed for a loan in the zloty). Together with the draft act, a calculator has been made public that allows one to manually calculate the KWO rate. At first, the formula used in the calculator was initially inconsistent with the provisions of the draft act, but later the President’s Office made respective amendments in the draft act.

The draft act assumes that in the case of both voluntary and compulsory restructuring, upon the loan instalment due date, part of the instalment is written off in the amount of the difference between the value of the loan instalment determined in the context of restructuring and the value following from the original credit agreement. This solution was meant to allow for a gradual settlement of losses by banks.

Banks will be able to deduct the write-off defined in the act from the payable amount of the tax on certain financial institutions. Deduction in a given month may not exceed 20% of the tax, but it can be done gradually in the subsequent months until full deduction of the write-off.

If the borrower does not use restructuring, she/he is also entitled to request for a full cancellation of the loan in exchange for the transfer of ownership rights to the mortgaged property to the bank. The borrower must, however, comply with the following conditions:

- in the last year the borrower did not receive an income in the loan currency that would make monthly repayments of the foreign currency loan possible,
- in the last year, the borrower’s DStI ratio was higher than 20% 
- the remaining outstanding loan principal (expressed in zloty) has increased by more than 30% compared to the moment the loan was granted.

Analysis of the impact of the introduction of the act on the situation of banks

Assumptions

The scale of application of the act and, consequently, its impact on the financial results and solvency of banks is heavily dependent on individual decisions of borrowers. It can be expected that the return of spreads would be taken advantage of by all borrowers because it does not include any additional conditions or consequences. Loan restructuring would be most favourable to borrowers who took out loans in the years 2007–2008. However, it cannot be ruled out that other cohorts of borrowers would also decide to restructure. From the borrower’s perspective, it seems more rational to use compulsory restructuring. The value of outstanding principal would be the same as in voluntary restructuring, but the interest rate would be based on LIBOR, which is currently much lower than WIBOR used as basis for interest calculation in the case of voluntary restructuring. Transfer of ownership rights to property in exchange for cancellation of the loan would, in turn, be profitable for borrowers (who meet the
conditions defined in the act), for which the loan Ltv exceeds 100%. However, most of those borrowers would also benefit most from loan restructuring.

Performing calculations of the impact of restructuring on the banking sector requires the adoption of a number of assumptions and reliance on estimated values. The cost of the introduction of the act depends on the individual characteristics of particular loan agreements. In order to estimate the costs associated with the refund of FX spreads and loans restructuring the characteristics of average FX mortgage loans issued in each quarter and the corresponding repayment schedule were calculated at first. Then on this basis:

- for the FX spreads refund – the value of the FX spreads refund was calculated based on average FX spreads applied by three largest banks in terms of FX loans portfolio. It was assumed that the spreads were collected only until 2011, i.e. until the amendments to the Banking Law Act enabled all borrowers to make monthly repayments directly in the currency of the loan;
- for loan restructuring – for each stylized loan representative for each quarter the KWO rate was calculated and, eventually, the value of write-off. Afterwards, basing on the data on the value of newly extended loans in each quarter the aggregated costs of restructuring for the banking sector was estimated.

In the opinion of NBP, the loss arising from the conversion of the loan principal should be reflected immediately in the financial result of the bank, both in the case of voluntary and compulsory restructuring. At the time of submitting an application for restructuring, the expectations of the bank regarding future cash flows from the loan agreement change significantly, which is the basis for the recognition of losses, either as a result of objective evidence of impairment of the value of the loan, or due to replacing the original foreign currency loan with a new loan denominated in PLN with a lower value (due to a significant change in the characteristics of the loan). The necessity of immediate recognition of losses is also apparent from the fact that foreign currency housing loans are valued for the purposes of financial statements in zlotys. Following the customer’s submission of an application for restructuring, there are no grounds for further valuation of such loans at the exchange rate of the original currency, as the relation of future cash flows arising from the loan agreement with the exchange rate of this currency no longer exists.

The estimated value of the costs is highly dependent on market parameters at the time of restructuring, in particular the level of the exchange rate. It was assumed that the conversion would take place without affecting the exchange rate (exchange rates of 15 January 2016 were applied, i.e. CHF/PLN 4.0284, EUR/PLN 4.4075). In reality, the depreciation pressure caused by the increased demand of banks for foreign currencies (for closing of the currency position) would contribute to an increase in restructuring costs.

Aggregated costs of the draft law

The cost of refunding the spreads together with statutory interest for all foreign currency loans can be estimated at about 9 billion zlotys.

The direct costs of restructuring, i.e. conversion of the principal of all loans at the KWO rate, can be estimated at about 35 billion zlotys. If, however, restructuring is used only by borrowers from the years 2007-2008, the costs would be approx. 29 billion zlotys. This cost is the same for voluntary and compulsory restructuring.

In addition to the above direct cost of write-offs, banks would have to incur the costs of closing the currency position resulting from the conversion. Currently the portfolio of FX loans is financed directly by FX liabilities or with the use of fx swap or CIRS transactions. As a result, the net open FX position is close to zero (see Chapter 2.3). In case of restructuring, the FX loans would be replaced by zloty loans ceteris paribus creating so-called short FX position (FX liabilities would exceed FX assets). Closing the position (e.g. by purchasing FX assets or reversing hedging transactions) would result in significant demand for foreign currencies by the banking sector.

Increased banks’ demand for foreign currencies coupled with their deteriorated financial standing and increased risk perception with respect to Poland could, however, result in zloty depreciation. This would translate into
rise in the cost of restructuring. Above estimates should be thus regarded as minimal costs of restructuring. Should zloty depreciate by 10% (compared to the level of CHF/PLN as of 15th January 2016 applied in the simulation) the aggregated costs of the refund of FX spreads and restructuring would increase by about 13 billion zlotys.

In addition, in the case of compulsory restructuring, banks would receive lower interest income. This is due to the fact that the interest charged by the bank on the loan de facto denominated in the zloty would be based on the LIBOR rates, and after closing the currency position, the bank would have to finance these loans in zlotys. The current value of such reduction in revenue, assuming that all borrowers would take advantage of compulsory restructuring, may be estimated at approx. 21 billion zlotys.

Available data do not allow for a precise assessment of the value of loans with Ltv above 100% being repaid by borrowers meeting the conditions set out in the act. The total value of foreign currency loans with Ltv greater than 100% can be estimated at around 77 billion zlotys. If these loans are written off in exchange for the credited property, the costs for banks (i.e. the difference between the carrying value of the loan and the value of the acquired property) would amount to approx. 20 billion zlotys. This amount can therefore be regarded as the maximum possible cost of this solution. In addition to the direct costs for banks, the use of this possibility on a large scale would lead to a drop in real estate prices, which would have an additional negative impact on the stability of the financial system.

Apart from aforementioned costs, banks would also had to bear increased operating and transaction associated with restructuring.

Impact on the situation of banks

In order to assess the combined impact of the direct restructuring costs on individual banks, it was assumed that all borrowers would take advantage of the refund of FX spreads, and additionally loan restructuring would be taken advantage of by:

- Scenario I – all borrowers,

The costs of closure of the foreign currency position and reduced interest income were not taken into account.

The total direct costs of implementing the act, reaching 44 billion zlotys in Scenario I and 38 billion zlotys in Scenario II, are several times greater than the current profits of the banking sector, which would threaten its stability.

The impact of the restructuring of foreign currency loans on banks’ financial results would be even greater because it would take place in a situation of decreasing profitability of banks and other burdens imposed on the sector, in particular the introduction of the tax on assets. The simulation results show that on a yearly basis, taking into account other factors influencing the financial results of banks, the introduction of the analyzed draft law would produce losses in the entire domestic commercial banks sector: 36 billion zlotys in Scenario I and 30 billion zlotys in Scenario II. The share of assets of the domestic commercial banks sector with the annual loss, in both scenarios would increase to about 70%. In most banks, the losses would be very large in relation to the scale of their operations (see chart 1). These losses would translate into a decrease in own funds by 23%–27%. The share of banks failing to meet the minimum capital requirements in both variants would increase to 18% (from 1.2% today) and of banks not meeting the recommendations of the Financial Supervision Authority to 72% in Scenario I and 53% in Scenario II (from 12.2% today).
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Figure 1. Results of the simulation of the impact of the introduction of restructuring of foreign currency loans on commercial banks' ROA

![Graph showing the results of the simulation of the impact of restructuring foreign currency loans on commercial banks' ROA.](image)

Notes: The simulation assumes that the financial results of banks would be the same as in the preceding four quarters (Q4 2014 – Q3 2015), except for the impact of the analyzed burdens, i.e. restructuring of foreign currency loans, tax on assets, payments to the BGF for the payment of deposits guaranteed by SK bank, increased contributions to the BGF (when compared to Q4 2014 – Q3 2015), contributions to the Borrowers' Support Fund and a decrease in interest rates in accordance with market expectations based on FRAs. It was assumed that banks which show a loss are covered by the recovery plan and do not pay the tax on certain financial institutions.

Source: NBP.

The restructuring of foreign currency loans, reducing profits or even causing losses translating into a decline in banks' capital, would reduce their ability to continue lending. In Poland, banks' profits are the primary source of the creation of capital needed to increase the credit portfolio. The share of banks with the largest portfolios of foreign currency loans in total bank loans to the non-financial sector amounted at the end of September 2015 to 71%, and their share in the growth of credit extended to this sector in the previous four quarters to 91%. Reducing the supply of credit would, in turn, have negative consequences for the entire economy.

What is equally important, the restructuring of foreign currency loans, despite the elimination of the weak point of the balance sheet of banks, would translate into a decrease in the resilience of banks to other shocks (including those described in Chapter 5.1.2.). The results of the above simulation and stress testing cannot be mechanically connected, but the costs associated with the restructuring of foreign currency loans would very significantly increase the need for recapitalisation in the event of macroeconomic and market shocks (see Chapter 5.1.2.). In such a case, the scale of losses could lead to significant second-round effects and contagion between banks and the need for payouts of guaranteed funds. It is worth noting that at the end of September 2015 the banks with the largest portfolios of foreign currency loans had 669 billion zlotys of non-financial sector deposits, of which about 428 billion zloty billion were guaranteed.

Restructuring of FX loans in the proposed form would also have a negative impact on public finances. Apart from the possibility of reducing the value of the due tax on certain financial institutions (which is assumed by the draft law) the value of dividends that could be paid out by banks with state ownership would be limited. Significant decrease of own funds reducing banks capacity to expand activity would, in turn, result in a fall of corporate income tax from the banking sector. There would be also a significant risk of litigation and other claims against Poland. The deterioration of the standing of Polish banks would also cause a revision of ratings, fall in the confidence of foreign investors towards Poland and, consequently, rise in the costs of servicing the public debt.
5.2. Assessment of risk to financial system stability

Poland's financial system functions in a stable manner, although the intensity of risks to its stability has increased in the period since the publication of the previous issue of the Report.

Proposed measures aimed at limiting the value of foreign currency housing loans might negatively affect the stability of the financial system. So far, the persisting strong exchange rate of the Swiss franc has not caused risks to the stable functioning of the Polish financial system to materialise, which arises mainly from substantial buffers that allow borrowers and banks to absorb the effects of the market changes. Proposed measures would result in higher financial burden on the banking system, and a diminution of its resilience to a materialization of shocks in the future as well as of its ability to provide lending for the economy.

Persistently increased uncertainty related to the macroeconomic developments in the environment of the Polish economy is of major importance for the Polish financial system outlook. However, the sources of uncertainty have changed — the slowdown in large emerging economies, especially in China, which may affect the situation of Poland's major trading partners and asset prices on global markets, plays a more important role. On the other hand, trends inside the European Union are of lesser importance, thanks to, inter alia, the agreement Greece has reached with its creditors. The factor which may significantly diminish the resilience of the financial system, especially of the banks, to a materialization of shocks in the future is higher financial burdens on the banking system, both one-off and long-term burdens.

Cyclical risk

In the Polish economy and the key segments of the financial system, there are presently no significant imbalances whose reversal could negatively affect financial stability. The growth rate of lending, which is slightly higher than the nominal growth rate of GDP, does not generate such imbalances and is not a barrier to economic growth. The level of household and corporate debt is also moderate. Developments in the commercial real estate market, despite growing tensions, should not adversely impact the functioning of the financial system because the value of exposures of domestic financial institutions to this market is low.

Developments in the environment of the Polish economy, in particular in countries that are Poland's major trading partners, are a significant
risk factor. The situation in these countries affects the dynamics of the Polish economy, and this in turn impacts the situation of domestic borrowers. The growth projections for the coming years published for developed countries, including the euro area, point to a stronger economic upswing. However, the low share of investments in economic growth in the countries raises concerns about the sustainability of the recovery.

The economic situation of emerging economies gained in importance as a risk factor to the Polish economy, mainly through the influence of their situation on economic growth in countries that are Poland’s major trading partners. The downturn in China and low GDP growth rates in other large emerging countries show that the global economic growth outlook remains highly uncertain. If economic growth in large emerging economies slows down further, this may also spark a rise in risk aversion. As financial integration of the world is increasing — which is reflected, inter alia, in rising foreign debt of enterprises from emerging economies — capital flow changes, triggered for instance by shifts in US monetary policy, may magnify the negative phenomena in emerging economies. The direct trade ties of the Polish economy with emerging economies are moderate; however, the impact of the slowdown in these countries would be felt in Poland through the situation in Poland’s major trading partners.

A materialisation of negative scenarios involving the slowdown of economic growth in the euro area, coupled with a surge in risk aversion in global and emerging markets — resulting, inter alia, in capital flows to safe havens, which would translate in appreciation of the Swiss franc against the euro and the zloty, would be — apart from a serious geopolitical conflict scenario — a challenging test to the resilience of the domestic financial system. This factor would dampen the pace of Poland’s economic growth. Credit risk (responsible for around 90% of the capital requirements of banks) would be the main channel through which the materialisation of such a scenario would affect financial stability. Credit risk would increase both as a result of the worse condition of enterprises and the situation of the labour market as well as a depreciation of the zloty, which — if it were strong and persistent — could have a negative impact on the quality of the foreign currency loan portfolio. Such a scenario could negatively affect the prices of Treasury securities (which account for about 13% of banks’ assets); however, it should not have a strong influence on the assessment of Poland’s credit risk due to the moderate level of the public debt to GDP ratio. Potential significant loosening of the fiscal policy would increase the sensitivity of Treasury securities on the materialization of such scenario. On the other hand, banks’ exposure to market risk is limited and should not generate systemic risk.

A faster than expected by financial markets tightening of monetary policy by the Federal Reserve could lead to substantial reduction in investment in the emerging markets and result, inter alia, in a depreciation of the zloty and a rise in the yields on Polish government bonds. The impact of such a scenario on domestic financial system stability may be assessed as moderate due to the hedges used by banks against market risk, which are reflected in a low estimated VaR for market risk. The initial response of the markets to the Fed’s interest rate hike in December 2015 indicate, however, that the process of adjustments on global markets may be gradual.

The current historically low level of interest rates, if maintained for longer, should not generate significant risk for the stability of commercial banks, despite the downward pressure on their financial results. Low interest rates create a more significant
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challenge for cooperative banks due to their specific product offer and business model. Both types of banks should maintain prudence while defining their lending standards. In the case of non-credit financial institutions, particularly insurance companies operating in Poland, this situation will not generate significant threats due to the minor role of products with a guaranteed rate of return in their balance-sheets and the conservative methods of setting the guaranteed rates. In the case of the investment funds sector, low interest rates are a factor supporting an increase in demand for the services rendered by these institutions.

Structural risk

The implementation of some economic policy measures, which are now the subject of public debate and which have been partially implemented through legislative work may give rise to significant risk for economic growth and financial stability. This applies especially to measures which may cause significant and permanent decrease of banks' profitability or directly influence the reduction of capital buffers of banks. A negative consequence of such situation will be a lower capacity of banks to absorb adverse shocks and also a reduced ability to provide lending for the economy. Proposed measures aimed to reduce the value of foreign currency loan portfolio should be included among actions which have adverse effects, particularly when they are considered in interaction with already implemented tax on assets of some financial institutions.

The imposition of a tax on assets of the banking sector will have negative consequences for banks’ capacity to lend to the economy as well as to absorb negative shocks. In Poland, the growth rate of lending was the highest among EU countries in the period since the beginning of the global financial crisis (see Figure 2.2). Profits retained by banks are the main source of capital required for a safe increase in lending. A lower level of capital buffers also weakens the sector's resilience to the materialisation of other sources of risk discussed in this chapter. The increase in taxes takes place in the period of lower income of banks, growing burdens associated with the increasing of deposit guarantee funds (which were partially used for payment of guaranteed deposits at credit unions) and of restructuring funds at BFG as well as substantial costs arising from payouts of guaranteed deposits. Moreover, it should be pointed out that the proposed design of the tax does not create incentives for banks to conduct their business in a safer way.

Particularly negative consequences might result from the imposition (together with the tax burdens) of measures aimed to reduce the value of banks’ foreign currency loan portfolios if the majority of the cost of the measures is borne by banks. The foreign currency loan portfolio is a vulnerable element of the balance sheet of banks, but due to the existing buffers in the banking and household sectors it does not pose a systemic threat, even if significant shocks are assumed. The vulnerability of the area arises from borrowers’ exposure to market risk which is difficult for them to mitigate. A substantial portion of foreign currency loans demonstrates high LTV ratios. The foreign exchange rate changes have so far not been sufficient to generate a significant deterioration in the quality of this portfolio. The value of banks’ exposures to the portfolio is gradually diminishing due to a decrease in the value of the portfolio as borrowers repay the loan principal.

The proposal of the reduction of the portfolio of foreign currency housing loans presented on January 15, 2016 may contribute to the elimination of that vulnerable component of banks’ balance sheets. However, the proposed solution, if intro-
duced in the form presented in the proposal, could substantially and negatively affect the stability of the financial system and the economy.

**Proposed measures will have a strong adverse influence on financial situation of banks which hold large portfolios of foreign currency housing loans.** Those banks will have to bear high costs of the reduction of that portfolio. Those costs will include the effects of the currency conversion using the exchange rate lower than the exchange rate currently observed on the market as well as the costs of closing the open FX position resulting from the conversion. In cases of many banks described costs will cause the decrease of their capital which will result in the fall of their capacity to absorb shocks and their ability to provide financing for the economy. Moreover, if the significant fraction of the borrowers will take advantage of so called “compulsory restructuring” a permanent decrease of profitability of banks will be observed. As a result the ability of those banks to rebuild their capital position in the future will be limited.

**Proposed solutions concerning the issue of foreign currency loans will also negatively affect banks which do not hold substantial portfolios of those loans.** If it is necessary for the BFG to be involved in the process of restructuring of the banks having large portfolios of foreign currency loans, then the remaining banks will also have to bear the costs of the rebuilding of the financial potential of the BFG and as a result their profitability and ability to supply credit for the economy will be reduced. Furthermore, a potential limitation of credit supply from banks bearing the costs of the reduction of the foreign currency loan portfolios might contribute to the limitation of the economic growth, which in turn will contribute to the increase of credit losses in the whole banking sector.

The proposal of the restructuring of liabilities through writing off loans in exchange for transferring the ownership of the property financed by the loan to the bank, might have not only direct financial effects for banks, but also wider adverse economic and macrofinancial consequences. Taking advantage of that solution by substantial amount of borrowers might engender the risk of a substantial increase of supply on the housing market due to the fact that banks will try to liquidate the properties taken into possession. This would result in a fall of prices on housing market, which would in turn attract more borrowers to take advantage of that solution and increase banks’ losses resulting from selling properties for less than the value of the outstanding loan.

The proposed solution aiming to reduce the value of the portfolio of foreign currency housing loans, if implemented together with increased financial burdens on the financial sector from other sources engenders the risk of the negative feedback between the banking sector and the real economy (see Figure 5.5). This would slow down the pace of the economic growth as well as weaken the situation of the banking system. Banks’ vulnerability to the materialization of external shocks would permanently increase. The permanent decrease in bank’s profitability and capitals positions would encourage them to limit the supply of credit. Lower availability of financing from banks to enterprises and households will in turn cause the limitation of investments and consumption which will then slow down the economic growth and increase banks’ credit losses. Additionally the negative feedback could also be strengthened by the processes on the housing market described above. A materialization of such negative feedback would make the implementation of the economic policy aiming to boost the economic growth, much more difficult. Lower buffers in form of profits and the capital would also weaken the resilience of the domestic banking system to the mate-
The actions aiming to reduce the value of the foreign currency loans might also result in the pressure on depreciation of the zloty as banks will be forced to close their foreign currency positions. Both banks which finance their portfolio of foreign currency loans with FX liabilities and banks which close their FX position with off-balance-sheet transactions will have to acquire foreign currencies in order to pay back those liabilities or to conclude an off-balance-sheet transaction closing that position.

In the previous issue of the *Report*, Narodowy Bank Polski presented three principles which in NBP’s view should be followed when designing solutions aiming to reduce the portfolio of foreign currency loans106. The proposed solutions do not follow those principles. NBP pointed out that measures taken should not decrease significantly banks’ capital levels and capacity to absorb shocks. NBP’s estimates show that costs of proposed solutions will lead to the significant weakening of that ability. NBP also pointed out that the measures taken should not promote economic agents’ behaviour leading to systemic risk growth in the future, most notably through incentives that stimulate moral hazard. When costs of the reduction of the portfolio foreign currency loans are wholly incurred by banks (except for the value of the difference between debt servicing costs of the foreign currency loan and the loan in the polish zloty) the borrowers are encouraged to use risky financial products in the future as they may expect a similar government intervention. At the same time that solution discourages banks from offering more risky financial products. Therefore, it can be assessed that the principle of discouraging from actions increasing systemic risk is at most partially fulfilled. The third principle pointed out by NBP is that aid activities should be targeted well, in particular by ensuring that beneficiaries should be limited to financially distressed borrowers. The pro-

posed measures, according to the proposal from January 15, does not provide such targeting of aid activities.

The difficult condition of the credit union sector does not generate systemic risk directly, but it has certain significant consequences for the ability of public authorities to respond to problems in the financial system. The absence of systemic risk arises from the relatively low scale of credit union activity, the substitutability of financial services provided by credit unions and banks and the minor scale of interconnectedness between credit unions and other financial institutions. However, corrective measures for the credit union sector require involvement of financial resources at the disposal of financial safety net institutions, which points to the systemic nature of the problem.

A weakening of the financial potential of the Bank Guarantee Fund which resulted from the bankruptcy of few financial institutions decreases abilities of the financial safety net to function properly and emphasizes the necessity of the introduction of the resolution mechanism into the Polish law. In the years 2014 – 2015, the payout of guaranteed deposits of institutions operations of which were suspended by KNF was a significant burden for financial resources of the Bank Guarantee Fund. It was considerably influenced by the problems in the credit unions sector. Restructuring methods currently used for the sector (bankruptcy, liquidation, takeover\(^\text{107}\)) involve the use of BFG funds, which causes, ceteris paribus, a reduction of resources available in the event of potential problems in the banking sector. Additionally, using the funds of BFG to restructure the credit unions sector also causes an increase in costs, primarily for banks, in the future, which may, ceteris paribus, limit their capacity to increase their capital buffers. Due to the lower profitability of their activity, the additional burden will be more challenging for cooperative banks, which might make the creation of the financial potential of the institutional protection schemes more difficult. Such phenomena stress the need to introduce into Polish law the resolution mechanism, which would provide the institutions of the financial safety net with a wider range of tools allowing to limit the public costs resulting from the problems of financial institutions. For many years NBP has been pointing out the necessity of the completion of the legislative work in this regard.

It is hard to regard the level of concentration in Poland’s banking system as excessive, however it requires monitoring. In an environment of low rates of return, decisions by the strategic investors of Polish banks regarding the business model and the geographical scope of the group’s operations may lead to a rise in concentration in the Polish banking sector. The imposition of the tax on assets of the banking sector may strengthen that tendency, as larger institutions can be characterized by highest profitability and greater capacity to absorb effects of the tax. A rise in concentration in the banking sector may lead to the emergence of a group of institutions that are “too big to fail”. Such institutions could take excessive risk by taking advantage of their market position and expectations about support from authorities. Therefore, special attention should be paid to the side effects of the higher burdens for financial sector and of ownership changes in the domestic banking sector on market concentration. In this context, the participation of investors so far absent on Poland’s banking market in the pro-

\(^{107}\) The least costly method of restructuring credit unions could be through a partial acquisition of assets and liabilities of credit unions by other entities, which is a possibility provided for in Article 74c of the Act on Credit Unions (the Act of 5 November 2009 on Credit Unions, Journal of Laws of 2013, No. 1450, as amended.). However, this approach has not been used so far because of legal uncertainty on the compliance of the article with the Polish Constitution. The uncertainty was removed only by the ruling of the Constitutional Tribunal of 31 July 2015 that determines conclusively the constitutionality of the solution.
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cess of ownership changes (however it would be less likely, should the profitability of the banks decrease permanently) and the fact that the consolidation process will probably apply to medium-sized banks reduce the risk of excessive market concentration. Irrespective of the progress of mergers and acquisitions, institutions with a high market share should demonstrate the enhanced capacity to absorb the effects of risk materialisation. In other sectors under analysis, high market concentration is exhibited by the credit union sector, insurance companies and in the pension sector (although due to institutional solutions, in the latter sector the importance of the resilience of individual pension fund management companies to turmoil is lower).

The necessity of changes in the manner the cooperative banking sector operates is a medium- and long-term challenge. The sector does not fully utilize its development potential. With its current business model and level of integration, cooperative banks are not able to ensure the scope and level of services expected by potential new clients, and at the same time, the efficiency of the banks remains low. The sector’s business model needs to be changed. It should comprise closer integration (for example on the field of investing in technology) that allows, on the one hand, to meet new regulatory requirements, and on the other hand, to increase operational efficiency. The operations of cooperative banks should continue to focus on financing the lending needs of households and small and medium-sized enterprises (SMEs). The knowledge of local markets is a significant competitive advantage of the cooperative banking sector, whereas closer integration will enable it to strengthen its market position and to limit the fixed costs. At the same cooperative banks should care about the adequate exploitation of information from local markets in the risk assessment of their activity in order to limit the risk of excessive local links. When altering the business model, cooperative banks should avoid excessively expanding their activity in the areas in which they have no sufficient risk management potential. Such expansion may also lead to excessive concentration of the loan portfolio (both in counterparty and sector dimension). The necessity to suspend one of the largest cooperative banks (SK bank) by the KNF arose, inter alia, from the materialisation of risk accumulated during such expansion. The bank’s problems resulted from an accumulation of several types of risk, associated in particular with its rapid expansion in corporate lending and the credit risk taken.

The introduction of institutional protection schemes that should comply with the requirements laid down in the CRR Regulation is a major step towards integrating and strengthening the system of cooperative banking. In the period analysed, institutional protection schemes set up in both currently operating associations of cooperative banks were approved by the KNF.

Other risks

Besides the risks discussed above, other risks to financial stability have to be identified, which — although they are not strictly associated with the business or financial cycle, or the structure of the sector — may become systemic. As their character is non-economic, they are not the subject of analysis in this publication. These are primarily operational risk, in particular legal and technological risk. Legal risk is associated with the possibility to sustain big losses or costs arising from administrative procedures or court litigations. Of special significance is technological risk related to the operation of ICT systems and their exposure to failures and cyber-attacks. A potential materialisation of such risks may have substantial implications for financial stability through the impact on the reputation of the financial institutions, and in extreme cases, on their...
capacity to provide services and, in a broader context, on the level of confidence in financial institutions.

On 1 November 2015, the Act on the Macro-prudential Supervision of the Financial System and Crisis Management in the financial system took effect. It named the Financial Stability Committee as the body responsible for exercising macro-prudential supervision, in particular by applying macro-prudential instruments, adopting positions (that may serve as warnings about identified systemic risk) and issuing recommendations. Narodowy Bank Polski will play a vital role in the Committee's work on macro-prudential oversight, which is evidenced by the chairmanship of the Financial Stability Committee by the President of NBP (within the scope of the Committee's work that encompasses macro-prudential supervision) and the statutory requirement for NBP to support the Committee's macro-prudential function.

5.3. Recommendations

The role of the Report is, in addition to identification and assessment of risk occurring in the financial system, to offer measures and solutions aimed at containing such risks. It is one of the methods to fulfill the mandate of performing activities eliminate or contain systemic risk and to support the stability of the domestic financial system (Article 3 paragraph 2 items 6a and 6b of the Act on NBP). In the opinion of the Narodowy Bank Polski, the implementation of the following recommendations is key to the preservation of the stability of the Polish financial system:

1. Measures that constitute a threat to the stability of the financial system should be avoided. This pertains in particular to the presented proposals of solutions regarding the portfolio of foreign currency housing loans.

In the previous edition of the Report, Narodowy Bank Polski indicated three principles which should be observed when designing measures aiming to reduce the portfolio of foreign currency loans. Measures undertaken:

- should not lead to a destabilisation of the banking system, in particular by a significant weakening of its capital position and shock absorption capacity,
- should not encourage behaviour that leads to a rise in systemic risk in the future (in particular by stimulating moral hazard)
- should be properly addressed; their beneficiaries should be financially distressed borrowers.

At the same time, the impact of measures that have already been implemented on the stability of the banking system, its ability to lend to the economy and support economic growth should be monitored. If the imposition of the tax on certain financial institutions results in a significant reduction in the availability of financing for the economy or unfavourable changes in the structure of the financial system, a change in the rate and the formula of the tax should be considered.

Banks have recently faced the necessity to fulfill numerous new regulatory requirements. In the long term they will support the strengthening of financial system stability in Poland. However, in the short term, some of these measures lead to a rise in costs incurred by banks and a fall in their profitability. These changes

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Risk assessment

take place in an environment of low interest rates, which additionally reduces banks’ profitability, and at the time when there is the need to finance the restructuring of, as well as payouts of guaranteed deposits from, some credit institutions. In such a situation, introducing additional burdens on banks may make it impossible for them to increase their capital which is needed to ensure credit supply. This results from the fact that the retention of profits is the major source of capital for domestic banks.

2. In order to strengthen the cooperative banking sector, its further integration in the framework of recently created institutional protection schemes is desirable, as is the timely implementation of measures ensuring that the schemes are fully operational. It is also necessary to continue actions aiming to change the model of cooperative banking and to strengthen the resilience of the associating banks.

Cooperative and associating banks should pursue a timely implementation of measures and organisational and legal instruments within the created institutional protection schemes (IPS). A comprehensive and timely implementation of all legal mechanisms as well as appropriate financial arrangements is key for the safety of the functioning of the IPS. To obtain full advantages and planned effects stemming from the introduction of the IPS the participation of cooperative banks should be as broad as possible, while the mechanisms of supervision, reporting and risk management should also be properly used.

3. The restructuring measures in the credit union sector should be continued, to enhance the operational efficiency and increase capital in the case of credit unions whose restructuring is possible.

The capital position of many credit unions remains difficult. The current trends in the area of profitability and capital position of these credit unions do not indicate that over time, these credit unions have managed to resolve their problems independently. For this reason, the restructuring should be continued. Following the restructuring, credit unions should operate based on the model of a strong common bond between members of each credit union. In the cases of these credit unions which are not able to function further, their exit from the market should be carried out in a manner which minimises public costs, using the methods of full takeover or partial takeover of selected property rights or selected liabilities by domestic banks, using support tools provided by the BFG. Additionally, a prompt adoption of resolution legislation, which should include the credit union sector, is of key importance.

4. Banks should factor in their lending policy the possibility that interest rates rise in the future. Banks should ensure that borrowers taking out long-term floating interest rate loans have sufficient income buffers in the event of a substantial increase in interest rates.

Interest rates in the interbank deposit market, on which the interest rates on housing loans depend, are presently lower by around 3 percentage points than the average calculated from 2004. An acceleration of economic growth may lead to an increase of market interest rates, which may bring about a faster increase in loan servicing costs than the rate of borrowers’ income growth. For this reason, borrowers should have incomes that will allow them to service the loan even at a significantly higher level of interest rates than the current one. An element to reduce the sensitivity of borrowers could also be the expansion by banks
of the offer of long-term loans with fixed interest rate.

5. **Banks should pursue a particularly prudent lending policy in the segment of commercial property loans.**

The situation in the major segments of commercial property market (office and retail property) shows that imbalances have been growing, which in the environment of continually rising supply may result in credit risk growth. Banks should demonstrate particular prudence in examining the quality of loan collateral, the reality of assumptions concerning cash flows generated by the property and the borrower’s loan repayment capacity.

6. **Investment fund management companies should take particular care to maintain an appropriate level of liquidity of assets of open-ended investment funds.**

The structure of these funds’ assets should ensure uninterrupted redemptions of investment fund units on the request of investors and a prompt payout of related funds, also during events of market turbulence.
**Glossary**

**Adjusted net interest margin** – the ratio of net interest income posted in a given period less interest income on securities held and net charges to provisions for impaired loans to assets (or the relevant loan portfolio) in this period.

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

**Assets of limited liquidity** – category of assets specified by KNF Resolution No. 386/2008 defining liquidity standards for banks. Approximately it consists of assets resulting from banking activities outside the wholesale financial market.

**Auto casco insurance AC** – comprehensive auto insurance of land vehicles, excluding track vehicles, covering damage in automobiles or land vehicles lacking own drive — subsector no. 3 of the non–life insurance sector according to the Act on Insurance Activity.

**Automobile third party liability insurance OC** – third party liability insurance for land vehicles with own drive — subsector no. 10 of the non–life insurance sector according to the Act on Insurance Activity.

**Availability of housing** – measurement defining the number of square metres of a flat, which a person with average income in corporate sector in a given city could afford to buy at average transaction price in a given market. The average price consists of 40% of the price in the primary market and 60% of the price in the secondary market, which is reflected in the distribution of transactions in these markets.

**Availability of loan-financed housing** – measurement defining the number of square metres of a flat, which a person with average income in corporate sector in a given city could afford to buy at average transaction price in a given market, using a housing loan. This takes into account requirements of banks’ lending policies and average market parameters of the loan (interest rate, maturity, minimal income remaining after loan instalment payment).

**Available housing loan** – the value of a potential maximum housing loan expressed as the multiplicity of a monthly wage in the corporate sector in a given market. The value is calculated taking into account requirements of banks’ lending policies and average market parameters of the loan (interest rate, maturity, minimal income remaining after loan instalment payment).

**Banking sector** – all domestically incorporated commercial and cooperative banks as well as branches of foreign credit institutions operating in Poland.
Baseline credit assessment (BCA) – a main measure, developed by Moody's, designed for the assessment of the banks. Calculated in accordance with the new, implemented in March 2015, methodology, the measure replaced the financial strength rating. It presents the probability of default of the bank without any external support and its scale depends on the financial profile of bank’s activity, qualitative factors, such as the level of business’ diversification and complexity, and corporate practices, as well as the status of the macroeconomic environment in which the bank operates.

Combined Operating Ratio – the ratio of gross claims and expenses to premiums earned.

Commercial banks – all domestically incorporated commercial banks and branches of foreign credit institutions.

Consumer loans – credit card lending, consumer instalment loans and other consumer loans to natural persons.

Core liquidity reserve – category of assets specified by KNF Resolution No. 386/2008 of 17 December 2008, defining liquidity standards binding for banks. Approximately it consists of other receivables and other assets in the amount obtainable within 7 days.

Credit Default Swap (CDS) – a derivative transaction under which the issuer undertakes to pay the buyer contractually specified compensation in case of a credit event pertaining to a third party (the reference entity) in return for remuneration in the form of a single/upfront or periodic payments (so called premiums). The value of remuneration paid to the issuer of CDS is interpreted as a measure of perceived credit risk of the reference entity.

Credit losses – net charges to provisions for impaired loans.

Cross Currency Interest Rate Swap – a derivative transaction under which the parties are obliged to the 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 agreed for each currency. Transaction may involve the exchange of the nominal amount at the start or at the end of the transaction (at a predetermined exchange rate).

Deposit rating (long-term) – a measure of the capacity of a financial institution to repay its liabilities with a maturity of 1 year or more. It reflects the risk of default and the scale of possible losses in the case of default of a financial institution.

Deposit rating (short-term) – a measure of the capacity of a financial institution to repay its liabilities with a maturity of less than 1 year. It reflects the risk of default and the scale of possible losses in the case of default of a financial institution.

Domestic banking sector – domestic commercial banks and cooperative banks.

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

Effective interest rate – the ratio of interest income (cost) to average value of claims (liabilities) in a given period.
**Forward Rate Agreement (FRA)** – a derivative transaction under which the parties are obliged to exchange the difference between the FRA rate (forward rate determined at the date of the transaction) and the reference rate that was binding two working days before the date of settlement (fixing date), calculated on the basis of an agreed nominal amount for a set period of time starting in the future.

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

**Gross written premium** – the value of gross premium (before taking into account the share of reinsurers): in the case of life insurance sector – payable under the contract within the reporting period, whether or not the premium has been paid; in the case of non–life insurance sector, where the duration of coverage is determined – amounts payable for the whole period of liability, notwithstanding its duration, arising from the agreements concluded during a particular reporting period, whether or not the premium has been paid; in the case of non–life insurance, where the duration is not determined – amounts payable during a particular reporting period, whether or not the premium has been paid.

**Hedonic housing price index** – accounts for differences in housing attributes (i.e. location, usable area, standard) sold in each quarter. The index should react to those changes in the sample smoother than the average price growth or the median. The Hedonic price is the average transaction price from the base period multiplied by the hedonic index. For more information see the article by M. Widłak (2010) „Metody wyznaczania hedonicznych indeksów cen jako sposób kontroli zmian jakości dóbr“ [“Methods of computing hedonic price indices as the way to control changes in goods quality”], Wiadomości Statystyczne no. 9.

**Housing production indicator** – twelve-month moving sum of the number of dwellings whose production is in progress (dwellings which construction has begun after deduction of dwellings completed).

**Illiquid assets** – category of assets specified by KNF Resolution No. 386/2008 defining liquidity standards binding for banks. Approximately it consists of assets not resulting from banking activities.

**Impaired loan ratio** – the ratio of loans with identified impairment to total loans.

**Individual rating (SACP)** – (the assessment of the rating agency S&P), a measure of long-term capacity of financial institution to perform its activities without the support of third parties, calculated on the basis of the assessment of the risk of operating in different countries in which it is active and the individual characteristics of this financial institution.

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

**JPM G7 Volatility Index, JPM EM Volatility Index** — risk indices for the FX market calculated by J.P. Morgan Chase & Co. as the weighted average of 90-day implied volatility derived from at-the-money FX options for USD against, respectively, 9 most liquid currencies from the developed countries and 14 most liquid currencies from emerging markets. The weightings of individual currencies within the indices are based on turnover data in the global market for FX options.

**Large enterprises** – enterprises that employ at least 250 persons.
**Leverage** – 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. Traditionally, leverage is also described as a ratio of assets to Tier 1 capital.

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

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

**Loans with identified impairment** – loans from portfolio B for which objective evidence of impairment and decrease in the value of expected cash flows have been recognised (in banks applying IFRS) or loans classified as irregular pursuant to the Regulation of the Minister of Finance regarding principles for creating provisions for the risk of banking activity (in banks applying the Polish accounting standards).

**M1 liquidity ratio** – according to KNF Resolution No. 386/2008 on the establishment of liquidity standards binding for banks, in case of banks with total assets over 200 million zlotys. It is defined as the sum of primary and supplementary liquidity reserves less the value of unstable external funds. The minimum value of the ratio is 0.00.

**M2 liquidity ratio** – supervisory measure of bank's liquidity defined by KNF Resolution No. 386/2008 on the establishment of liquidity standards binding for banks, in case of banks with total assets over 200 million zlotys. It is defined as the ratio of the sum of primary and supplementary liquidity reserves to the value of unstable external funds. The minimum value of the ratio is 1.00.

**M4 liquidity ratio** – supervisory measure of bank’s liquidity defined by KNF Resolution No. 386/2008 on the establishment of liquidity standards binding for banks, in case of banks with total assets over 200 million zlotys. It is defined as the ratio of the sum of own funds and stable external funds to the sum of non-liquid assets and assets of limited liquidity. The minimum value of the ratio is 1.00.

**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 a given market.

**MOVE** – risk index for US Treasury bond market calculated by Merrill Lynch Bank of America on the basis of 30-day implied volatility derived from Treasury options. The share of Treasury bond options of 2-year, 5-year, 10-year and 30-year maturities in the index amounts to 20%, 20%, 40% and 20%, respectively.

**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 difference between interest income and interest expenses, divided by average assets in a given period.

**Non-interest income** – the sum of income on fees and commissions, equities, other securities and other financial instruments with a variable income amount and the gain/loss on the swap position.

**Operating costs** – the sum of bank's general expense and amortisation.
Glossary

**Overnight Index Swap (OIS)** – a derivative transaction under which the parties are obliged to exchange the difference between interest payments calculated on the basis of the floating and fixed rate (OIS rate) multiplied by an agreed nominal amount. The floating interest rate is computed by combining daily O/N interest rates over the transaction period. Net settlement (without the exchange of the OIS nominal amount) is made on the next working day after the maturity date of the transaction.

**Own funds of insurance company** – assets of insurance company, excluding assets held to cover any foreseeable liabilities, intangible assets, own shares held by insurance company and deferred income tax.

**Portfolio B** – a portfolio of assets separated in banks’ prudential reporting, comprising claims classified as available for sale or held to maturity as well as all financial instruments (including debt securities) classified as loans and receivables.

**Premiums retention ratio** – relation of premiums net of reinsurance to gross written premiums.

**Pre-tax profit margin (TFI)** – the ratio of gross financial result and total revenues.

**Price-to-book value ratio** – ratio of the price of one share of a company to accounting value of capital per share.

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

**Solvency margin** – defined by law parameter that determines the level of the insurance company’s own capital.

**Stable external funds** – category of assets specified by KNF Resolution No. 386/2008 defining liquidity standards binding for banks. Approximately it consists of funds that the bank includes in stable funding sources, in particular core deposits, own securities issued that are not included in regulatory capital, other liabilities with the original maturity over 1 year, which the bank intends to renew and other liabilities resulting from banking activities, whose plan of obtaining and renewing has been approved by the supervisory board.

**Supplementary liquidity reserve** – category of assets specified by KNF Resolution No. 386/2008 of 17 December 2008 defining liquidity standards binding for banks. Approximately it consists of receivables and other assets in the amount obtainable within 7–30 days.

**Systemic risk** – a risk of disruption in the financial system with the potential to have serious negative consequences for the internal market and the real economy (in accordance with the Regulation of European Parliament and Council (EU) No. 1092/2010 of 24 November 2010 on the EU macroprudential oversight of the financial system and establishing a European Systemic Risk Board).

**Technical profitability of the insurance** – ratio of technical result to premiums earned, net of reinsurance.

**Technical profitability on pension fund management** – ratio of technical profit from pension fund management to revenues from pension fund management.

**Technical profit/loss of PTE from the management of pension funds** – the difference between revenues from managing pension funds (inter alia, fees from premiums paid-in and remuneration for pension fund management) and the costs of pension fund management (inter alia, commissions for ZUS on premiums paid-in, the costs of acquisition, PTE general costs).
Technical provisions – the amount of insurance liabilities arising from insurance contracts.

Technical result – the difference between income from premiums as well as the so-called other technical income and claims and benefits paid, changes in insurance provisions, the costs of conducting insurance activity (inter alia, administrative and acquisition expenses), the so-called other technical costs and a part of income from investments.

Unstable external funds – category of assets specified by KNF Resolution No. 386/2008 defining liquidity standards binding for banks. Approximately it consists of funds not included in stable external funds.

Vacancy rate – relation of vacant space to the accumulated (total) supply of commercial space in a particular location, e.g. town or district.

Value at Risk – maximum loss that can be incurred in a given time horizon with a given confidence level, estimated on the basis of historical data.

Viability rating – individual rating assigned to institutions by Fitch Ratings advising of the financial condition of single entities.

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

ZKPK Index – cumulated index of changes in banks’ credit standards.
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AC</td>
<td>Auto Casco</td>
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<tr>
<td>BFG</td>
<td>Bank Guarantee Fund</td>
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<tr>
<td>BGK</td>
<td>Bank Gospodarstwa Krajowego</td>
</tr>
<tr>
<td>BGŻ</td>
<td>Bank Gospodarski Żywnościowej</td>
</tr>
<tr>
<td>BIK</td>
<td>Credit Information Bureau</td>
</tr>
<tr>
<td>BOŚ</td>
<td>Bank Ochrony Środowiska</td>
</tr>
<tr>
<td>BPS</td>
<td>Bank Polskiej Spółdzielczości</td>
</tr>
<tr>
<td>BRRD</td>
<td>Bank Recovery and Resolution Directive</td>
</tr>
<tr>
<td>BTE</td>
<td>Bank Enforcement Order</td>
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<tr>
<td>BZ WBK</td>
<td>Bank Zachodni WBK</td>
</tr>
<tr>
<td>CDS</td>
<td>Credit Default Swap</td>
</tr>
<tr>
<td>CIRS</td>
<td>Cross Currency Interest Rate Swap</td>
</tr>
<tr>
<td>CNAV</td>
<td>Constant Net Asset Value</td>
</tr>
<tr>
<td>COR</td>
<td>Combined Operating Ratio</td>
</tr>
<tr>
<td>CPI</td>
<td>Consumer Price Index</td>
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<tr>
<td>CRD</td>
<td>Capital Requirements Directive</td>
</tr>
<tr>
<td>CRR</td>
<td>Capital Requirements Regulation</td>
</tr>
<tr>
<td>DStI</td>
<td>Debt-service-to-income-ratio</td>
</tr>
<tr>
<td>EAPP</td>
<td>Expanded Asset Purchase Programme</td>
</tr>
<tr>
<td>ECB</td>
<td>European Central Bank</td>
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<tr>
<td>Ecofin</td>
<td>Economic and Financial Affairs Council</td>
</tr>
<tr>
<td>EIOPA</td>
<td>European Insurance and Occupational Pensions Authority</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>EURO STOXX 50</td>
<td>Stock index of the 50 biggest companies in the euro area by value of shares in free float</td>
</tr>
<tr>
<td>EURO STOXX BANKS</td>
<td>Stock index of the biggest banks in the euro area</td>
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<tr>
<td>BZ WBK</td>
<td>Bank Zachodni WBK</td>
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<tr>
<td>FCL</td>
<td>Flexible Credit Line</td>
</tr>
<tr>
<td>Fed</td>
<td>Federal Reserve System</td>
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<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>FI</td>
<td>Investment fund</td>
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<tr>
<td>FRA</td>
<td>Forward Rate Agreement</td>
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<tr>
<td>GDP</td>
<td>Gross domestic product</td>
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<tr>
<td>GPW</td>
<td>Warsaw Stock Exchange</td>
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<tr>
<td>GUS</td>
<td>Central Statistical Office</td>
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<tr>
<td>IFRS/IAS</td>
<td>International Financial Reporting Standards / International Accounting Standards</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>IPS</td>
<td>Institutional Protection Scheme</td>
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<tr>
<td>KDPW</td>
<td>Central Securities Depository of Poland</td>
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<tr>
<td>KNF</td>
<td>Polish Financial Supervision Authority</td>
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<tr>
<td>KWO</td>
<td>“The Exchange Rate”</td>
</tr>
<tr>
<td>LCR</td>
<td>Liquidity Coverage Ratio</td>
</tr>
<tr>
<td>LFS</td>
<td>Labour Force Survey</td>
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<tr>
<td>LIBOR</td>
<td>London Interbank Offered Rate</td>
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<tr>
<td>LTGA</td>
<td>Long Term Guarantees Technical Assessment</td>
</tr>
<tr>
<td>LtV</td>
<td>Loan-to-value</td>
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<tr>
<td>MA</td>
<td>Matching Adjustment</td>
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<tr>
<td>MCR</td>
<td>Minimum Capital Requirement</td>
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<tr>
<td>MdM</td>
<td>“Housing for the Young”</td>
</tr>
<tr>
<td>MPC</td>
<td>Monetary Policy Council</td>
</tr>
<tr>
<td>MREL</td>
<td>Minimum Requirement for own funds and Eligible Liabilities</td>
</tr>
<tr>
<td>NBP</td>
<td>Narodowy Bank Polski</td>
</tr>
<tr>
<td>NC</td>
<td>NewConnect</td>
</tr>
<tr>
<td>NEG</td>
<td>Negative rating outlook – expected downgrade</td>
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<tr>
<td>NIF</td>
<td>Non-credit financial institution</td>
</tr>
<tr>
<td>NIM</td>
<td>Net interest margin</td>
</tr>
<tr>
<td>NSFR</td>
<td>Net Stable Funding Requirement</td>
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<tr>
<td>O/N</td>
<td>Overnight</td>
</tr>
<tr>
<td>OC</td>
<td>Third party liability insurance</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>OFE</td>
<td>Open Pension Fund</td>
</tr>
<tr>
<td>OIS</td>
<td>Overnight Index Swap</td>
</tr>
<tr>
<td>POS</td>
<td>Positive rating outlook – expected upgrade</td>
</tr>
<tr>
<td>PTE</td>
<td>Pension fund management company</td>
</tr>
<tr>
<td>QIS</td>
<td>Quantitative Impact Study</td>
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<tr>
<td>RNS</td>
<td>“Family on their Own”</td>
</tr>
<tr>
<td>ROA</td>
<td>Return on Assets</td>
</tr>
<tr>
<td>ROE</td>
<td>Return on Equity</td>
</tr>
<tr>
<td>S&amp;P</td>
<td>Standard &amp; Poor’s</td>
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### Abbreviations

<table>
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<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>S&amp;P 500</td>
<td>Stock index of 500 companies listed on NYSE or NASDAQ with the highest value of shares in free float</td>
</tr>
<tr>
<td>SACP</td>
<td>Stand-Alone Credit Profile</td>
</tr>
<tr>
<td>SCR</td>
<td>Solvency Capital Requirement</td>
</tr>
<tr>
<td>SKOK</td>
<td>Credit unions</td>
</tr>
<tr>
<td>SME</td>
<td>Small and medium-sized enterprise</td>
</tr>
<tr>
<td>STA</td>
<td>Stable rating outlook</td>
</tr>
<tr>
<td>TCR</td>
<td>Total Capital Ratio</td>
</tr>
<tr>
<td>TFI</td>
<td>Investment fund management company</td>
</tr>
<tr>
<td>TLTRO</td>
<td>Targeted Longer-Term Refinancing Operation</td>
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<tr>
<td>UKNF</td>
<td>Office of the Polish Financial Supervision Authority</td>
</tr>
<tr>
<td>VA</td>
<td>Volatility Adjustment</td>
</tr>
<tr>
<td>VaR</td>
<td>Value at Risk</td>
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<tr>
<td>VIX</td>
<td>Chicago Board Options Exchange Market Volatility Index</td>
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<tr>
<td>WIBOR</td>
<td>Warsaw Interbank Offered Rate</td>
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<tr>
<td>WIG</td>
<td>Main index of the Warsaw Stock Exchange</td>
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<tr>
<td>WIG20</td>
<td>Warsaw Stock Exchange index of 20 largest companies by the value of shares in free float</td>
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<tr>
<td>WIG–Banki</td>
<td>Warsaw Stock Exchange index of banks</td>
</tr>
<tr>
<td>WIG–Energia</td>
<td>Warsaw Stock Exchange index of energy industry</td>
</tr>
<tr>
<td>WSE</td>
<td>Warsaw Stock Exchange</td>
</tr>
<tr>
<td>ZBP</td>
<td>Polish Bank Association</td>
</tr>
<tr>
<td>ZU</td>
<td>Insurance company</td>
</tr>
<tr>
<td>ZUS</td>
<td>Social Insurance Institution</td>
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