

NBP

Narodowy Bank Polski

July 2015

Financial Stability Report



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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 stability of the financial system is a necessary condition for ensuring sustainable economic growth.

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 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 the NBP due to its statutory tasks to contribute to the stability of the domestic financial system and to establish the necessary conditions for the development of the banking system (article 3 paragraph 2 items 6 and 6a of the Law on NBP). 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 the NBP plays an important role and which, together with the monetary policy, contribute to maintaining sustainable economic growth. Another reason for the involvement of the 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 Law 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 analysis conducted in this *Report* is based on data available up to 31 May 2015 (cut-off date). Some high-frequency data, especially relating to financial markets, and other particularly significant information go beyond the adopted cut-off date. The *Report* was approved by the Management Board of the Narodowy Bank Polski at a meeting on 23 July 2015.

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Executive summary

In the period under analysis,¹ Poland's financial system was functioning in a stable manner.

The situation in the economic environment of the Polish financial sector has improved since the publication of the previous Report. The recovery in the global economy in the last quarter of 2014 consolidated despite various differences between specific countries and regions. GDP accelerated noticeably in the euro zone – the most important area from Poland's point of view. Positive trends in euro area countries translated into a pick-up in economic activity in Central and Eastern Europe.

The Polish economy was growing at a stable rate. The lack of significant imbalances is the positive factor behind domestic financial system stability. In the first quarter of 2015, GDP growth rate accelerated, both in quarterly and annual terms. Deflationary pressures are receding steadily, albeit at a rate slower than previously expected. NBP expects economic growth to stabilise at around 3.5% in the nearest three years.

As in the period covered by the previous Report, economic growth was mainly driven by domestic demand, investment and consumption. Favourable trends in the labour market continued, especially rising employment and wages. The enterprise sec-

tor remained in good financial condition, and industries exhibiting substantially-lower-than-average financial condition did not have a big share in banks' loan portfolio. The forward-looking indicators of the enterprise sector indicate that default risk for 2015 is not high. The debt of households and enterprises remained moderate.

With regard to the financial condition of the public sector, the reduction of the budget deficit continued, which resulted in the abrogation of the excessive deficit procedure with respect to Poland. The sustainability of the excessive deficit reduction is confirmed both by projections of the European Commission and the Polish Ministry of Finance.

Poland's external equilibrium has also improved. In the first quarter of 2015, Poland reported a current account surplus of 2.2 billion euros, which was the first time a surplus was recorded since 1995 and was the result of both cyclical factors and structural changes in the Polish economy.

¹The *Report* focuses on analysing the information from the period between the cut-off date of the previous edition (30 November 2014) and the cut-off date of the current edition (31 May 2015). Some high-frequency data, especially those relating to financial markets, and other particularly significant information go beyond the adopted cut-off date.

Table 1. Synthetic assessment of domestic financial system stability

Area of assessment	Change since the previous edition of the Report
Outlook for environment of Polish economy	▲
Banks' current financial standing	▶
Banks' shock absorption capacity	▶
Credit unions current financial standing	▼
Non-credit financial institutions current financial standing	▶
Synthetic assessment of outlook for domestic financial system stability	▶

Notes: ▲▲ – significant improvement, ▲ – improvement, ▶ – no change, ▼ – deterioration, ▼▼ – significant deterioration. The outlook for the Polish economic environment takes into account both the most likely developments and the risk to the materialisation of a significantly more unfavourable scenario. In this table, non-credit financial institutions include institutions discussed in Chapter 4.
Source: NBP expert assessment.

The prices of financial instruments in the domestic market were largely affected by developments in international markets. In the period analysed, volatility on the global FX market and government bond market grew, and was driven by the release of euro area and US macroeconomic data and also measures taken by major central banks. The ECB decision of 22 January 2015 to announce an expanded asset purchase programme that will include the purchase of bonds issued by euro area central governments in the secondary market was the key event for European financial markets. The announcement resulted in an appreciation of the US dollar against the euro. On March 13, the EUR/USD exchange rate reached a 12-year high.

The increased volatility in the global financial markets had a moderate impact on EUR/PLN exchange rate movements. Following the decision of the Swiss National Bank (SNB) to reintroduce a floating exchange rate of the franc and the abrupt depreciation of the domestic currency against the Swiss franc, the zloty appreciated gradually. For the euro, this trend changed amidst the signs of an improvement of the macroeconomic situation of euro area countries. The currencies of the emerging markets, including Poland, depreciated on the back of concerns over a possible declaration of insolvency by Greece.

The domestic money market functioned in a stable manner, although liquidity in the segment of deposits transactions was lower than in the second half of 2014. The perceived credit risk perceived of banks remained low.

The long-term downward trend of yields of Polish bonds (since February 2014) came to an end towards the end of January 2015. Yields reached their all-time lows, then bond yields began to rise steadily and the yield curve steepened. The highly diversified investor structure in the domestic government bond market, which is a factor strengthening the resilience of the market to global turmoil, has not changed substantially.

No imbalances were seen on the residential real estate market. Transaction prices of dwellings in the primary market posted a slight increase. At the same time, a rise in supply was seen in this segment.

The surplus of supply over demand in the commercial real estate market increased. International investor activity remained robust, especially in the office real estate market. This situation does not generate risk to domestic financial stability due to the limited role of domestic banks in the funding of this segment.

Due to the nature and structure of the Polish finan-

cial 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.

The banking sector was in a good condition. The capital position of the banking sector remained good. The Polish banking sector exhibits low leverage, which confirms its good capital position. The results of simulations and macro stress tests corroborate the sector's high resilience to a potential deterioration of operating conditions and negative shocks.

In the period under analysis, the earnings and profitability ratios of the banking sector declined. The pace at which profits were falling and losses were rising was faster than would result from seasonality seen in the profit and loss account. 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. In most banks, the interest on assets responds faster to changes in market interest rates than the interest on liabilities. As a result, a drop of market interest rates leads to a fall in banks' net interest income. In the environment of low interest rates and the interest rate on some liabilities being close to zero, the possibility of making further adjustments of interest expense to lower market interest rates is limited. Therefore, banks tried to partially neutralise the effect by raising their non-interest margin and increasing leverage slightly. The impact of operational costs and costs of credit risk materialization remained stable.

The profitability of the banking sector, measured by return on assets, may be expected to fall in the future. This may be driven by the following: a fall in net interest margin, a further fall of non-interest margin (e.g. the statutory reduction of the inter-

change fee, a fall in revenue from the distribution of insurance policies), and a rise 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 cost and the good condition of borrowers may help improve the sector's profitability. Risk to the sector's profitability may stem from intensified competition for deposits of the non-financial sector, which results in raising the interest and enhancing the role of deposits with negative interest spreads. It should be noted, however, that the level of interest rates in Poland as compared to that of European Union countries is at a relatively high level, which gives more room for achieving positive deposits spreads.

The growth rate of lending to the non-financial sector has been close to the nominal growth rate of GDP for around three years, which should not give rise to a growth of imbalances and is safe from the point of view of financial stability. Such an assessment is confirmed by the analysis of forward-looking indicators, used to consider the risk of a bank crisis triggered by excessive lending. The growth rate of the main credit categories – housing, consumer and corporate loans — has not changed substantially since the previous edition of the Report.

The lending growth rate may be expected to rise moderately in the near future, which will be supported by low interest rates. Lower risk weights and higher profitability may be a factor behind faster growth of loans to small and medium-sized enterprises (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 will most likely be maintained. Favourable changes can still be observed in the loan portfolio structure; primarily the value of foreign currency housing loans (expressed in the currency of the loan) has been diminishing.

In recent quarters, the ratio of impaired loans for the non-financial sector has stabilised, and the volume of impaired loans has risen slightly. However, the ratio of loan losses to net loans, which illustrates the burden on the working part of the portfolio, did not change substantially. Quality trends for loans to households varied: the quality of housing loans was worsening slowly, mainly due to the ageing of the portfolio, while in the case of the portfolio of consumer loans – it was improving. The analysis of income and assets of households shows that the percentage of indebted households, which are characterised by both a high share of income spent on debt servicing as well as low buffers of liquid assets and a high debt to assets ratio, is low. After a fall in the past, impaired corporate loan ratios and impaired corporate loans increased. This concerned, in particular, large enterprises, including coal mining companies.

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 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 long period in which the share of funding provided to banks by foreign financial institutions was falling, this ratio in-

creased; however, this only applied to a small group of banks, and the funding was long-term. 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. Individual cooperative banks had problems in complying with the standards. Implementation of the provisions of the CRDIV/CRR package may create similar challenges to the associating banks of the cooperative banks sector.

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) have resulted in a reduction of the number of credit unions to 50. 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. The losses posted by the credit unions in the first quarter of 2015 led to a decrease in their regulatory capital, which translated into a further decline in their capital adequacy ratios. The trends regarding the liquidity of credit unions are not positive either, which may, inter alia, be related to the materialisation of reputational risk on the back of a public debate on the functioning of credit unions.

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 Banking Guarantee Fund, BFG), which reduces, *ce-*

teris paribus, the amount of funds that can be used in the event of problems of the banking sector, which is key to financial stability. Therefore, the reduction of BFG resources may produce systemic results.

In the period analysed, the sector of non-credit financial institutions (NIFs) was developing faster than the banking sector, mainly due to a net inflow of funds to investment funds. The impact of NIFs — insurance companies, pension fund management companies, open pension funds, investment fund management companies and investment funds — on the banking sector through the ownership, credit and funding channels was limited. Also, the scope of ties of the insurance sector with the banking sector has been reduced by limiting the scale of distribution of insurance-wrapped deposits following the KNF action.

The NIF sector may generate systemic risk if particular types of NIF cease to provide specific financial services, which may take place if their financial situation is jeopardised. However, the financial condition of investment fund management companies and pension companies in 2014 was good and did not pose a threat to maintaining the continuity of the sector's financial services. Moreover, should any problems arise in the case of individual pension fund management companies or investment fund management companies, fund management can be taken over by another entity. The domestic insurance sector was also stable in 2014, and its financial condition did not pose a risk, although its financial result in non-life insurance deteriorated slightly. Risk may stem from excessive competition in the car insurance segment. Life insurance reported a rise in both technical profit and earnings. European stress tests have shown that the two segments of Poland's insurance sector are highly resilient.

Given the traditional character of instruments traded on Poland's financial markets (e.g. lack of

instruments created through securitisation), where NIF investments are concentrated, and the specific nature of services offered, non-credit financial institutions did not generate risk to financial stability. In the case of Poland's insurance sector, its traditional activities do not generate systemic risk. Also, the insurance sector did not offer to any significant extent financial instruments 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 potential impact of investment funds and pension funds on financial stability is that of influencing the prices of financial instruments. This influence may be particularly significant in the event of a sharp decline in the liquidity of markets. As clients of investment funds may withdraw funds, their behaviour in crisis situations may prompt a reduction of funds' assets and have an impact on the supply of instruments and their prices. In the experience of the Polish financial system so far, this mechanism is yet to play a significant role.

Overall, Poland's financial system exhibits high resilience. Nevertheless, a number of factors and scenarios that may generate risk to its stability can be identified.

Risk factors having a cyclical character mostly concern developments in the environment of the Polish economy, primarily in countries that are Poland's main trading partners. In this area, developments in Greece remain a substantial uncertainty factor. Except for the scenario of a serious geopolitical conflict, the materialization of the pessimistic scenario in the euro zone combined with a fall in financial assets' prices and strong rise in risk aversion on developing markets is the biggest threat for the stability of the

national financial system.

Maintaining the current level of historically low interest rates should not create 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 they will not create a major risk to the stability of the sector.

Although the materialisation of the risk factors discussed above does not create systemic risk, it may, however, pose a major challenge for some financial institutions. However, existing uncertainty about global developments 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. 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.

Narodowy Bank Polski presents a number of recommendations aimed at strengthening the stability of the Polish financial sector and financial safety net.

These recommendations are discussed in the last chapter and they concern the following:

- passing legislation creating a macroprudential authority,
- passing legislation introducing the mechanism of recovery and resolution for, inter alia, banks and credit unions,
- continuation of the restructuring of the credit unions sector,
- tighter integration of the cooperative banking sector and the implementation of institutional protective schemes,
- necessity of maintenance of high capital levels by banks,
- avoiding public measures that might result in a substantial reduction of the resilience of the banking sector to shocks,
- increasing economic incentives for banks so that they take autonomous measures aimed at reducing their foreign currency housing loan portfolios,
- banks conducting a lending policy assuring that borrowers who take long-term loans with floating interest rate have income buffers high enough in the case of an increase of interest rates,
- limitation of risk concerning banks' funding structure, including concentration,
- particularly cautious lending policy of banks in the segment of lending to the commercial real estate market,
- acting towards the mitigation of systemic risk which might be caused by the activity of CCPs, particularly towards the creation of a recovery and resolution mechanism for these entities,

Chapter 1.

Financial institutions' economic environment

1.1. Macroeconomic developments

Since the previous edition of the Report, the global economy saw persistent recovery accompanied by continued diverging trends across countries and regions. A marked pick-up in economic growth was seen in the euro area, whereas in the United States growth declined in the first quarter of 2015, partly as a result of temporary factors (severe winter, strikes at ports) but also on account of structural reasons (falling shale oil extraction and declining investment in this sector) and a strong appreciation of the US dollar. Considerable differences in the business climate in the major emerging economies continued, with China posting a robust albeit slackening growth, India developing rapidly and Brazil and Russia remaining in recession.

Gradual improvement was observed in the main region in the direct environment of the Polish economy, i.e. in the euro area (a 0.4% q/q GDP growth in the first quarter of 2015 as compared to 0.2% in the third quarter of 2014 and to 0.4% q/q

in the fourth quarter of 2014). The improvement was mainly supported by low crude oil prices, expansionary monetary policy of the ECB (including the quantitative easing) resulting in the depreciation of the euro, and by neutral fiscal policy. Growth in the euro area picked up on the back of higher domestic demand, including, primarily, private consumption growth amidst certain signs of a rebound in investment. Acceleration of GDP growth was observed in large euro area countries, which were mired in recession in previous quarters (Italy), posted sluggish growth (France) or were on the path of difficult structural reforms (Spain). Economic growth in Germany in the first quarter of 2015 declined markedly and stood at 0.3% q/q against 0.7% q/q in the previous quarter. Economic growth was fuelled by domestic demand, including higher gross capital formation amidst slower export growth.

Positive trends in the euro area contributed to the recovery in Central and Eastern European

countries, with the exception of the Baltic States. Growth in Central and Eastern Europe was driven by domestic demand, in particular by private consumption accompanied by growing role of investment in some countries (e.g. the Czech Republic, Poland). The countries of the region saw a markedly higher export growth in the first quarter of 2015.

The latest forecasts (including those of the European Commission and the OECD) indicate accelerating growth in the developed economies and in Central and Eastern Europe in the nearest quarters, although in some major economies (e.g. the US) this will mean a downward revision of the previous forecasts. The GDP decline in China, continuation of currently observed growth in India and gradual recovery in Brazil and Russia are expected.

In the Polish economy positive trends observed in the previous quarter further consolidated. In the first quarter of 2015 GDP increased by 3.5% sa in real terms, which means a 1.0% quarter-on-quarter growth against 0.8% in the previous quarter. GDP data for the first quarter of 2015 were higher than market expectations and Central Statistical Office (GUS) preliminary estimates.

Similarly to the previous quarter, the main driver of growth was domestic demand, both investment and consumption. Good exports performance, accompanied by a moderate rise in imports, combined to a positive impact of foreign trade on the GDP growth (1.1 percentage point). Domestic demand growth, in year-on-year terms, was markedly lower than in the previous quarter (2.6% as compared to 5.0% in the fourth quarter of 2014), on account of a considerable decline in inventory and low public consumption growth. A strong growth in household consumption was maintained (3.1% as compared to 3.0% in the fourth quarter of 2014). Investment growth rose considerably (up to 11.4% versus 8.6% in the previous quarter).

Inflation in Poland, measured by the annual consumer price index, remained negative for the tenth consecutive month (-1.1% y/y in April 2014). It stood at 0.4 percentage points above the level noted in March, indicating gradually declining deflationary pressure in the Polish economy. The reasons behind such development include energy and food prices, low inflation abroad, in particular, in the euro area, affecting domestic inflation through the tradable goods channel. The absence of demand pressure in the domestic economy is confirmed by low core inflation (inflation net of food and energy prices), which stood at 0.4% y/y in April 2015 and was slowly rising (0.2% y/y in March 2015). The growth rate of industrial production prices continued to be negative and declined, which means that the cost factors still did not exert an upward pressure on prices. Inflation expectations of corporations and consumers were at historically low levels (close to zero).

Economic recovery supported favourable trends in the labour market. According to the LFS data, the number of the employed in the economy continued to rise dynamically in the first quarter (1.7% y/y as compared to 1.9% y/y in the fourth quarter of 2014). A particularly rapid rise in employment was observed in industry (3.5% y/y and 1.3% q/q sa), especially in exporting enterprises. In other sectors, employment grew at a moderate pace. The LFS unemployment rate declined evidently (down to 7.7% sa from 8.3% in the fourth quarter sa), continuing the trend observed for several quarters. The monthly unemployment rate registered on a month-on-month basis posted a regular, although slower decline (10.9% in April 2015 as compared to 11.0% in March).

The above trends translated into a marked rise in wages. In the first quarter of 2015, the wage growth in the economy stood at 4.1% y/y, which implies

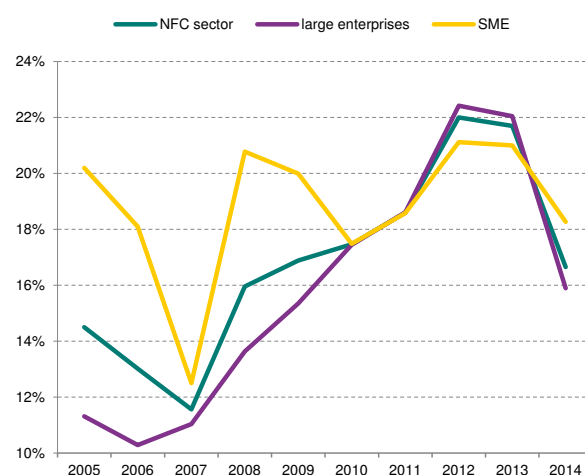
a considerable acceleration comparing to previous quarters. Wages have been growing rapidly not only in the corporate sector but also in other sectors such as services, the public sector and the financial sector. According to the NBP latest report², the upward trend in employment and wages will be continued, exerting a positive impact on consumer demand growth in the nearest future, as expected in the last macroeconomic projection of NBP.

The household debt to disposable income and to GDP ratios remained largely unchanged and at a moderate level as compared to EU countries. The savings rate in the fourth quarter of 2014 stood at 2.1% sa, i.e. it ran at the level close to that observed in the last several quarters. On the other hand, the rise in the voluntary savings rate to the level of 1.5% sa in the fourth quarter of 2014, as compared to 0.5% in the first quarter of 2014, is a favourable development.

The situation in the non-financial corporations sector (NFC) was good and stable. In the fourth quarter of 2014 the growth rate of financial result on sales continued to be positive, the return on sales increased by approximately 0.1 percentage point y/y, and the percentage of profitable companies rose from 72.6% (sa) to 74.7% (sa). All liquidity indicators continued an upward trend, with a majority of them reaching historical highs. The growth rate of financial result on sales was on the rise and the return on sales was improving (by 0.3 percentage points y/y). The percentage of profitable companies reached the record high and stood at 76.4% (sa). Investment in the corporate sector continued a strong upward

trend (growth rate of gross fixed capital formation in the real terms was 15.4% y/y in the first quarter of 2015 as compared to 20.5%, y/y in the fourth quarter of 2014), with the fastest growth recorded in exporting enterprises.³ Enterprises are optimistic about the prospects of further high investment growth, close to the currently observed one, which concerns, in particular, export-oriented industrial enterprises (with the exception of enterprises trading with Russia or Ukraine). The conducted analyses indicate that some caution is advised when forecasting such a good situation in the corporate sector because often several large enterprises exercise a decisive influence on investment and gross profit of the whole sector.

Figure 1.1. Share of loans of corporations potentially at risk in total loans of the whole NFC sector in years 2005-2014



Source: NBP calculations based on results of bankruptcy prediction models (data from GUS forms F01).

Good condition of the whole non-financial corporate sector, including the liquidity position, points to its high debt servicing capability. In 2014, enterprises with a safe interest coverage ratio (ICR)⁴, mea-

²See "Informacja o kondycji sektora przedsiębiorstw ze szczególnym uwzględnieniem stanu koniunktury w I kwartale 2015 r. oraz prognoz koniunktury na II kwartał 2015 r." ("Information on the condition of the enterprise sector, including the economic climate in 2015 Q1 and forecasts for 2015 Q2"), NBP, No 02/15 (April 2015).

³See "Informacja o kondycji sektora przedsiębiorstw ze szczególnym uwzględnieniem stanu koniunktury w I kwartale 2015 r. oraz prognoz koniunktury na II kwartał 2015 r." ("Information on the condition of the enterprise sector, including the economic climate in 2015 Q1 and forecasts for 2015 Q2"), NBP, No 02/15 (April 2015).

⁴This ratio is defined as the ratio of EBIT (pre-tax earnings + interest expenses – interest income) to interest expenses. The lower its value, the higher the enterprise interest repayment burden. International comparability of this ratio is limited because of differences in EBIT calculation methods.

asuring the ability to service interest debt with current income (EBIT), held a little less than a 70% share in total bank debt. This share has slightly increased since 2013, after declining gradually since 2009.

The risk of default in the corporate sector, measured with bankruptcy prediction models⁵ for 2015 is not significant. In 2005-2014, changes of default risk in the corporate sector largely followed fluctuations in business conditions (see Figure 1.1)⁶. Yet, it seems that small and medium-sized enterprises are somewhat more vulnerable to shocks in the economy than the large ones.

In order to assess the impact of the situation of enterprises on the credit risk it is important to identify “systemically important” sections, namely those whose share in the whole sector’s credit is the highest, and whose credit is largely concentrated in several enterprises.⁷ These sections are currently in a relatively sound condition. In “systemically important” industries, the default risk ratios should not be expected to significantly deteriorate throughout 2015.

The budget deficit will continue to be reduced in the analysed period. The reduction in the general government deficit in 2014 to 3.2% of GDP (by 0.8 percentage points y/y) resulted in the European Commission issuing a recommendation to lift the

excessive deficit procedure against Poland. Sustainability of the excessive deficit reduction is evidenced by both the forecast of the European Commission and the forecast of the Ministry of Finance presented in the Convergence Programme adopted in April 2015.⁸ The stabilizing expenditure rule should further act to reduce the public finance deficit.

In the first quarter of 2015, Poland posted a PLN 6,9 billion surplus in the current account of the balance of payments, for the first time since 2004. The trade surplus was driven by both business conditions (recovery in the euro area and in the Central and Eastern European countries) as well as structural factors. Consequently, a further improvement in the foreign trade balance may be expected. Poland’s gross foreign debt at the end of the first quarter of 2015 amounted to PLN 1252,6 billion, i.e. a 8.1% rise in year-on-year terms. Growth was seen in foreign liabilities of the government sector, and, to a lesser extent, in foreign liabilities of the banking, corporate and household sectors. The foreign debt to GDP ratio remained at a stable level of approximately 73%.

As compared to the previous edition of the Report, Poland’s economic growth outlook has improved. According to the NBP’s central projection path presented in the March „Inflation Report”, the average GDP growth in 2015-2017 will be stable, amounting

⁵These models allow to assess the risk of the corporate bankruptcy/insolvency in a 12-month period, which means that the results obtained using 2014 data are a prediction for 2015. The analyses relied on the discriminant analysis model G INE PAN (E. Mączyńska, „Systemy wczesnego ostrzegania”, Nowe Życie Gospodarcze, no. 12/2004), and the logit model of J. Kaczmarek et al. (J. Kaczmarek, „Branżowa analiza zagrożenia przedsiębiorstw upadłością”, Kwartalnik Nauk o Przedsiębiorstwie, nr 2/2012, oraz K. Fijorek, J. Kaczmarek, K. Kolegowiec, P. Krzemiński, „Raport z oceny stopnia zagrożenia przedsiębiorstw upadłością – komponent mikroekonomiczny”, Kraków, 2011). Enterprises were regarded as being at risk if such was suggested by both models.

⁶The share of loans of enterprises at risk in the sector’s total loans, calculated on the basis of bankruptcy prediction models, may differ from the share of non-performing loans reported in the banking statistics (NPL). These models are used to assess the general condition of enterprises and, in this context, their default risk. For many enterprises timely repayment of bank debt is a priority. Therefore, bankrupt enterprises may continue to timely repay their loans. Moreover, the results of bankruptcy prediction models are forward-looking, which means that they are used to assess the situation in a 12-month perspective and not at the particular moment in time.

⁷In 2014 they included sections dealing with Electricity, gas and steam supply, Telecommunications and postal services as well as Transportation services. One should also remember that apart from “systemically important” sections, “sectionally important” enterprises may exist. Such enterprises are defined as possibly having a considerable impact on credit risk associated with a given section. One should bear in mind that certain areas of activities in the Polish non-financial corporations sector are highly concentrated at section level. Currently, no signs of difficulties in the group of “sectionally important” are reported.

⁸“Multiannual Financial Plan of the State 2015-2018 containing the Convergence Programme. The 2015 Update”, the Ministry of Finance, Warsaw, April 2015.

to approximately 3.5%. The May 2015 forecasts of the European Commission are consistent with the above projection.⁹ The internal equilibrium indicators (the narrowing output gap; gradually declining unemployment rate; reduced fiscal deficit structurally stabilized by the expenditure rule, preventing against increase in public debt) and external equilibrium indicators (a minor current account deficit with a safe financing structure) should further improve.

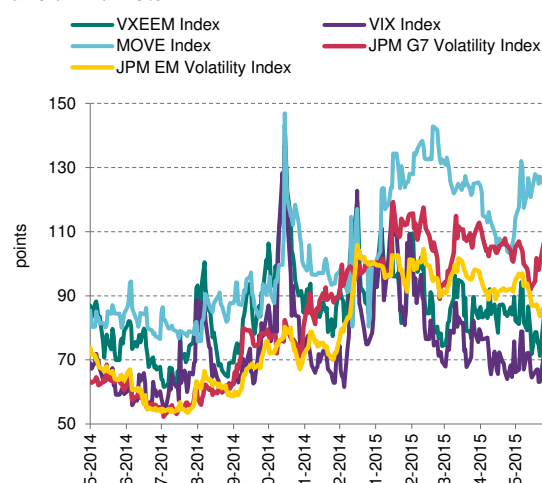
The main risk to the positive macroeconomic scenario unfolding in Poland is the euro area resuming a downward growth or stagnation. It is also difficult to assess the scale of the negative impact, both direct and indirect, of Greece's potential exit from the euro area on the economic growth and macroeconomic equilibrium in Poland. Prolonged uncertainty concerning further development of situation in Greece may increase risk aversion of financial markets participants as well as of entrepreneurs. A substantial risk may stem from the geopolitical situation should the Russian-Ukrainian conflict aggravate and persist, and should the resulting economic sanctions imposed on Russia be extended. Another risk factor may also be the delivery of certain election promises (in particular concerning tax policy) increasing sovereign risk and curbing investment. The improving internal and external equilibrium in the Polish economy, seen in recent quarters and expected in the coming years, will increase the resilience of the Polish economy to negative shocks originating in the global economy and will positively influence conditions in which the domestic financial sector operates.

1.2. Developments in financial markets

1.2.1. Global markets

In the analysed period, price volatility in the global foreign exchange market and in the government bond market increased (see Figure 1.3). Foreign exchange rates and securities prices were chiefly affected by the release of macroeconomic data for the euro area and the United States as well as the measures taken by major central banks.

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



Note: Data normalised to 100 points as of 31 December 2014. Indices refer to: VXEEM and VIX – equity markets, JPM G7 and JPM EM – foreign exchange markets, MOVE – bond markets. Source: Bloomberg.

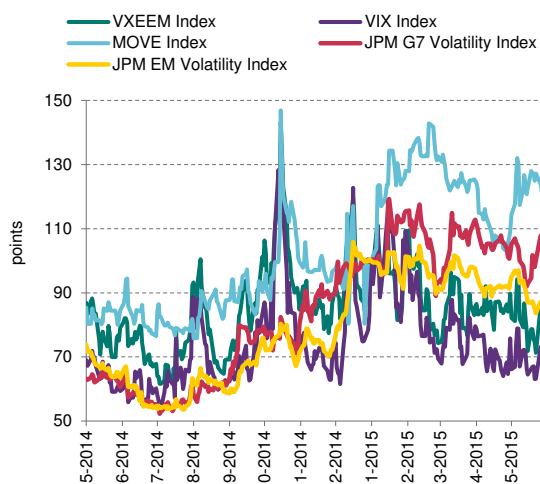
Financial markets were considerably affected by the uncertainty as to the start of the Fed's interest rate hikes. It was driven by the publication of different-than-expected data on the US economy.¹⁰ The waning prospect of monetary policy tightening by the Fed translated into rising stock indices of the US stock markets which reached new historical highs (see Figure 1.4), and supported search for yield and

⁹European Economic Forecast Spring 2015, European Commission, May 2015.

¹⁰The IMF revised downwards the forecast rate of economic growth for the United States for 2015 to 3.1% from 3.6%, at the same revising upwards the forecasts for the euro area to 1.5% from 1.2%,"World Economic Outlook", IMF, April 2015.

the related exposure of global investors to the government bond markets of emerging economies.

Figure 1.3. Volatility indices for selected segments of global financial markets

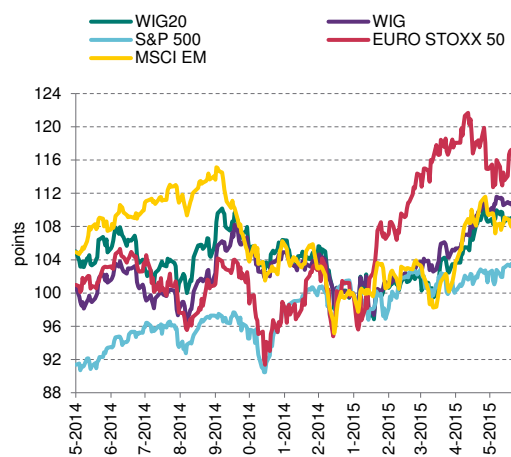


Note: Data normalised to 100 points as of 31 December 2014. Indices refer to: VXEEM and VIX – equity markets, JPM G7 and JPM EM – foreign exchange markets, MOVE – bond markets. Source: Bloomberg.

The announcement and the launch of the ECB's expanded asset purchase programme on 22 January and 9 March 2015, respectively, had a considerable impact on European financial markets. This programme involves the purchase of government bonds of the euro area countries in the secondary market (PSPP).¹¹ The scale and implementation of the programme were positively received by market participants, which was reflected in a strong rise of European stock market indices observed until the beginning of April 2015 (see Figure 1.4) and declining yields on government bonds of euro area countries (with the exception of Greece) to historically low levels, e.g. yields on 5-year German government bonds fell to -0.15% (see Figure 1.5). The ECB measures also boosted demand for government bonds of non-euro area countries with higher interest rates. Very low long-term interest rates persisting in the euro

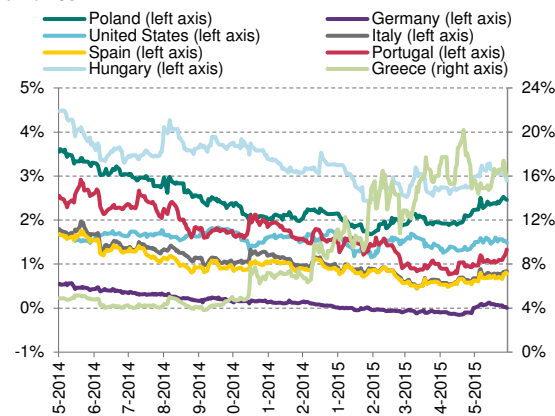
area raised concerns about certain financial instruments being overvalued¹² and posed a challenge for investors guaranteeing a specified return on investment, in particular, for some European life insurance companies (see Box 5).

Figure 1.4. Selected stock market indices



Note: Data normalised to 100 points as of 31 December 2014. Source: Thomson Reuters.

Figure 1.5. Yields on 5-year government bonds of selected countries



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

In mid-February and in mid-April 2015, the default

¹¹ Expanded Asset Purchase Programme (EAPP) consists of secondary market purchases of the euro area countries' bonds (Public Sector Purchase Programme – PSPP), as well as launched in 2014 Covered Bond Purchase Programme (CBPP3) and the Asset-Backed Securities Purchase Programme (ABSPP).

¹² "Global Financial Stability Report – Navigating Monetary Policy Challenge and Managing Risks", IMF, April 2015, p. ix

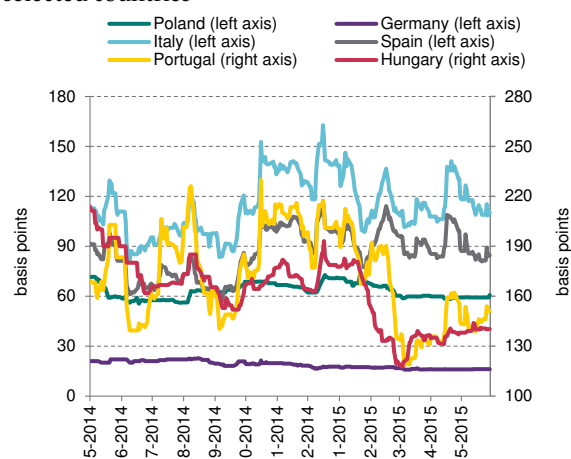
risk of certain euro area countries temporarily increased, which was reflected in CDS premia. It was associated with the protracted negotiations of the terms of continuation of aid programmes for Greece provided by the European Commission, the IMF and the ECB, and periodically mounting concerns about the possible consequences of Greece's potential insolvency and exit from the euro area (see Figure 1.6).

In late April and early May 2015, yields on bonds of euro area countries picked up markedly and price volatility increased (see Figure 1.5). The significant sales of those instruments and the steepening of the yield curve were triggered by an upward revision in inflation expectations after the publication of better-than-forecast macroeconomic data for the euro area. Moreover, some investors were increasingly aware that record low yields do not accurately reflect the financial condition of issuers and the investment risk. This made them limit the scale of speculation on further increases in government securities' prices. Many investors started to realise profits. The effects of their actions were enhanced by limited liquidity of the secondary market.

Volatility indices of the FX market markedly increased, and the euro weakened against world's major currencies. The SNB decision of 15 January 2015 to abandon the minimum EUR/CHF exchange rate at 1.2 led to a strong appreciation of the Swiss franc against the euro (in the subsequent months, the EUR/CHF exchange rate stood at around 1.05) and other currencies. This urged certain central banks to intervene in the FX market. These factors translated into increased volatility of foreign exchange rates. At the same time, the divergence between the Fed's and the ECB's monetary policies led to a further appreciation of the US dollar against the euro. On 13 March, the EUR/USD exchange rate

reached its 12-year record low (below 1.05). In subsequent months, the euro appreciated against the US dollar, inter alia, as a result of the postponed expectations of interest rate hikes by the Fed, oil prices increases and the improved outlook for economic growth in the euro area.

Figure 1.6. CDS premia on 5-year government bonds of selected countries



Note: Data pertain to CDS premia on bonds denominated in the euro.
Source: Thomson Reuters.

The analysed trends and developments in financial markets may point to the mounting market risk in the global financial system. Moreover, they show the consequences of unfavourable structural changes that constrain market liquidity, inter alia, declining activity of market makers, and imply lower market resilience, e.g. to negative signs from the real economy or to geopolitical developments.

1.2.2. Money market

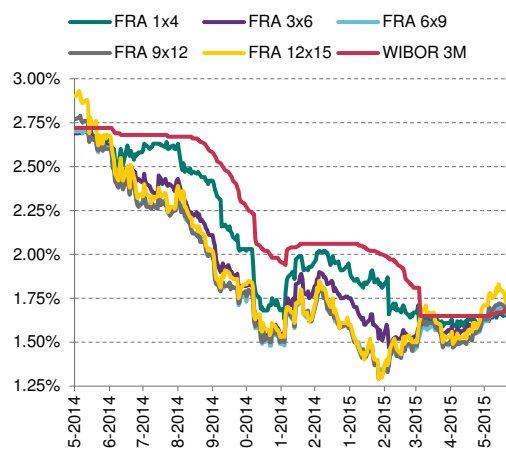
During its meeting on 3-4 March 2015, the MPC lowered the NBP interest rates to historically low levels (reference rate – 1.50%), announcing at the same time the end of the monetary policy easing cycle.¹³ This was preceded by the rising expectations

¹³Information from the meeting of the Monetary Policy Council held on 3-4 March 2015, http://www.nbp.pl/en/aktualnosci/2015/mpc_2015_03_04.pdf

(in January) of NBP interest rate cuts, reflected in falling FRA rates and WIBOR reference rates (see Figure 1.7). Taking its decision, the MPC took into account an increase in risk of inflation remaining below the target in the medium term and the condition in the international environment, in particular, the ECB's announcement to launch the expanded asset purchase programme. The measures taken by the MPC dampened the expectations of further cuts in NBP interest rates. Since the end of April, after the publication of better-than-forecast macroeconomic data on Poland (inter alia, data on retail sales and industrial output), some market participants began to expect NBP interest rate hikes as soon as the first half of 2016.

The functioning of the domestic money market was stable, with liquidity in the deposit transaction market slightly lower than in the second half of 2014. The WIBOR 3M/OIS 3M spread remained in the range of 15-40 basis points, reflecting the low perception of credit risk in the domestic unsecured interbank deposits market. The average daily net turnover in this market in the first half of 2015 amounted to around 4 billion zlotys. The aforementioned low perception of credit risk and expectations, evolving in the first half of the year, regarding NBP interest rates urged some domestic banks to increase their activity in the market for unsecured deposits with original maturities of 1M and more. These operations, however, did not cause significant changes in the term structure of this market where O/N deposits continued to prevail (approx. 85% of the value of all transactions).

Figure 1.7. Current and expected WIBOR rates



Source: Thomson Reuters.

The cost of hedging foreign exchange positions with swap transactions remained low. The CIRS basis market, apart from temporary turmoil related to the SNB decision, saw the premia declining to historically low levels. As a result of a very low interest rates on the euro in the money market and a strong demand for the zloty, since mid-February the mentioned premia were for the first time negative in relation to the EURIBOR reference rate.¹⁴

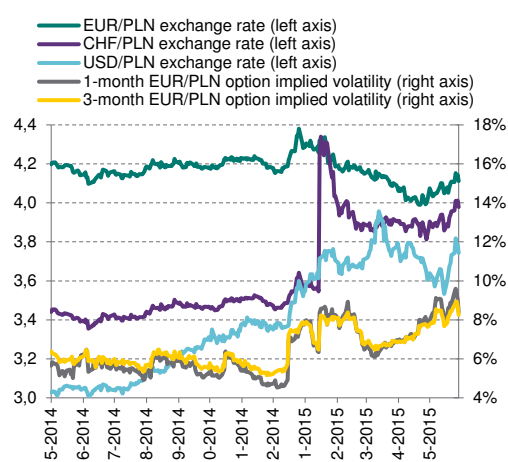
1.2.3. Foreign exchange market

Rising volatility in global financial markets translated into moderate changes in the EUR/PLN exchange rate. Following a temporary increase of the EUR/PLN exchange rate and its volatility, observed in January 2015 in the aftermath of the SNB decision, the zloty gradually appreciated below the level of 4 zlotys per euro in the second half of April (see Figure 1.8). The zloty appreciation was driven by good macroeconomic data and measures taken by major central banks. This trend reversed with the

¹⁴As a result, domestic banks which reduce market risk through operations in the EUR/PLN CIRS basis market, limiting the mismatch between assets and liabilities, received from foreign banks interest payments resulting from a negative, in the analysed period, reference rate for interest rates in euro, increased by the absolute margin and payments calculated according to the WIBOR reference rate.

release of better-than-expected macroeconomic data for the euro area and the related surge in the yields on bonds of the euro area countries with the highest credit rating. Also mounting concerns about Greece's failing to reach an agreement with its creditors and declaring insolvency had an adverse impact on the currencies of the emerging economies. As a result, the zloty gradually depreciated against the euro since the end of April. At the end of May 2015, the EUR/PLN exchange rate stood at around 4.10.

Figure 1.8. Zloty exchange rate and its volatility



Source: Thomson Reuters.

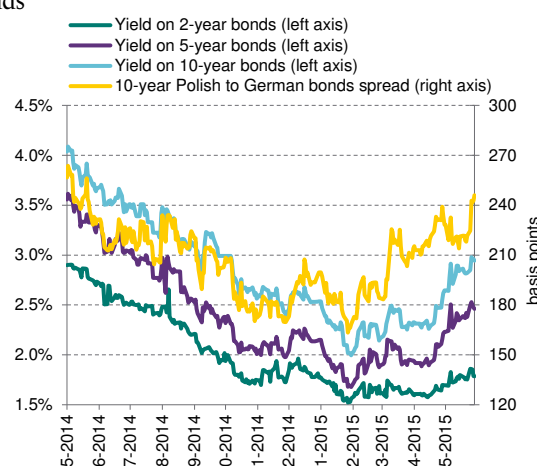
A strong depreciation of the euro vis-à-vis the Swiss franc in mid-January 2015, only slightly offset in subsequent days, automatically translated into a marked weakening of the zloty against the Swiss franc. From February to May, the CHF/PLN exchange rate ranged from 3.80-4.00. The USD/PLN exchange rate was determined by EUR/USD exchange rate movements stemming primarily from the divergence between the ECB's and the Fed's monetary policies.

1.2.4. Bond market

The domestic government bond market continued to be influenced by favourable developments in

Poland's economic and fiscal situation and the trends in Poland's international environment, in particular, in the euro area financial market.

Figure 1.9. 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.

Towards the end of January, the long-term downward trend in the yields on Polish government bonds, observed since early February 2014, came to an end. At the time, these yields hit their record lows (2Y — 1.52%; 5Y — 1.68%; 10Y — 2.00%). In January, in the period of mounting expectations of NBP interest rate cuts, foreign investors, mainly commercial banks and investment funds searching for attractive rates of return, increased their exposure to domestic government bonds by approx. 7 billion zlotys.

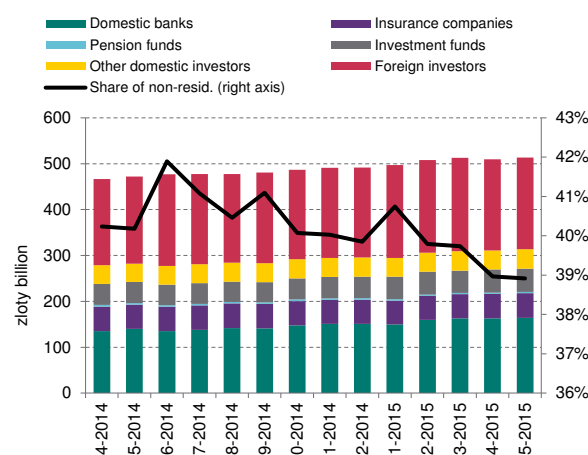
Then, until the end of the analysed period, the yields on domestic government bonds were on the rise, especially in the middle and at the longer end of the yield curve. Better-than-expected macroeconomic data on the Polish economy, supported by better forecasts of Poland's economic growth published by the European Commission at the beginning of February 2015 (i.e. 3.2% for 2015 and 3.4% for 2016), and rising yields on the US bonds, reducing the attractiveness of domestic bonds for foreign

investors who finance their investment in US dollars, curbed expectations for further drop in long-term interest rates. This prompted some participants of the domestic government bond market to realise profits. As a result, the yields on those instruments were on a gradual rise, and the yield curve was steepening (see Figure 1.9). This trend was strengthened in March 2015 by the MPC's announcement of the end of NBP interest rate cuts and further better economic growth forecasts for Poland. In late April and early May, the prices of domestic government bonds, in particular those with the longest maturities, were negatively affected by the mentioned sale of bonds of the euro area countries with the highest credit ratings. At the end of May 2015, the yields on domestic government bonds were higher than their historically lows observed in late January 2015 by 26, 78 and 95 basis points, for 2Y, 5Y and 10Y, respectively.

The government bond market in Poland was highly liquid and its investor structure was stable and diversified. Domestic banks had the largest share in this market (at the end of May 2015, the value of their portfolio was by more than 13 billion zlotys higher than at the end of 2014 (see Figure 1.10). Higher bond yields in the European markets were not accompanied by the sale of domestic Treasury securities by non-residents.¹⁵ Stable exposure of foreign entities was supported by the favourable GDP growth outlook, Poland's sound fiscal situation as well as attractive yield on those instruments relative to credit risk. In January and February, CDS premia on Polish bonds went slightly down, to stand at approx. 60 basis points in subsequent months. The information released by major rating agencies confirmed stability of Poland's credit ratings. Also the European Commission's recommendation to the Council of the European Union

to close the excessive deficit procedure had a positive impact. The exposure of foreign central banks and public institutions, mainly from Asia, in the domestic government bond market, has increased continually since April 2014 (see Figure 1.11). In the first five months of 2015, it increased by nearly 8 billion zlotys. As a result, the structure of investors in the domestic government bond market became more diversified, increasing the market's resilience to turmoil caused by capital flows in international markets.

Figure 1.10. Structure of investors in the domestic government bond market



Note: Data reflect the balance on the securities accounts in KDPW.
Source: Ministry of Finance.

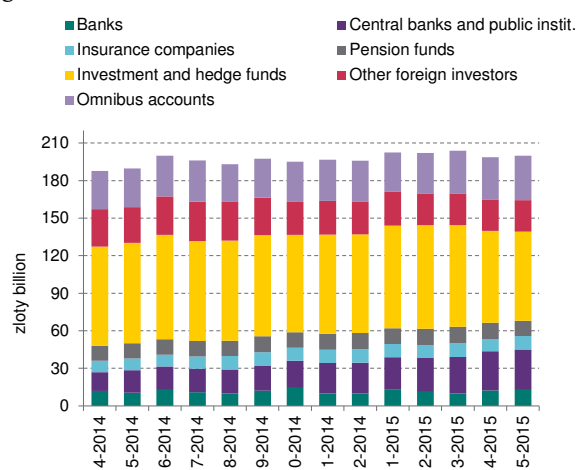
1.2.5. Equity market

The WSE indices, similarly to equity market indices of other emerging economies, followed the upward trends observed in the capital markets of the developed countries. From January to May 2015, the WIG20 and WIG indices increased by 5.6% and 8.1%, respectively, yet the scale of their changes was markedly smaller than in the case of main equity

¹⁵ A temporary fall in non-residents' exposure in the domestic government bond market in late April and early May resulted from the redemption of PS0415 bonds, high value of which was held by them, and the cancellation by the Ministry of Finance of the tender scheduled for 7 May 2015.

indices of the euro area (see Figure 1.3). Stable exposure of non-residents in the domestic equity market (their share in the market capitalisation was approx. 45%) was conducive to the rise of stock prices quoted on the WSE. The higher stock prices were also driven by local factors, inter alia, improved outlook for Poland's economic growth, release of better-than-expected macroeconomic data and the inflow of funds to equity investment funds, in particular those investing in shares issued by SMEs.

Figure 1.11. Structure of foreign investors in the domestic government bond market



Source: Ministry of Finance.

As compared to the main equity markets of the euro area, the lower increase in prices of shares listed in the WSE was largely determined by changes in the valuation of domestic banks which have a considerable share in the WIG and WIG20 indices. Falls in share prices of banks, in particular those with large Swiss franc-denominated housing loan portfolios, and their increased volatility were driven by the January depreciation of the zloty against the Swiss franc. Investors' concerns about the financial consequences for those entities

of the increase in the CHF/PLN exchange rate and of measures aimed to offset the unfavourable effects thereof for indebted households intermittently intensified.

1.3. Situation in the real estate market

In the analyzed period, the residential real estate market remained balanced.¹⁶ At the same time, the commercial real estate market, especially the office property market, continued to show an imbalance between demand for space and facilities, and surplus and rising space supply, resulting from the implementation of new investment projects.

Residential real estate market

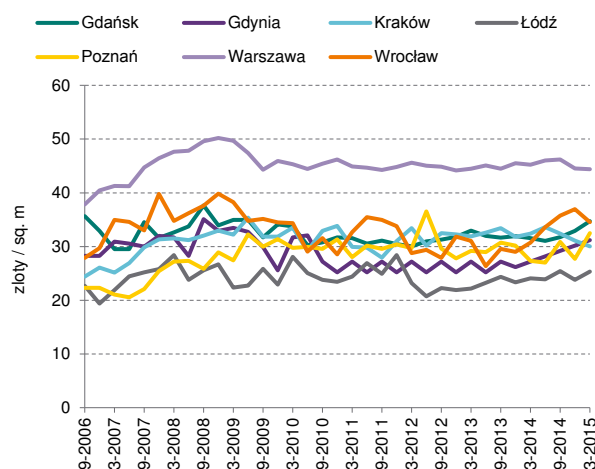
Average transaction prices of housing in the primary markets remained stable (data on 17 largest cities). Amidst deflation, average transaction prices per square metre of housing in real terms (deflated with CPI) showed a slight increase both in the primary and the secondary market. At the same time, prices showed stagnation in relation to the relatively high wage growth in the enterprise sector. In the secondary market, home prices also remained stable, only the Warsaw market posted a slight price decline. This was driven by the sale of a larger number of lower quality and poorer location dwellings. This is confirmed by the analysis of hedonic price.¹⁷ in the Warsaw secondary market.

Rent rates, following an approx. 6 year period of stabilisation, picked up slightly, with the exception of the Warsaw market.

¹⁶A more detailed description of developments in the residential and commercial real estate market in the quarterly reports of 2014 and 2015 and in the annual "Report on the situation in the Polish residential and commercial real estate market in 2013"

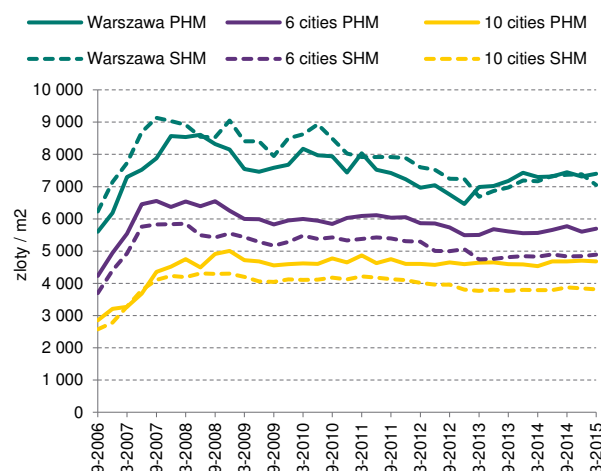
¹⁷The hedonic housing price index is described in the article by M. Widłak (2010) "Metody wyznaczania hedonicznych indeksów cen jako sposób kontroli zmian jakości dóbr", Wiadomości Statystyczne no. 9.

Figure 1.12. Average (offer and transaction) rent rates in Poland's selected cities



Source: NBP.

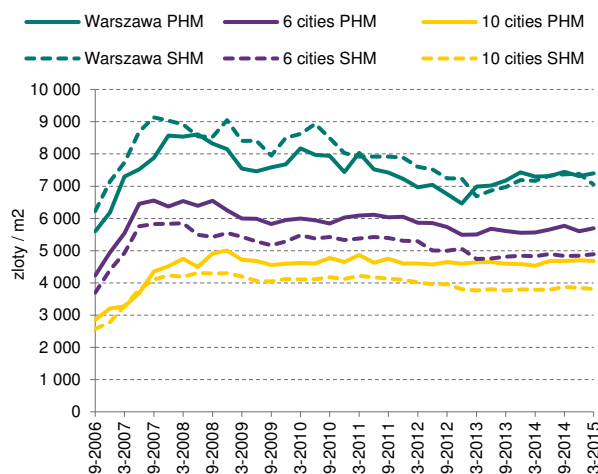
Figure 1.14. Transaction prices of housing in the primary (PHM) and secondary housing market (SHM) in Poland



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.

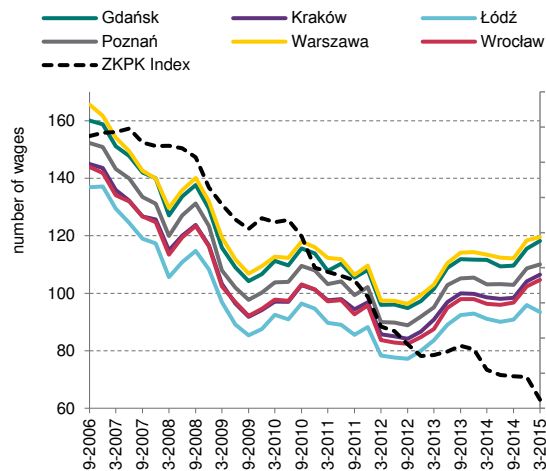
Figure 1.13. Transaction prices of housing in the primary (PHM) and secondary housing market (SHM) in Poland



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.

Figure 1.15. Available housing loans and the accumulated index of changes in banks' credit standards with regard to housing loans



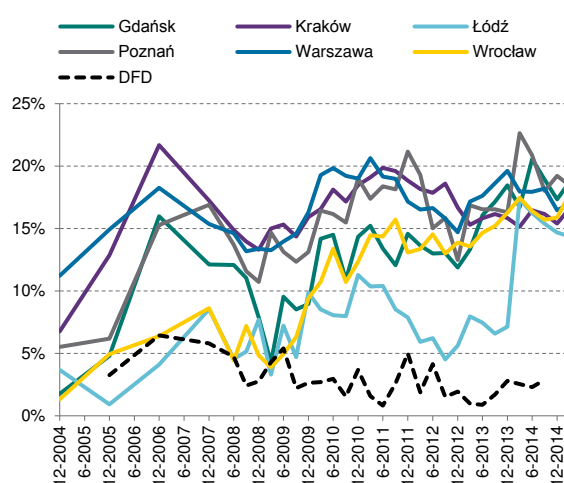
Note: Definition of available housing loan in the *Glossary*.
Source: NBP, GUS.

The estimated availability of housing loans and loan-financed housing increased, which translated into higher demand. This was driven by stable real estate prices, slightly lower nominal interest rates on mortgage loans and increase in nominal income.

The average availability of housing in the largest cities at the end of the first quarter of 2015 rose to the level of 0.85 square metre of housing per average monthly wage in the corporate sector, which represents an increase of 0.36 square metre as compared

to the record low level in the third quarter of 2007. Housing demand was supported by the government-subsidised housing scheme– Housing for the Young (Mdm). The upper limits of prices per square metre of housing admitted to the MDM scheme were raised in Wrocław, Kraków and Poznań, remained unchanged in Warsaw and were reduced in Łódź and Gdańsk.

Figure 1.16. ROE on investment projects in six cities and the real rate of return of large real estate development companies (DFD)



Source: NBP, Sekocenbud, GUS.

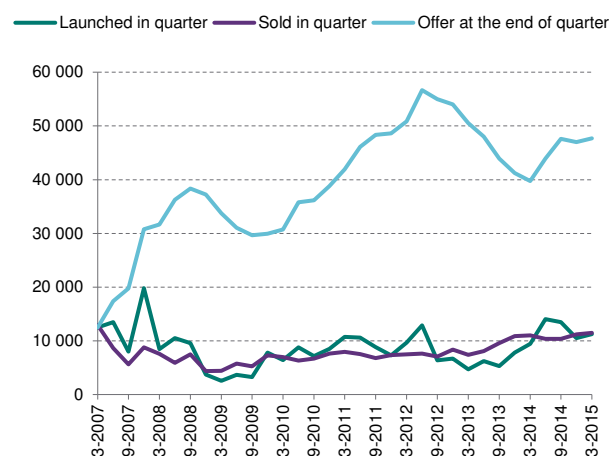
The analysed period saw growing supply in the residential real estate market. The number of home building applications and permits and the number of homes under construction was rising. Growing supply, apart from the so-called regulatory factor, was also supported by still high profitability of developer housing projects, which continues to be driven by a relatively high level of home prices amidst the decline in building materials and construction works, observed for several years now. The estimated profitability of developer housing projects at the end of the first quarter of 2015 stood at approx. 15–18%.¹⁸

This was confirmed in the launch and marketing of subsequent investment projects. Also the number of bankruptcies in the real estate development sector was declining.

Changes in the upper limits of prices of housing available under the MDM scheme changed somewhat the estimates of the annual rate of return on developer projects sold under this scheme from 5% to 8% in the case of Kraków, from 10% to 11% in Wrocław, remained at approx. 12% in Warsaw, and reduced it from 14% to 13% in Gdańsk.

The supply of real estate developer housing pending sale in six largest cities was high, which was, to some extent, related to real estate developers factoring in the amendments to the Act on the protection of home buyers' rights.¹⁹

Figure 1.17. The number of homes put on the market, sold and remaining listed in Poland's six largest markets

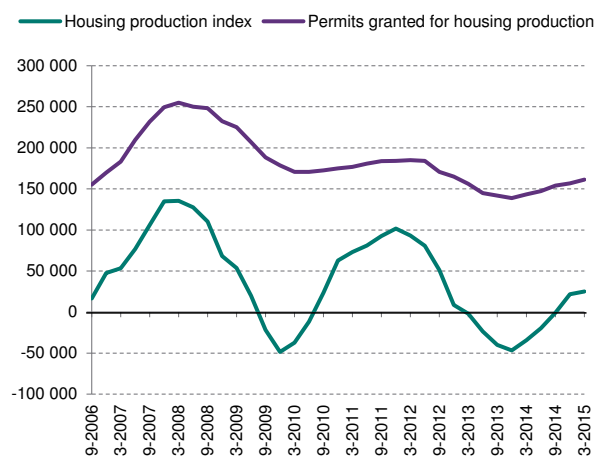


Note: Six largest markets include: Kraków, Łódź, Poznań, Gdańsk-Sopot-Gdynia Tricity, Warsaw, Wrocław.
Source: REAS.

¹⁸Financial data of real estate developers generally show low profitability of their business, which is also reflected in poor stock market quotations of the largest companies in the industry. This is driven by a number of factors, including the specific character of accounting books of real estate developers (sale of construction contract does not constitute income; income is shown after the building has been completed), historical burden of companies, being the result of inappropriate decisions or tax optimisation.”

¹⁹Act of 16 September 2011, Journal of Laws of 2011, Journal of Laws No. 232, item 1377.”

Figure 1.18. The housing production indicator in Poland



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

Home sales in the six largest markets since 2015 stood at a new, higher level (approx. 10 thousand housing units quarterly as compared to 7-8 thousand previously). Housing supply exceeded housing demand and, consequently, the housing stock increased. The number of transactions rose whereas home prices remained stable. The existing scale of the mismatch does not threaten market equilibrium.

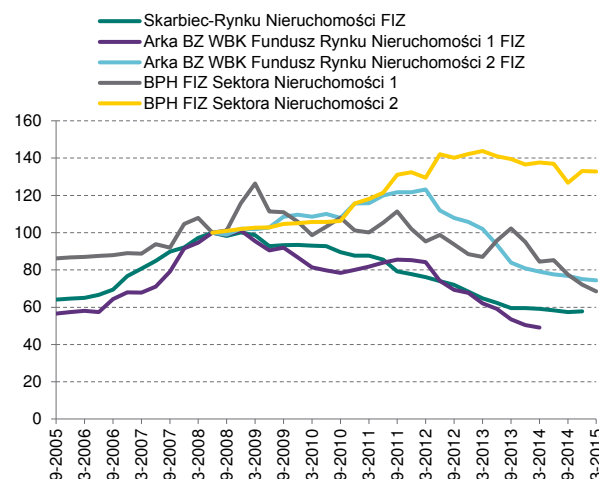
Home selling time in the primary market remained stable, confirming that this situation does not create a major risk of price decline. The real estate developer sector shows high flexibility of activity²⁰, which should support the adjustment in housing supply.

Commercial real estate market

The office and retail space market continued to experience a growing imbalance resulting from the oversupply of rental space. The availability of foreign financing for real estate developers helped to increase fixed assets growth. This phenomenon may be largely attributed to low interest rates in the

global markets in view of which rates of return on investment, despite their decline, remain attractive.

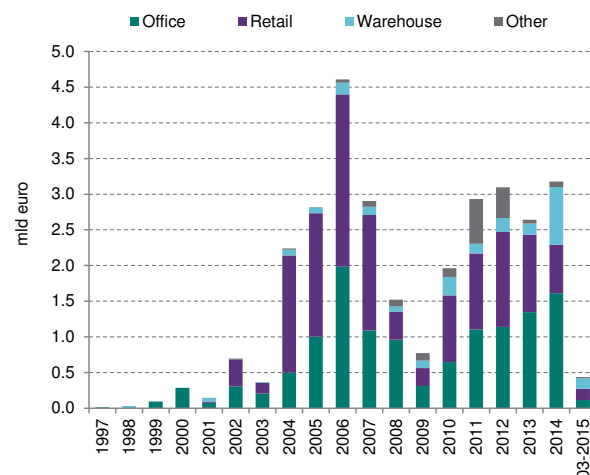
Figure 1.19. Performance indicators of closed-end investment funds on the commercial real estate market



Note: 2008 Q2 = 100.

Source: NBP calculations based on data from websites of investment funds.

Figure 1.20. Value of investment transactions in the commercial property market



Source: Comparables.pl.

The commercial real estate market saw a robust activity of investors, especially international investors. The growing supply of commercial space boosted competition, thus translating into a higher

²⁰Flexibility of the activity of real estate developers is tied with the possibility to change the intended use of the building's usable area and launch subsequent stages of investment project"

vacancy rate and decline in rents. In 2014, the bulk of investment projects concerned purchase and sale transactions of office buildings. Investment in warehouse premises also showed a historically high share. These market trends are confirmed by falling valuations of participation units of closed-end investment funds investing in commercial real estate. Despite falling rents, real estate developers plan to complete subsequent warehouse space.

The commercial real estate sector is financed by domestic banks to a slight extent, thus growing

imbalance does not pose a risk to the stability of the domestic banking system. If commercial real estate has been purchased by openend investment funds, their managers may have problems with selling the real estate at an expected price or at a scheduled time. The banking system, taking into account the negative and costly experience of other countries with the commercial real estate market, should be extremely cautious in examining the quality of mortgage and the possibility of repayment from borrower's income which such real estate may generate.

Chapter 2.

Banking sector

The features and structure of the financial system in Poland²¹ cause that the level of risk to financial system stability is predominantly determined by the situation in the banking sector. Credit risk, in turn, can be deemed the most significant risk borne by the banking sector in Poland (see Figure 2.37).

2.1. Lending

The credit activity of banks is an important source of funding for the economy and, at the same time, largely shapes the profitability and capital adequacy of the banking sector. Due to the conventional model of services, banks' interest income constitutes a major source of net income from banking activity, influencing the possibility to increase capital. Credit-related risk, in turn, impacts to the largest extent the level of the capital requirements for banks and the minimum level of their regulatory capital.

The current growth rate²² of lending, close to the

nominal GDP growth rate (see Figure 2.1), should not result in the growth of imbalances, jeopardise financial stability (see Box 1) or be a barrier to economic growth. At the same time, the current credit growth rate enables banks to report high earnings (see Chapter 2.5.). Banks that operate in Poland were not forced to curb lending to improve their capital adequacy ratios, as was the case in some EU countries (see Figure 2.2).

In the period analysed²³, the growth rate of lending was similar in all main market segments (see Figure 2.3), which kept the structure of the loan portfolio roughly unchanged. Loans to households continued to prevail, and the share of loans to enterprises was relatively low (see Figure 2.4). The diminishing share of foreign currency-denominated housing loans is a positive development. The value of this loans lowers at the rate of about 6% per annum which in a long term contributes to reducing risk associated with them.²⁴

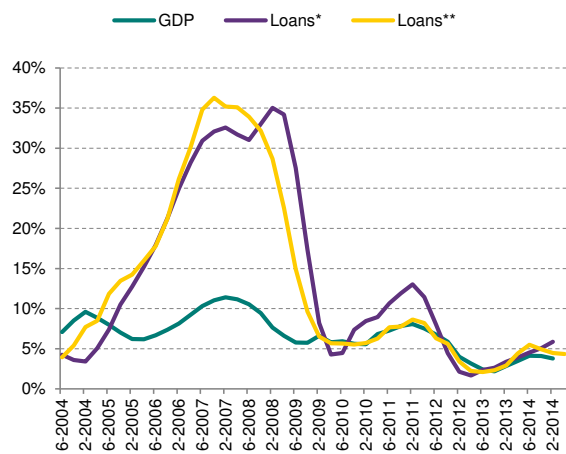
²¹See Chapter 1.2 in "Financial System Development in Poland 2013", www.nbp.pl.

²²Unless otherwise indicated, changes in loan values referred to in Chapter 2.1. apply to data after excluding the impact of foreign exchange rate changes.

²³Unless otherwise indicated, in Chapter 3, the "period analysed" covers the period from 30 September 2014 to 31 March 2015.

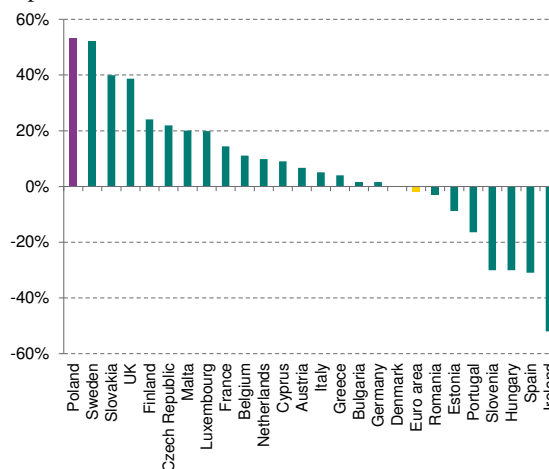
²⁴A detailed description of the risk associated with foreign currency loans was presented in "Financial Stability Report. December 2011", Box 3.

Figure 2.1. Growth rate of nominal GDP and loans to the non-financial sector, y/y



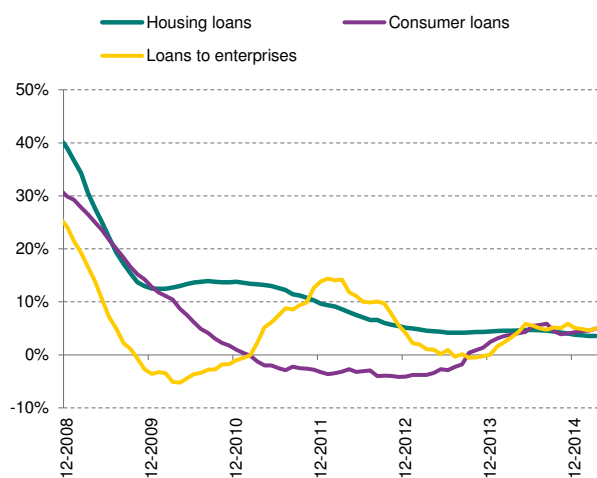
Note: Loans* – annual growth rate, three-month moving average; Loans** – annual growth rate after excluding the impact of foreign exchange rate changes, three-month moving average.
Source: Own calculations based on GUS and NBP data.

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



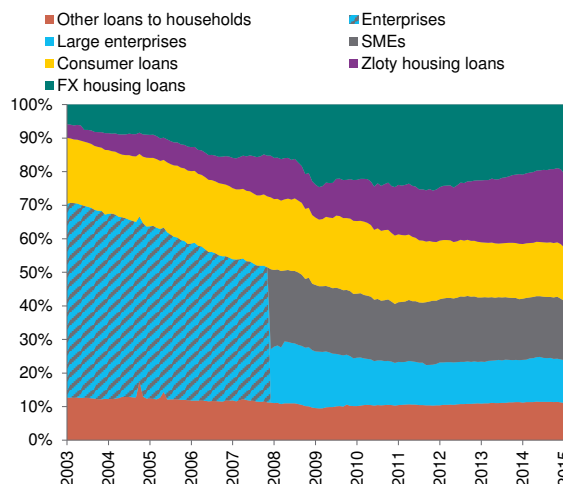
Source: Own calculations based on ECB data.

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



Source: NBP.

Figure 2.4. Structure of loans to the non-financial sector

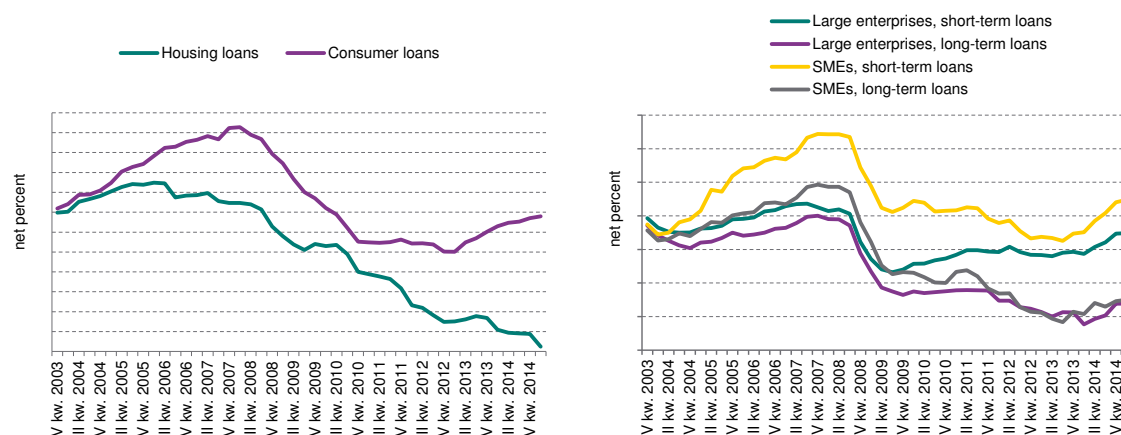


Note: The hatched area indicates the share of loans to the whole enterprise sector in a period when data broken down by loans to large enterprises and small and medium-sized enterprises were not available.
Source: NBP.

Changes in the lending policy of banks had a different effect on lending, depending on the market segment (see Figure 2.5). In the case of corporate loans, they supported credit supply growth: banks reported having eased slightly their lending

standards and lowered credit spreads. The lending policy changes in the segments of loans to households were largely due to regulatory restrictions. In the case of consumer loans, a fall in the limit on the

Figure 2.5. Accumulated index of changes in banks' lending policy standards – loans to households (left-hand panel) and loans to enterprises (right-hand panel)



Note: An increase in the index indicates that lending standards were eased in a given period, a decrease – that they were tightened.
Source: NBP.

maximum amount of interest²⁵ led to a decrease in credit spreads, which the banks tried to offset by raising non-interest loan costs. On the other hand, the application of a lower limit for the maximum LtV ratio for housing loans²⁶ translated into a further tightening of banks' lending policy in the first quarter of 2015.

The annual growth rate of housing loans was gradually weakening (see Figure 2.3). This was due to a rapid albeit decreasing growth in zloty loans and a steady decline – from early 2012 – of foreign currency loans (by 13.2% and -6.1% y/y, respectively). The relevance of the government aid scheme “Housing for the Young” for the housing loan growth rate remained limited. Despite an increase in the value of loan agreements, the share of loans extended under the scheme in total lending during the term of the scheme has amounted to just around 7.4%.²⁷ By the end of March 2015, around 8% or around

3.5 billion zlotys earmarked for the implementation of the programme in 2014–2018 was utilised.

A recovery in consumer lending continued. Since August 2013, the annual growth rate of consumer loans was positive (4.8% at the end of March 2015). The growth rate has fallen slightly in recent months, but it can be largely associated with the so-called base effect. Data provided by the Credit Information Bureau²⁸ show that in the fourth quarter of 2014 the value of new consumer loans was higher than in the corresponding period of the preceding year.

Corporate loans were growing at a stable pace (around 5% y/y). Investment loans were growing over twice as fast as working capital loans. The total growth of loans to large enterprises and small and medium-sized enterprises (SMEs) was similar. At the same time, its structure was discrepant. Investment loans grew mainly in large enterprises, while SMEs were responsible for the growth in working capi-

²⁵In accordance with Article 359 of the Civil Code, the maximum amount of interest resulting from an act in law cannot exceed annually the amount of the Lombard loan rate of Narodowy Bank Polski multiplied by four.

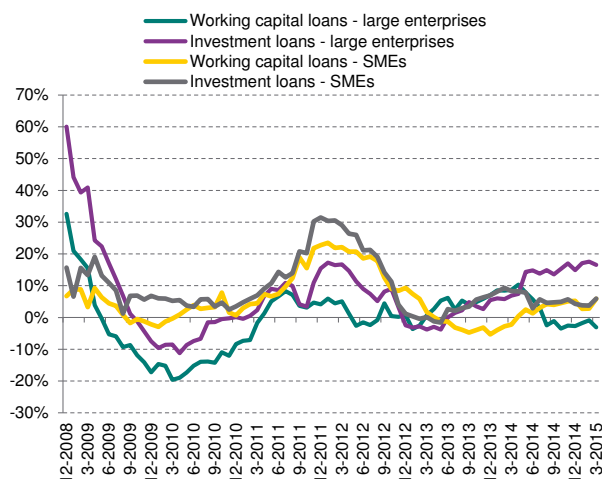
²⁶In accordance with Recommendation S, since 2015, the borrowers' LtV cannot exceed 90%. See Resolution No. 148/2013 of the Polish Financial Supervision Authority of 18 June 2013 on issuing of Recommendation S on good practices with regard to risk management of retail credit exposures (Official Journal of KNF of 2013, item 23).

²⁷See “AMRON–SARFiN Report 1/2015. Nationwide report on housing loans and property transaction prices”, May 2015, ZBP.

²⁸See “Kredyt trendy. Raport Biura Informacji kredytowej”, March 2015, BIK, p. 4–8.

tal loans (see Figure 2.6). The *de minimis* Portfolio Guarantee Facility, launched in March 2013 (expanded to include investment loans in November 2013)²⁹, was favourable for the supply of working capital loans to SMEs and micro enterprises.

Figure 2.6. Annual growth of investment and working capital loans to enterprises



Source: NBP.

Outlook

The lending growth rate can be expected to grow further over the NBP macroeconomic projection horizon. The forecasts indicate that the economy will continue to grow at a stable pace of 3.5%, the labour market will improve further, individual consumption will increase and the savings rate will only grow slightly. Lending growth can be driven by the environment of historically low interest rates. Aiming to sustain the ROE and market indicators (such

as the price-to-earnings or price-to-book value) given the possibly low asset profitability (see Chapter 2.5.) will exert pressure on banks to increase leverage.

In the environment of low interest rates, banks can be expected to revise their strategies towards an increase in the sales of more profitable products that, simultaneously, generate relatively low capital requirements. This may result in an increase in the pace of growth (and in the share in the loan portfolio) of consumer loans and loans to SMEs.

Consumer loans exhibit the highest estimated profitability (see Chapter 2.5.) at relatively low capital requirements. In practice, the statutory linkage of interest on consumer loans with the NBP Lombard loan rate does not seem to be a substantial constraint to their profitability due to the considerable non-interest costs associated with the loans which, to some extent, may offset the decrease in interest. The regulatory factor supporting the growth of consumer loans is the possibility of granting loans on the basis of simpler creditworthiness assessment rules. Consumer loan growth is also envisaged in banks' plans for 2015.³⁰

The increase in loans to SMEs will be supported by the government *de minimis* guarantee programme³¹ and the capital requirement lowered by the application of the so-called supporting factor.³² The growth of loans to SMEs (and, consequently, to all enterprises) should increase despite a relatively low estimated profitability of the loans

²⁹See the Act of 25 January 2013 on amending the Act on warranties and guarantees granted by the State and particular legal persons (Journal of Laws of 2013, item 198) and the Regulation of the Minister of Finance of 18 February 2013 on the *de minimis* aid granted by Bank Gospodarstwa Krajowego in the form of loan repayment guarantee (Journal of Laws of 2013, item 239).

³⁰See "Banks' financial plans for 2015", KNF, http://www.knf.gov.pl/Images/Plany_finansowe_bankow_2015_tcm75-41114.pdf.

Comparing banks' loan growth plans with real loan growth figures in previous years shows that the latter differed substantially from the plans. Nevertheless, the proportions alone of growth of specific loan categories expected for 2015 suggest banks' greater interest in consumer loans.

³¹The completion of the programme is scheduled for 31 December 2015, see the Regulation of the Minister of Finance of 16 June 2014 on *de minimis* aid in the form of loan repayment guarantees by Bank Gospodarstwa Krajowego (Journal of Laws of 2014, item 790). BGK is making preparations to continue the programme in a slightly modified form, see <http://deminimis.gov.pl/przedsiębiorcy/wazne-informacje/>.

³²The CRDIV/CRR regulatory package introduces the so-called supporting factor (amounting to 0.7619), by which the value of the capital requirement arising from some credit exposures to SMEs should be multiplied. The factor is now used on a larger scale by cooperative banks than commercial banks – see Chapter 2.6..

(see Chapter 2.5.).

Housing loans may be expected to grow at a rate **similar to the current one**. Expected improvements in the labour market and stable prices in the residential property market should support credit growth. Stable housing prices, coupled with low interest rates, will increase the availability of flats, now at its highest level since 2007. The demand should also be driven by the government aid scheme “Housing for the Young”. The Sejm is now working on the Act, with the aim of introducing amendments that are beneficial to prospective beneficiaries.³³ As in the previous years, the growth of housing loans will almost exclusively apply to zloty loans, and the foreign currency loan portfolio will be steadily repaid. As a result, the share of foreign currency loans in the housing loan portfolio may be expected to continue

to steadily fall.

Banks’ expectations regarding changes in lending policy (the NBP survey on credit conditions) support the thesis on credit growth, although the survey’s horizon is short. The direction of the expected changes in lending policy standards has hitherto reflected well the future changes in lending dynamics.

Uncertainty for the lending outlook and, more broadly, for the future of the banking sector stems from the recently discussed issues of a bank tax and a mandatory conversion of foreign currency housing loans into zlotys. If adopted, these solutions, together with the liquidation of the bank enforcement order and a change in the amount of contributions paid to the Bank Guarantee Fund, may have a negative impact on credit demand at a time when their costs are passed onto clients.

Box 1. Method of identifying the risk of excessive lending

This box contains a summary of preliminary studies on excessive credit growth risk. The Basel Committee¹ recommends measuring this risk by the deviation of the credit-to-GDP ratio from its trend (the so-called credit gap). The selection of this variable is determined by its ability to generate accurate signals of crisis occurrence in the horizon from one year to even five years.² High predictive accuracy of the credit gap has been confirmed in numerous studies.³ However, many countries also adopt modified approaches, using a broader information set.

The aim of this analysis is to identify variables that have the highest ability to generate accurate signals of the crisis risk associated with excessive credit growth. The analysis is based on international experience and is subsequently used to evaluate the current situation in Poland. The predictive performance of potential early warning indicators was assessed over horizon ranging from 16 to 5 quarters prior to the commencement of the crisis. The choice of horizon assumes that the signal warning of the crisis in more than 4 years in advance could be ignored, whereas signalling of the crisis within a period of a year or shorter does not leave sufficient time for economic policy response. There are at least several studies associated with the dating of crisis periods. In the study in question, the benchmark is the database resulting from the work within the group *ESBC Heads of Research*.⁴

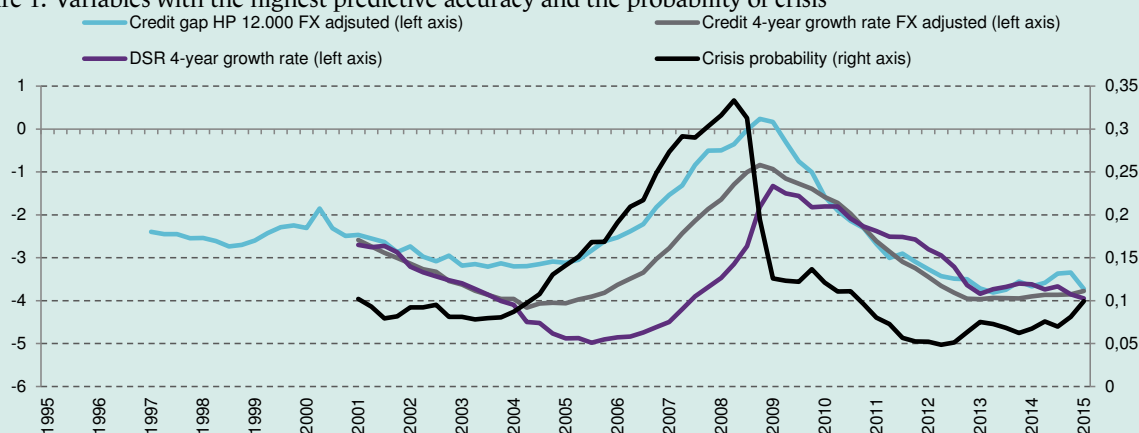
The set of potential early warning indicators (11 variables) was analysed based on data from 47 countries, covering the period 1970–2014. Individual variables were analysed both in levels and growth rates as well as cyclical deviations from the trend. The length of the financial cycle was identified for each country separately, based on the periodogram obtained from the analysis of the growth rates of variables.⁵ In the first step, a number

³³ Draft law on amending the Act on State aid in first-time home purchase by the young <http://www.sejm.gov.pl/Sejm7.nsf/agent.xsp?symbol=RPL&Id=RM-10-11-15>.

of logit models with single explanatory variable was estimated and those with the best forecasting properties were selected.⁶ Subsequently, the multivariate logit models were estimated using variables with the highest predictive quality, as measured by AUROC. Summing up, the analysis enabled the identification of three variables that were found most appropriate to generate signals of the forthcoming crises in the group of countries under study.

The analysis does not indicate symptoms of excessive credit growth in Poland and the probability of crisis associated with it is very low. The figure below (Figure 1) presents values of the selected variables for Poland and the probability of crisis in Poland obtained from the logit model. The variables were normalised so that values above zero should be read as the signal of an increasing excessive credit growth risk, whereas values below zero – as the lack of such a signal.

Figure 1. Variables with the highest predictive accuracy and the probability of crisis



Note: Normalised variables (z-score) with deducted constant value equal to the threshold generating the crisis signal for the model without country-specific fixed effects (while determining the threshold it was assumed that the cost of type II errors is twice as high as type I errors). The credit gap – deviation of bank credit-to-GDP ratio from the trend determined based on the Hodrick-Prescott filter with the smoothing parameter equal to 12,000, after adjustment for changes in foreign exchange rates. DSR – debt service ratio. Crisis probability – implied from the estimated model
Source: NBP

¹ Basel Committee on Banking Supervision (2010), "Guidance for national authorities operating the countercyclical capital buffer"

² Detken, C., et al. "Operationalising the countercyclical capital buffer: indicator selection, threshold identification and calibration options." ESRB Occasional Paper Series (2014).

³ Jokivuolle, Esa, Jarmo Pesola, and Matti Viren. "Why is credit-to-GDP a good measure for setting countercyclical capital buffers?" Journal of Financial Stability 18 (2015): 117-126.

⁴ Babecký, Jan & Havránek, Tomáš & Matějů, Jakub & Rusnák, Marek & Šmídková, Kateřina & Vašíček, Bořek (2014). "Banking, debt, and currency crises in developed countries: Stylized facts and early warning indicators," Journal of Financial Stability, Elsevier, vol. 15(C), pages 1-17.

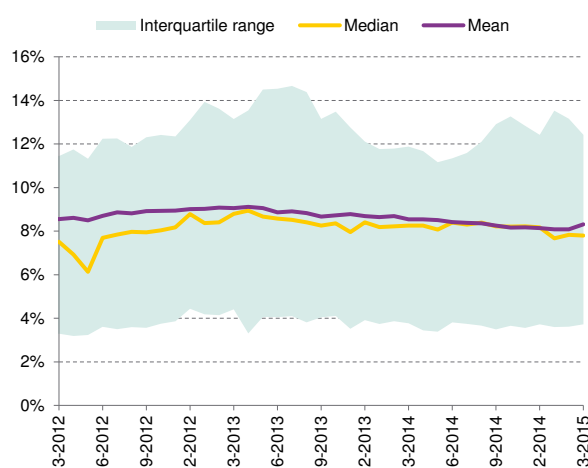
⁵ Comin D. & Mark Gertler, (2006), "Medium-Term Business Cycles," American Economic Review, American Economic Association, vol. 96(3), pages 523-551, June.

⁶ The methodology applied for the evaluation of the quality of variables is the *Area Under the Receiver Operating Characteristic Curve*, AUROC). The ROC curve illustrates the trade-off between type I errors (signal of the crisis despite the lack of the crisis, which is equal to "0") and type II error (no signal of the crisis and subsequent occurrence of the crisis, which is equal to "1"). The AUROC value illustrates the quality of the model and informs how often the model will classify the pre-crisis observations at a level higher than those not preceding the crises.

2.2. Credit risk

The credit risk costs have been stable for several quarters. The impaired loan ratio for the non-financial sector and the ratio of credit losses³⁴ to net loans, illustrating the burden of credit risk materialisation on the working part of the loan portfolio, did not change significantly (see Figure 2.7). The value of impaired loans grew only slightly, inter alia, after banks had implemented the UKNF recommendations based on the results of an asset quality review (AQR) conducted in accordance with the ECB methodology in 2014.

Figure 2.7. Impaired loan ratio for the non-financial sector



Note: Unless otherwise stated, dispersion plots in Chapter 2. related to commercial banks.
Source: NBP.

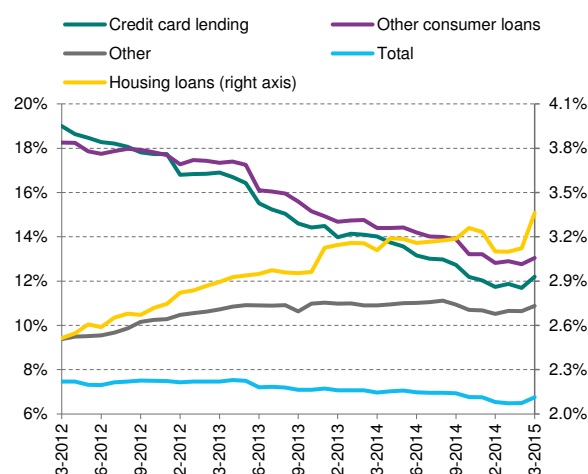
2.2.1. Credit risk of loans to households

Housing loans

The gradual deterioration in the quality of housing loans continued. The value of impaired housing

loans and the impaired loan ratio increased slightly (see Figure 2.8). Besides the “ageing” of the portfolio, this growth was a result of a more frequent identification of impairment of not overdue loans or loans in shorter arrears.³⁵

Figure 2.8. Impaired loan ratios for households



Note: The value of particular loan categories at the end of March 2015 amounted to (PLN billion): Credit card lending – 12.3, Other consumer loans – 119.5, Housing loans – 367.9, Other loans – 103.6.
Source: NBP.

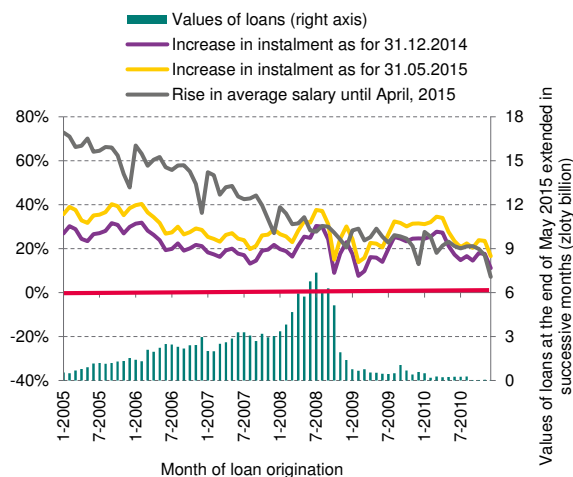
The potentially negative impact of the appreciation of the Swiss franc in the first quarter of 2015 on housing loan quality was mitigated by a decrease in the LIBOR CHF rates.³⁶ The amount of loan instalments grew only slightly (see Figure 2.9). The situation of borrowers was also positively affected by wage growth, which occurred from the loan origination date (this, in particular, applies to the persons who borrowed before the end of 2007).

³⁴Credit losses are defined as net charges to provisions for impaired loans to the non-financial sector.

³⁵This was primarily noticeable in the case of a large bank, where a catalogue for the basis for impairment was extended, by quality-related premises.

³⁶A dominant portion of Swiss franc-denominated housing loans are loans with variable interest rate, where interest equals the LIBOR CHF rate increased by a fixed spread.

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, an instalment calculated on the basis of the Swiss franc exchange rate and the LIBOR 3M rate of 31 December 2014 and 29 May 2015, respectively, and average spread on Swiss franc-denominated loans at loan origination.

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

Source: NBP estimates based on BIK data.

However, the appreciation of the Swiss franc resulted in a deterioration of the extent to which housing loans were collateralised. An increase in the LtV of a loan has an adverse impact on the level of recovery in the event of bad debt collection, thereby increasing credit losses. It can be estimated that at the end of the first quarter of 2015, the share of loans with LtV above 90% and 100% in the portfolio of Swiss franc-denominated loans grew to 60% and 50% from 53% and 44%, respectively, at the end of 2014.³⁷ In the case of zloty loans, the share was substantially lower and amounted to 29% and 9%,

respectively. In addition, following the changes in banks' lending policies related, inter alia, to the entry into force of an amended Recommendation S, the share of zloty loans with LtV above 100% has fallen over the last two years.

The increase in LtV ratios, apart from its negative influence on banks in the form of smaller recoverable value, has an adverse effect on the standing of debtors. The situation, when the loan amount exceeds or is close to the property value, can impede selling or switching the flat. According to the declaration of ten banks with substantial portfolios of FX housing loans, they are willing to introduce measures facilitating such transactions.³⁸

The value of impaired loans was positively affected by an increase in the value of housing debt sale transactions, and loans removed from the balance sheet and treated as off-balance-sheet items (after writing off the whole loan as losses).³⁹ In total, the operations were responsible for decreasing the growth in impaired housing loans by around two thirds.

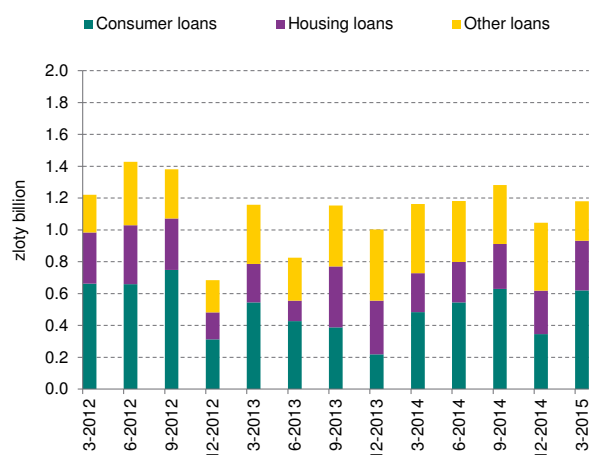
Despite the deterioration in the quality of housing loans, credit losses and their ratio to loan value did not change substantially (see Figure 2.10 and 2.11).

³⁷See "Report on the condition of Polish banks in 2014", 2015, UKNF.

³⁸See "Deklaracja w sprawie udzielenia przez banki wsparcia dla kredytobiorców posiadających kredyty mieszkaniowe, w tym walutowe [The declaration regarding support to the debtors with housing loans, including FX loans, granted by banks]", https://zbp.pl/public/repozytorium/wydarzenia/images/maj_2015/konf/PODPISANA_DEKLARACJA_25_05_2015.pdf

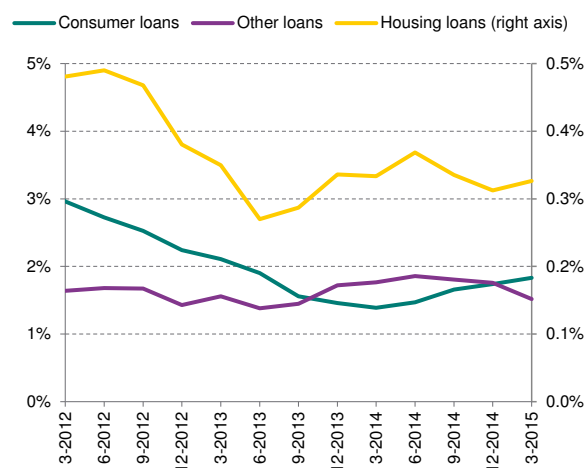
³⁹Earlier, housing loans were relatively rarely used in debt sale transactions. In 2014, the combined impact of the above operations on the change in the value of impaired housing loans amounted to -0.9 billion zlotys, while in previous years it was -0.3 billion zlotys in 2013 and -0.1 billion zlotys in 2012.

Figure 2.10. Net quarterly charges to provisions for impaired household loans



Source: NBP.

Figure 2.11. Ratio of net charges to provisions for impaired loans to households to net value of the loans



Note: Annualised data.
Source: NBP.

Box 2. Dilemmas associated with a reduction in the portfolio of foreign currency loans

Narodowy Bank Polski assessed in the January 2015 edition of the "Financial Stability Report" that changes in the exchange-rate policy of the Swiss National Bank will not pose a threat to Poland's banking system stability. The change led to an appreciation of the Swiss franc against other currencies, including the zloty. However, when coupled with a reduction in interest rates in Switzerland, and substantial buffers, both on the part of banks and borrowers, the increase in Swiss franc housing loan servicing costs should not jeopardise the stability of the Polish banking system.

Foreign currency housing loans, denominated mostly (82% of their value) in the Swiss franc, constitute a significant albeit not dominant portion of assets of the Polish banking sector. At the end of April 2015, foreign currency housing loans accounted for 10.8% of the sector's assets, 19.4% of claims on the non-financial sector and 46.3% of housing loans to households. In relation to the economy, the value of the loans was also moderate, representing the equivalent of 9.7% of GDP.

The value of the portfolio of foreign currency housing loans (expressed in the currency of the loan) is declining steadily with the repayment of subsequent principal and interest instalments by borrowers, albeit at a slow pace. In April 2015, the yearly rate of the decline amounted to around 6%. New foreign currency loans are practically not granted. As the largest portion (around 75% of loans, in terms of value) of this portfolio are loans with residual maturity of over 20 years, a substantial reduction in the portfolio of foreign currency loans will only take place in about 15-20 years.

The appreciation of the Swiss franc increased the intensity of the public debate on the advisability and the content of potential measures aimed at reducing the risk associated with the foreign currency housing loan portfolio. During the debate and the resulting proposals of action, and in the course of measures being implemented, efforts were made to address both aspects of financial stability and protection of the consumer of financial services.

Narodowy Bank Polski is analysing the issue of foreign currency loans and potential measures to address it from the point of view of the stability of the financial system. Such a perspective is determined by the mandate of NBP

(laid down, inter alia, in Article 3 item(2) point (1), (6) and (6a) of the Act on NBP). The protection of consumers is the task of other public entities.

Foreign currency housing loans are no doubt a vulnerability of the domestic banking system. NBP has repeatedly analysed risks associated with the portfolio.¹ This portfolio involves elevated credit risk (arising from market risk taken by borrowers), market risk (associated with the need to hedge the FX position by banks), liquidity risk (associated with liquidity needs generated by FX risk hedging transactions) and funding risk.²

Two questions need to be considered when analysing the issue of foreign currency loans. Firstly, should any action be taken to eliminate this weak point of the banking system? Secondly, if taking such measures were justified, then how should they be implemented, given the benefits and costs of such action?

Referring to the first aspect, in NBP's view the portfolio of foreign currency loans currently poses no systemic risk, which results from a number of factors:

- the income situation of households repaying foreign currency loans is, on average, better than that of holders of zloty loans³, and substantial wage growth, which has taken place since the origination of most foreign currency loans⁴, is an additional buffer that allows borrowers to absorb the effects of a depreciation of the zloty,
- the Swiss interest rate reductions offset, in part, the rise in Swiss franc housing loan servicing costs arising from an appreciation of the Swiss franc (see Figure 2.9),
- high capital levels of banks give them the opportunity to absorb a deterioration in loan quality,
- the quality of foreign currency housing loans remains good.

For comparison, the risks to financial stability in Hungary (the country which took wide-ranging measures, including administrative ones, to eliminate the foreign currency loan portfolio) generated by foreign currency loans were incomparably higher. The value of foreign currency loans to Hungarian households was substantially larger than in Poland (in 2011, it was 20% of GDP). Banks operating in Hungary did not factor in Swiss interest rate decreases, applying the formula of interest set by the decision of the bank, which contributed to a strong rise in the percentage of share of nonperforming loans (see Table 1).⁵

Table 1. Portfolio of foreign currency loans in Hungary and Poland

	Węgry	Polska
Maximum value of the portfolio in relation to GDP	20% (2011)	12.5% (2011)
Average interest rate on housing loans in CHF over the period 2008-2014	6.1%	2.3%
Share of nonperforming loans	20.7% (2011), 42% (2014)	3.1% (2014)

Source: NBP, MNB.

Notwithstanding existing buffers on the part of borrowers and banks in Poland, which help to absorb even substantial exchange-rate changes, it is possible that the Swiss franc may appreciate at a scale resulting in a significant deterioration in portfolio quality. Such a situation is, however, very unlikely, and among factors that may potentially trigger it one can identify geopolitical turmoil which could renew trends of capital inflows to countries rated as stable and offering safe investments, and at the same time having a well-developed financial system. Switzerland is traditionally rated as such a country, therefore if the above mentioned scenario were to unfold, the Swiss franc could appreciate significantly against other currencies.

Any decision to take measures aimed at reducing the portfolio of foreign currency housing loans has to take into account the cost of such measures. Such a cost would be a decline in the resilience of the banking system

to other risks not associated with the CHF portfolio, whose materialisation is more probable than a very strong appreciation of CHF. In particular, a conversion of Swiss franc loans into zloty loans at the exchange rate as of the loan origination date would have to bring about losses of a sizeable group of banks, which would decrease their capital buffers. This could lead to a situation where shocks not associated with the FX market, e.g. a lengthy economic slowdown in the environment of the Polish economy, would jeopardise the safe operation of banks as well as the security of savers' deposits. Another cost could be a decline in the resilience of the whole economy to risks associated with the FX exchange rate due to a decrease in foreign exchange reserves related to the closing of open FX positions of banks. The current value of Swiss franc-denominated housing loans amounts to around 140 billion zlotys (this is the equivalent of around 37% of Poland's foreign exchange reserves). The open FX position generated by this portfolio is closed with FX liabilities or off-balance-sheet transactions, where domestic banks undertake to provide counterparties with foreign currencies in exchange for the zloty. A conversion of the portfolio of foreign currency loans into the zloty would make banks close hedging transactions via the provision of currencies to the counterparty or buy FX assets, e.g. Swiss government bonds. Such measures would result in a strong pick-up in demand for foreign currencies and pressure towards zloty depreciation. In such a situation, NBP – having in mind the stability of the economy – could be forced to intervene by reducing foreign exchange reserves.

The scenario outlined above shows that there is a significant dilemma whether to take top-down systemic measures aimed at reducing the value of foreign currency loans. Such action would help reduce the vulnerability of the financial system and the real economy to unlikely severe shocks coming from financial markets. At the same time, it would induce substantial costs arising from a weakening of the banking sector's resilience to other risks.

Assuming that despite the costs mentioned above, the decision to take measures aimed at reducing FX debt will be made, three general rules can be identified which, in NBP's view, should be followed when designing such a solution.

- Measures taken should not destabilise the banking system, in particular should not decrease significantly its capital levels and capacity to absorb shocks. Such a decrease could occur when the banking sector incurs high costs over a short period of time.
- Measures taken should not generate economic agents' behaviour leading to systemic risk growth in the future, most notably through incentives that stimulate (*moral hazard*). In this context, moral hazard can be considered in two aspects:
 - on the part of lenders (banks) – if costs arising from addressing the issue of the portfolio of foreign currency loans are, in a substantial part, incurred by other entities, by the state in particular, this would provide an incentive for the promotion of riskier financial products (also other products than loans) in the future due to expectations that the problem will be solved again at a low cost to the entities marketing their products.
 - on the part of borrowers – if costs arising from addressing the issue of the portfolio of foreign currency loans are wholly incurred by other entities (banks and the state), this will provide an incentive for households to take excessive financial debt-related risk (and perhaps also other risky financial activities) due to expectations that a potential problem will be solved at the expense of other entities.
- Aid activities should be targeted well. Their beneficiaries should be financially distressed borrowers with low income and low financial assets who have encountered problems in loan repayment as a result of adverse circumstances. Such measures should also ensure a level playing field for all borrowers and should be available to persons whose debt is denominated both in the zloty and in foreign currency.

The NBP also indicates that a way to achieve a reduction of FX loans could be the creation of economic incentives for banks to take autonomous measures leading to a reduction in their FX housing loan books, through

individual offers made to clients. Such incentives can take the form of e.g. higher risk weights or additional capital charges.

¹ see, inter alia, „Financial Stability Review – June 2007” and editions of „Financial Stability Report” of December 2010, July and December 2011 and July 2013.

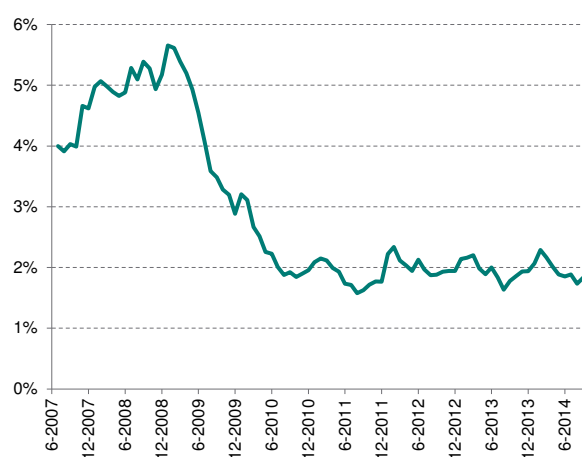
² see Box 3 in „Financial Stability Report. December 2011”.

³ see Box 4 in „Financial Stability Report. July 2013”.

⁴ see Box 1 in „Financial Stability Report. January 2015”.

⁵ See also: P. Gąsiorowski, „Gorzkawy posmak bankowego tokaju”, a feature in the Rzeczpospolita daily on 26 May 2015.

Figure 2.12. Percentage of consumer loans in arrears of more than 30 days after 6 months from loan origination



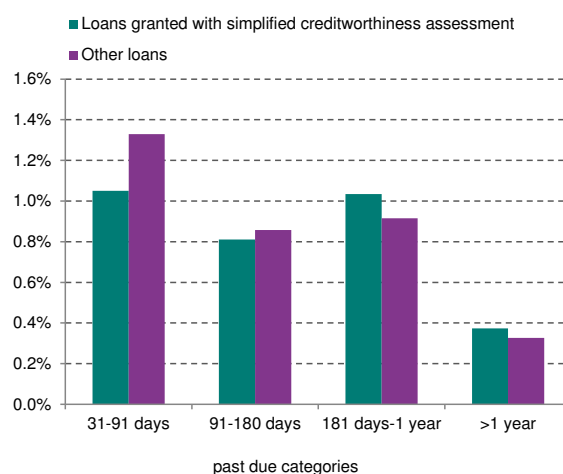
Note: Points on the horizontal line mark the month of loan origination.
Source: BIK.

Consumer loans

The quality of consumer loans continued to improve. The fall in the impaired loan ratio (see Figure 2.8) followed both a decrease in the value of impaired loans and an increase in the value of the loan portfolio. The decrease in the value of impaired loans was strongly influenced by factors not associated with the improved economic situation of debtors, i.e. debt sale and loans written off the balance sheet (in the last three years, the annual value of the operations each amounted to approx. 5.5 billion zlotys.⁴⁰) The improvements in the loan quality were also supported by a better situation in the

labour market and the relatively good quality of new loans (see Figure 2.12).

Figure 2.13. Share of loans in arrears of more than 30 days in consumer loans extended after the implementation of an amended Recommendation T



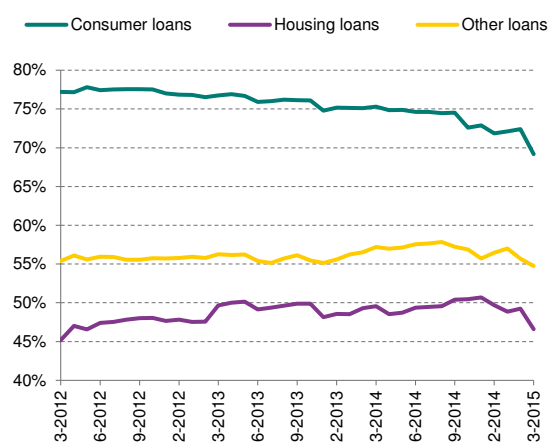
Note: Data as at the end of 2014 based on the NBP survey conducted on a sample of banks with an 83% share in consumer loans. The estimates do not include the banks that have stated they do not extend consumer loans using simplified creditworthiness assessment rules.
Source: NBP.

The risk of loans extended with the use of simplified creditworthiness assessment rules was similar to the risk of other consumer loans (see Figure 2.13). Loans granted to clients with whom banks have long term relations are likely to have a high share in these loans. Experience of the years 2009-2011, when credit losses grew substantially, shows that such loans exhibit a much better quality than loans extended to the clients who have not used pre-

⁴⁰See “Report on the condition of Polish banks in 2014”, 2015, UKNF.

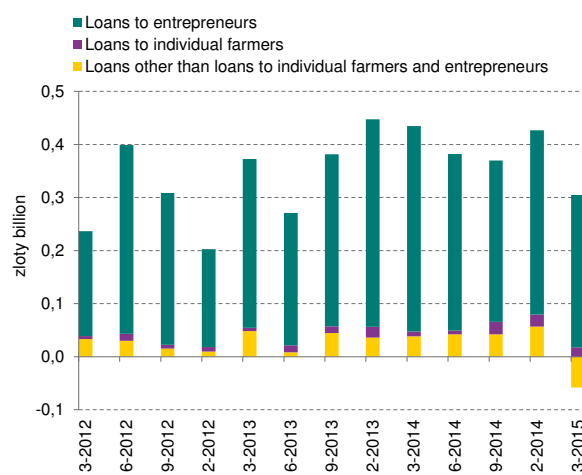
viously the bank's services.

Figure 2.14. Coverage of impaired household loans by provisions



Source: NBP.

Figure 2.15. Net quarterly charges to provisions for impaired other loans to households



Source: NBP.

Despite a minor rise, the ratio of credit losses to value of consumer loans remained relatively low (see Figure 2.11), especially taking into account revenue achieved on this product (see Figure 2.32). Income on consumer loans consists largely of non-

interest income, which is not encompassed by the statutory limit on interest. However, should the current low level of interest rates be sustained, a decrease in the profitability of these loans cannot be excluded.

The average coverage of impaired loans by provisions, both for consumer and housing loans, dropped in recent months (see Figures 2.14). This phenomenon was characteristic mainly for the banks that more often identified impairment of loans which were not overdue or loans with shorter arrears, and the banks that carried out large debt sale transactions (mainly significantly impaired debt, covered by provisions at a higher-than-average rate).

Other loans to households

The quality of other loans to households⁴¹ did not change substantially, and credit losses and their ratio to loans dropped slightly (see Figures 2.8 and 2.15). The good economic climate and the improvement in the situation of micro enterprises, including their liquidity position, as evidenced by surveys, helped reduce the credit losses.⁴²

Outlook

The foreseeable macroeconomic developments allow to expect that the value of credit losses in loans to households will stabilise or fall slightly, in the coming quarters. Such scenario will be supported by forecasts of further improvements in the situation on the labour market and a rise in revenues of private entrepreneurs. The ability of borrowers to service their zloty loans will also be positively influenced by low interest rates. This factor is of greatest importance for housing loans, where inter-

⁴¹At the end of March 2015, these loans accounted for around 15% of loans to households. They included: loans to individual entrepreneurs (63%), loans to farmers (28%) and loans other than housing and consumer loans to natural persons (9%).

⁴²See "NBP Quick Monitoring Survey. Economic climate in the enterprise sector in 2015 Q1 and forecasts" – 2014 and 2015 editions, NBP. In English only shortened version available.

est on the prevailing portion of loans is based on the interbank market rate, increased by a fixed spread, and the share of interest instalments in the total loan instalment is the highest due to their long maturity.

Among basic risk factors the still large share of foreign currency housing loans held in banks' portfolios should be mentioned. The borrowers who took out the loans are exposed to the risk of zloty depreciation and a rise in foreign interest rates.

The other risk factor is the fact that during creditworthiness assessment banks accept low income buffers in the event of a future rate increase. A considerable portion of banks keeps the buffers at a level corresponding to an interest rate increase of just 1–2 percentage points⁴³, i.e. a lower increase than the combined scale of an interest rate decrease in the last cycle of their reductions. After interest rates increase to levels prior to this cycle, the borrowers who took loans recently and whose income met only the minimum requirements may find it difficult to repay

the loan in a timely manner.

The amendments associated with the Constitutional Tribunal ruling on the unconstitutionality of the provisions of the bank enforcement order⁴⁴ together with new regulations in consumer insolvency⁴⁵ may bring about higher credit losses. In the case of the existing portfolio, the liquidation of the bank enforcement order may result in a decrease in recovery from impaired loans and, in consequence, a rise in credit losses. Changes in consumer insolvency implemented at the start of 2015 facilitate the declaration of bankruptcy of natural persons not conducting a business activity (liberalisation of conditions that enable the declaration of bankruptcy) and improve the position of the consumer in the insolvency proceedings.⁴⁶ The influence of these changes on banks' credit losses will depend on the extent of the use of this instrument by consumers, but it may be expected that it will be considerably higher than today.

Box 3. The financial risk taken by households: first results from the pilot study on household wealth in Poland (2014)

This analysis presents the first conclusions concerning the scale of the debt burden on households and the accompanying level of savings buffers held. It is based on the pilot *Study on Household Wealth (Badanie Zasobności Gospodarstw Domowych - BZGD)* carried out by Narodowy Bank Polski in 2014 in cooperation with the Central Statistical Office on a representative sample of 3.5 thousand households in Poland.¹ BZGD is the Polish equivalent of *The Eurosystem Household Finance and Consumption Survey (HFCS)* coordinated by the European Central Bank.² It provides unique information concerning the size and structure of assets and debt of Polish households. As a result, it enables a more comprehensive analysis of households' financial standing than other studies, through considering not only income and expenditure associated with debt, but also the impact of liquidity buffers and other assets and debt characteristics.

⁴³Source: The results of the KNF survey of the portfolio of loans to households as at the end of 2014.

⁴⁴See the ruling of the Constitutional Tribunal of 14 April 2015 (Journal of Laws of 2015, item 559).

⁴⁵The 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 of 2014, item 1306).

⁴⁶The main changes, which in the mind of the legislator are supposed to ensure greater accessibility to consumer bankruptcy, consist in making it possible to start the procedure even when there is only one creditor and the amount of 30 zlotys is paid. The court will dismiss the petition only when the debtor has brought about insolvency by his/her intentional actions or through blatant negligence (previously, the declaration of bankruptcy was possible only in exceptional and independent circumstances). After assets (including property) are liquidated and the plan (up to 36 months) to satisfy the creditors has been executed, the remaining part of the debt is redeemed. In 2009–2013, consumer bankruptcy was declared only in 88 cases out of 3,035 insolvency petitions. The new regulations are likely to change the statistics.

The *BZGD (2014)* shows that 37.0% of households in Poland are indebted, including 12.5% with mortgage loans and 29.0% with non-mortgage loans.³ Polish borrowers spend, on average (based on the median), approximately 10% of their monthly gross income on servicing their debt (*Debt-Service-To-Income – DSTI*)⁴ and approximately 14.1% of their net income. In the case of borrowers with a mortgage loan, the median of the relation of their monthly expenditure associated with debt servicing to their wage in gross terms amounts to 14.0% and 21.2%, in net terms. Compared to the euro area countries, statistics illustrating the scale of debt in Polish households remain below the median for this group, respectively, at the level of 43.7% (percentage of indebted households), 13.9% (*DSTI* gross for total loans) and 15.9% (*DSTI* gross for mortgage loans) (see Table 1).

Table 1. Percentage of indebted households and the scale of debt servicing burden in Poland compared to euro area countries

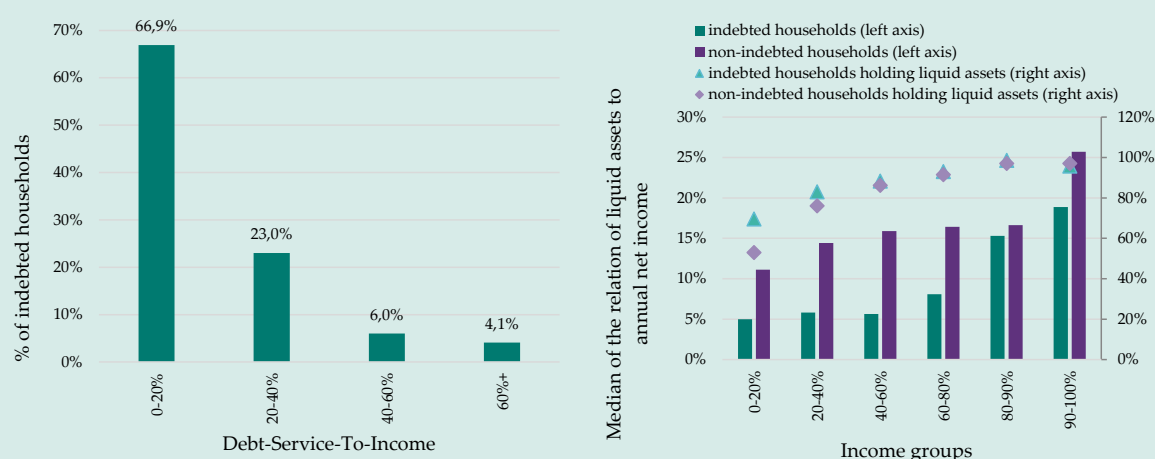
	PL	BE	DE	GR	ES	FR	IT	CY	LU	MT	NL	AT	PT	SI	SK	FI	EA
% of households																	
has debt	37,0	44,8	47,4	36,6	50,0	46,9	25,2	65,4	58,3	34,1	65,7	35,6	37,7	44,5	26,8	59,8	43,7
has mortgage debt	12,5	30,5	21,5	17,5	32,5	24,4	10,8	44,8	38,8	15,6	44,7	18,4	26,7	14,1	9,6	b.d.	23,1
has non-mortgage debt	29,0	24,2	34,6	26,1	30,7	32,8	17,8	47,9	36,9	25,2	37,3	21,4	18,3	38,9	19,9	b.d.	29,3
Median in %																	
DSTI ratio for total loans	9,8	15,1	10,9	14,7	19,9	14,7	13,2	25,0	16,6	11,5	14,5	5,6	17,3	15,8	12,5	b.d.	13,9
DSTI ratio for mortgage loans	14,0	14,8	12,8	16,4	20,5	17,4	15,5	25,3	16,3	12,8	14,2	4,6	16,7	11,7	20,4	b.d.	15,9

Notes: The category *Total loans* does not include loans in the form of credit lines, credit card loans and overdrafts. The *DSTI* ratio was referred to income in gross categories.

Symbols: PL - Poland, BE - Belgium, DE - Germany, GR - Greece, ES - Spain, FR - France, IT - Italy, CY - Cyprus, LU - Luxembourg, MT - Malta, NL - Netherlands, AT - Austria, PT - Portugal, SI - Slovenia, SK - Slovakia, FI - Finland, EA - euro area

Source: NBP, ECB (2013).

Figure 1. The distribution of the *Debt-Service-To-Income* ratio for loans in the population of indebted households in Poland (%) (left panel); Liquid financial assets in relation to the annual net income against income groups in the population of indebted and non-indebted households in Poland (%) (right panel).



Note: The category *Total loans* does not include loans in the form of credit lines, credit card loans and overdrafts. *DSTI* was calculated based on net income.

Source: NBP.

In more detail, 90% of Polish borrowers allocate no more than 40% of their monthly disposable income for debt servicing. In Poland, there are 10% of households with a *DSTI* net ratio above the 40% threshold (often adopted

in literature as the excessive debt threshold) (see Figure 1 left panel) and 4.8% with *DSTI* gross ratio above 40% threshold, which is half the proportion observed in euro area countries (9%).

The high level of debt burden on monthly expenditure is a warning signal, but it may be an acceptable situation if the remaining part of income significantly exceeds the basic expenditure or a household holds sufficient amount of liquid financial assets.⁵ The last item may constitute a buffer in the case of a sudden increase in debt servicing costs (which may mainly happen in the case of loans with variable interest rate or foreign currency loans), or in the case of income decline (e.g. as a result of job loss).

Over a half of indebted households (55.1%) report that they save (16.8% - regularly, 38.3% - irregularly). The probability of holding any liquid financial assets and their value increases with the level of income. The value of liquid financial assets usually does not exceed two-month's income among non-indebted households and is lower among indebted households (see Figure 1 right panel).

A household may be exposed to financial risk due to the high level of *DSTI*, in particular, if accompanied by a low level, including the lack of liquid financial assets or a high *Loan-to-Value (LTV) ratio*. In Poland approx. 16.8% of indebted households spend more than 30% of their income on debt servicing, approx. 8.8% of households with mortgage loans are indebted by over 90% of the value of the real estate constituting their collateral, and the liquid assets for 58.5% of indebted households are lower than monthly income.

The aforementioned statistics do not say how many households simultaneously demonstrate high *DSTI*, high *LTV* and low liquidity buffers. The answer to this question is the goal of the analysis presented below.

Households with the highest debt servicing costs have liquidity buffers at a level similar to the remaining debtors, i.e. approximately 9.9% of the annual income (median) against 8.4% in the whole group of debtors. The percentage of households having simultaneously *DSTI* exceeding 30% of income and liquid assets lower than monthly income amounts to 9.8% of all debtors. Thus, a substantial proportion of indebted households has some liquidity buffers. An exception are households of the lowest level of income with a consumer loan – in this group relatively more (i.e. approximately 32%) households report that they do not hold any liquid assets. However, from a household perspective, the risk associated with a consumer loan is usually lower than in the case of mortgage loans, since the latter are exposed to interest rate or foreign exchange rate risk. This conclusion also seems to confirm the lack of significant relationship between the loan burden and perception of borrowers of their financial situation, which was individually assessed by households in the questionnaire, within a scale of 10. Nevertheless, the relatively low value of liquid assets held (it usually does not exceed monthly income) means that they mainly protect against small or short-term increases in debt servicing costs or a decline in income.

Another element affecting the situation of households with mortgage loans is the possibility to sell the real estate for the purpose of debt repayment. This is possible when the value of the real estate is higher than the current debt value, which may be evaluated through the *Loan-to-Value (LTV) ratio*.⁶ As a result, the percentage of households that have simultaneously a *DSTI* exceeding 30% and *LTV* higher than 90% makes up only 2.6% of all households with a mortgage loan.

Summing up, 9.8% of indebted households have simultaneously a high *DSTI* and low liquidity buffers, and 2.6% have a high *DSTI* and a high *LTV*. On the other hand, only 0.9% of indebted households are in a particularly difficult situation, recording poor results for all these ratios simultaneously – they have a high *DSTI*, low liquidity buffers (below the monthly income) and a high *LTV*. The foregoing statistics refer to all debtors, irrespective of the level of their income. However, the conclusions do not change significantly if the analysis is limited to households from the first nine deciles (according to total income as well as equivalent income). In this group, the percentage of indebted households with *DSTI* exceeding 30% increases to approximately 18%, and the percentage of households simultaneously demonstrating a high *DSTI*, low liquidity buffers and high *LTV* amounts to 1.3%.

¹ The sample amounted to 7 thousand, and the number of completed interviews amounted to approximately 3.5 thousand.

² ECB (2013), *The Eurosystem Household Finance And Consumption Survey. Results from the first wave*, Statistics Paper Series No 2.

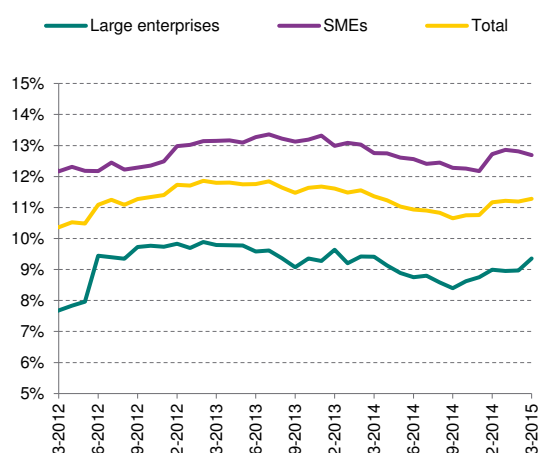
³ The category *non-mortgage loans* comprises other forms of debt, such as consumer loans, other loans related to real estate, credit cards loans, loans in the form of credit lines and overdrafts.

⁴ *Debt-Service-To-Income* was defined as the ratio of a monthly loan instalment to the monthly gross or net income of a household. For the needs of international comparison in Table 1, the gross ratio is applied, whereas in the remaining part of the text the net ratio, i.e. disposable income, is used. This defines a proportion of a monthly wage that is allocated by the borrower for servicing the debt.

⁵ Liquid financial assets include deposits in banks, units in mutual funds, bonds and shares.

⁶ The *Loan-to-Value ratio* is defined as the ratio of the outstanding loan value to the current value of the real estate constituting the collateral for this loan. The value of the real estate has been estimated at the moment of conducting the questionnaire.

Figure 2.16. Impaired loan ratios for enterprises



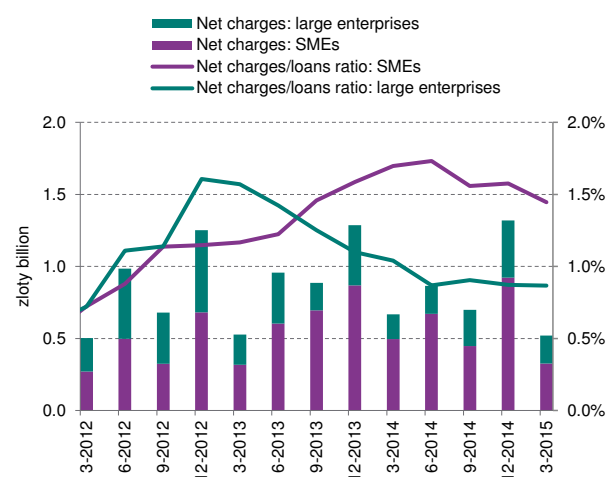
Note: At the end of March 2015, the value of loans to large enterprises amounted to 130 billion zlotys, and to SMEs – 178 billion zlotys.
Source: NBP.

2.2.2. Credit risk of corporate loans

Corporate loan quality

The quality of corporate loans worsened, but only a small part of the portfolio was affected. The impaired loan ratio and the value of impaired corporate loans (see Figure 2.18) grew only in the sector of large enterprises (see Figure 2.16), including in particular enterprises in the coal-mining industry. Apart from factors associated with changes in the economic condition of debtors, the growth of impaired loans in the last quarters was also influenced by an asset quality review. The results of the review

Figure 2.17. Quarterly net charges to provisions for impaired corporate loans and their ratio to net value of loans



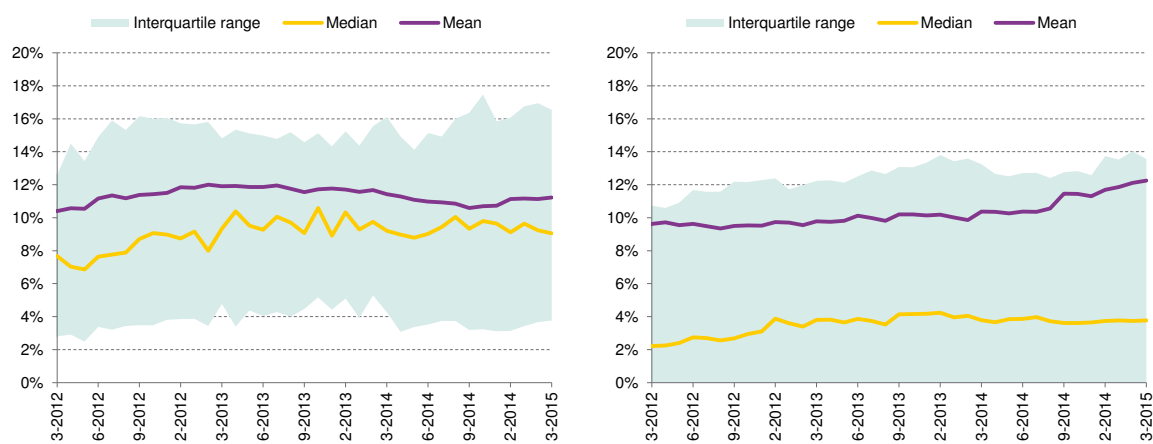
Note: Ratio – annualised data.
Source: NBP.

made UKNF issue recommendations to banks regarding a change in the classification of some loans.

The quality of corporate loans also fell in the case of cooperative banks, especially some medium-sized and large ones (see right-hand panel of Figure 2.18). Usually also the coverage of impaired corporate loans by provisions in these banks was low. The high level of shorter arrears points to the risk of a further deterioration in the quality of the portfolio, which may have a negative impact on the financial condition and capital adequacy of several banks.

Credit losses on corporate loans declined slightly in the last several quarters (see Figure 2.17). The

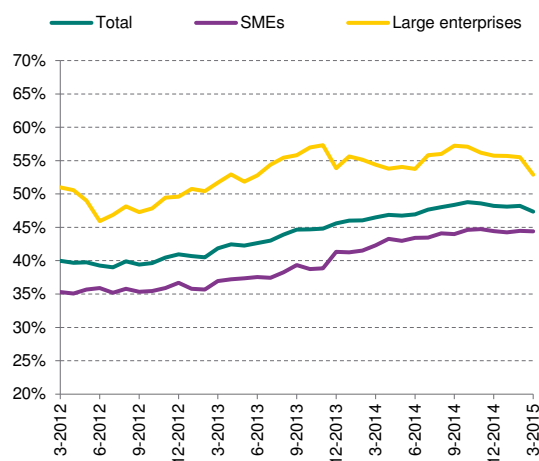
Figure 2.18. Impaired loan ratio for the enterprise sector at commercial banks (left-hand panel) and cooperative banks (right-hand panel)



Source: NBP.

decline was mainly associated with the fact that an increase in impaired exposures had resulted largely from quality conditions not related to arrears in repayment. In effect, the average coverage of impaired loans by provisions also dropped (see Figure 2.19).

Figure 2.19. Coverage of impaired corporate loans by provisions



Source: NBP.

The quality of loans financing the commercial properties remained good despite growing 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 as compared with other corporate loans (they amounted to around 5% and 0.55%, respectively). In addition, office property loans accounted for a minor – and recently declining – portion of the corporate loan portfolio (3.5%).

Corporate loan quality by sections of the national economy⁴⁷

Among sections of the national economy, what draws attention is a deterioration in the quality of loans to enterprises in the coal mining industry. This led to a decrease in loan quality in the whole mining section (see Table 2.1). Loans to enterprises of the industry did not display arrears in repayment, and impairment was identified on the basis of qualitative criteria. Besides this, there were no other significant changes in loan quality for specific sections of the economy.

The Russian-Ukraine conflict had no major impact on credit risk costs. The changes in the quality of loans to enterprises from industries most engaged

⁴⁷Analysis 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 March 2015 (%)

Section	Structure of total loans by section	Structure of impaired loans by section	Impaired loan ratio
A – Agriculture	3.7 (3.6)	2.1 (2.1)	5.9 (6.1)
B – Mining	2.6 (2.5)	6.5 (2.8)	26.7 (11.3)
C – Manufacturing	22.9 (22.8)	22.6 (22.9)	10.4 (10.2)
- Food processing	4.7 (4.7)	3.9 (4.0)	8.9 (8.6)
- Chemicals	1.1 (1.3)	0.4 (0.4)	4.1 (2.9)
- Manufacture of rubber and plastic products	1.8 (1.8)	1.2 (1.3)	6.8 (7.4)
- Manufacture of other non-metallic products	1.4 (1.3)	2.1 (2.2)	16.5 (17.9)
- Manufacture of metal products (excluding machinery and equipment)	2.2 (2.1)	2.1 (2.4)	10.3 (11.7)
D – Electricity, gas and steam supply	4.2 (4.5)	0.5 (0.3)	1.3 (0.7)
E – Water supply, sewerage, waste management	1.2 (1.1)	0.6 (0.5)	5.3 (4.7)
F – Construction	10.3 (10.6)	23.7 (24.3)	24.3 (23.3)
G – Retail trade and repairs	20.0 (19.9)	14.1 (15.4)	7.5 (7.9)
H – Transportation and storage	4.2 (3.7)	2.3 (1.8)	5.9 (5.0)
I – Hotels and restaurants	3.1 (3.0)	6.0 (6.9)	20.6 (23.6)
J – Information and communication	3.6 (3.6)	0.8 (0.7)	2.3 (1.9)
L – Real estate activities	13.9 (14.5)	13.5 (14.1)	10.3 (9.9)
M – Professional, scientific and technical activities	3.4 (3.8)	4.3 (5.2)	13.3 (14.1)
N – Administrative activities	4.0 (3.8)	0.8 (0.8)	2.1 (2.1)
P – Education	0.4 (0.4)	0.4 (0.4)	12.2 (9.6)
Q – Health care	1.6 (1.5)	1.0 (1.1)	6.5 (7.3)
R – Arts, entertainment and recreation	0.5 (0.5)	0.3 (0.3)	6.6 (6.3)
S – Other services	0.3 (0.3)	0.4 (0.5)	13.5 (14.7)
Total	100.0	100.0	10.6

Notes:

In brackets, data at the end of September 2014.

Claims include the following balance-sheet items: loans and other receivables, debt and equity instruments and remaining receivables. Data are based on the so-called large exposure reporting, i.e. for a bank that is a joint-stock company, a state-run 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 exports to Russia were insignificant and multidirectional. In particular, loan quality in the section “Agriculture” improved slightly, and it deteriorated slightly in branch “Food processing”. The changes in loan quality in industries most engaged in exports to Russia was influenced by a relatively good situation of most of these industries and, so far, a limited impact of the sanctions on their financial condition.⁴⁸ Banks’ direct exposure to Russian entities is low (at the end of the first quarter of 2015 – around 1 billion zlotys) and, with the exception of one very small branch of a credit institution, for no bank did it exceed 0.6% of their assets.

Outlook

The credit risk costs should stabilise, however, a slight fall in credit losses is also likely. This will be supported by the stable economy growth and relatively low debt servicing costs as a result of interest rate decrease. The impact of the outcome of an AQR on credit losses in subsequent months should be small.

The situation of coal mining industry enterprises, despite the relatively low exposures of banks, may exert a negative influence on the quality of their loan portfolios for some time. This is related to the difficult situation of the industry, the lack of identification of impairment in the case of some loans and the low coverage of impaired loans by provisions.

A possible further intensification of the Russian-Ukrainian conflict may be regarded as a risk factor. However, the NBP assessment shows that even if the extremely negative scenario of a severe deterioration in the condition of enterprises with a considerable share in exports to Russia or Ukraine or mak-

ing investments in the countries were to unfold, the impact on banks’ capital adequacy would be small.

As in the case of loans to households, the value of credit losses may also be affected by the liquidation of the bank enforcement order.

2.3. Market risk

Domestic Treasury securities and NBP bills prevail in the securities portfolios purchased by Polish banks (see Table 2.2). Banks invest in riskier securities to a limited extent. Moreover, securities issued by non-residents accounted for around 2% of the entire portfolio of debt securities at the end of March 2015.

Risk associated with banks’ trading activity is insignificant due to their small-scale operations⁴⁹. The value of Treasury securities held for trading has risen recently but remains low. A vast majority of non-Treasury securities was not classified into this portfolio either (see Table 2.2). In consequence, VaR (median) for the interest rate risk of the trading book of banks does not exceed 1% of their regulatory capital (see Figure 2.20).

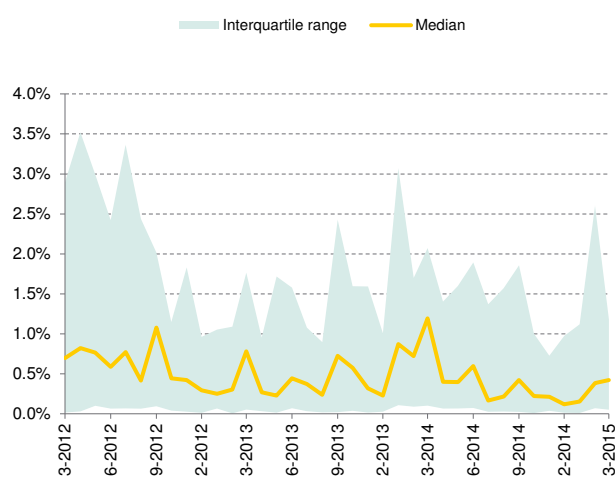
Banks are exposed to interest rate risk in the banking book to a greater extent, which stems from the repricing mismatch of zloty interest-bearing assets and liabilities (see Figure 2.21). At the majority of banks, interest on assets responds faster to market interest rate changes than interest on liabilities. As a result, in the short term (around two quarters), a decrease of market interest rates contributes *ceteris paribus* to a fall of net interest income of banks. Therefore, it may be expected that the interest rate cut in March 2015 (and, to a lesser extent, in October

⁴⁸See “Financial condition of the enterprise sector” and “NBP Quick Monitoring Survey. Economic climate in the enterprise sector in 2015 Q1 and forecasts” – 2014 and 2015 editions.

⁴⁹On the basis of data available, it is not possible to accurately specify the size of trading books held by domestic banks. The share of assets classified as “held for trading”, where most of the assets from the trading book should be classified into, is however low and amounted to 4.3% at the end of March 2015.

2014) will be contributing in the coming quarters to a decrease in banks' net interest income (see Chapter 2.5.).

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

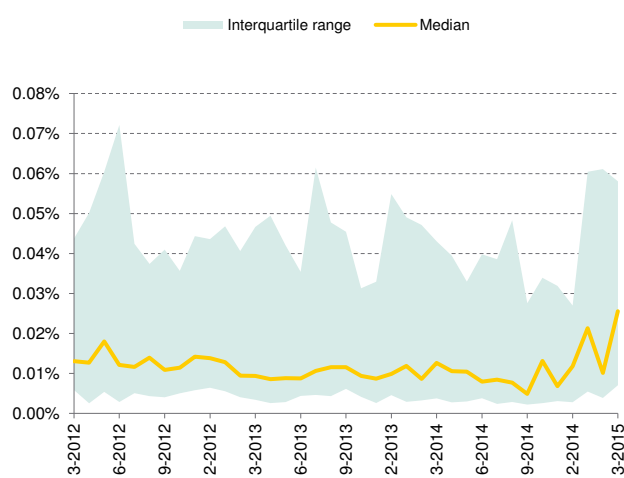


Notes: VaR at confidence level of 95% over a 10-day horizon, calculated for commercial banks and expressed as a percentage of regulatory capital; from April 2014, for months that are not-quarter-ending months, data on regulatory capital as of the end of the last quarter-ending month were used.
Source: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

The risk of substantial losses stemming from changes in the valuation of the FX position is low. Although banks have a substantial long FX position (associated mainly with the portfolio of foreign currency housing loans), it is usually hedged with fx swap and CIRS transactions. The estimated VaR for FX risk has recently risen on the back of a higher volatility of the foreign currency exchange rate, but is still low. The median of VaR at commercial banks does not exceed 0.05% of their regulatory capital (see Figure 2.22).

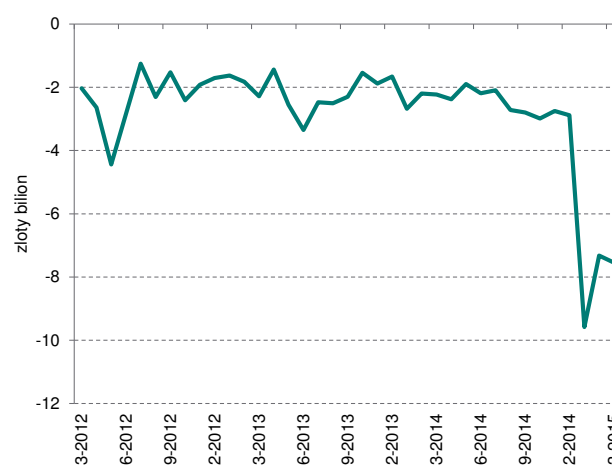
However, a depreciation of the zloty has an impact on an increase in the value of funds needed to hedge the FX balance-sheet position. The weakening and the rise in volatility of the zloty exchange rate entail margin calls, and when need arises to roll over the transaction, they require the use of a larger amount of funds expressed in the zloty.

Figure 2.22. Median of *Value at Risk* for FX risk



Note: See Notes to Figure 2.20.
Source: NBP.

Figure 2.23. Balance-sheet value of CIRS transactions



Notes: The difference between the balance-sheet value of claims and liabilities due to CIRS transactions classified as hedging and held for trading.
Source: NBP.

Most banks hold buffers of liquid assets that are sufficient to cover liquidity needs in the event of large-scale zloty depreciation. After the zloty weakened against the Swiss franc in January 2015, a negative valuation of CIRS transactions rose by around 7 billion zlotys (see Figure 2.23). Therefore, the banks which were involved in the transactions had to raise liquid funds (or use some of the funds they kept) for the margin calls. The results of stress tests

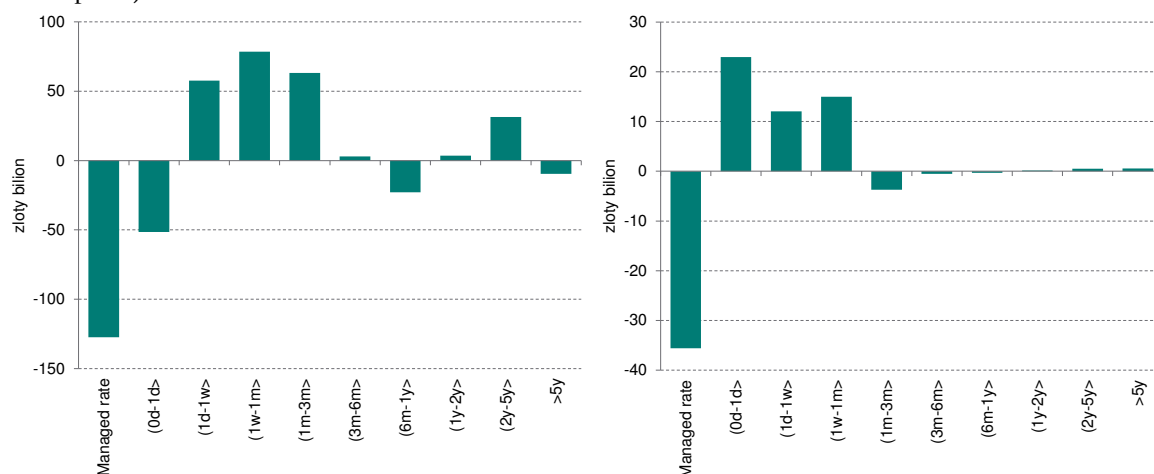
Table 2.2. Balance-sheet value of debt securities by issuer and the IFRS classification (PLN billion)

	Held for trading	Fair value through P&L	Available for sale	Held to maturity	Loans and receivables	Total
Central banks	10.7	19.5	53.4	6.6	0.0	90.1
Central government	22.0	2.0	149.1	13.6	3.8	190.4
Municipalities	0.1	0.3	7.1	0.3	10.3	18.1
Financial sector	0.9	0.0	9.8	2.7	1.1	14.5
Non-financial sector	0.3	0.0	8.3	0.3	15.2	24.2
Total	33.9	21.7	227.7	23.6	30.4	337.4

Note: At the end of March 2015; the share of securities issued by non-residents amounted to: central banks 0%, central government institutions 3%, local-government institutions 0%, financial sector 10%, non-financial sector 0%.

Source: NBP.

Figure 2.21. Contractual interest rate gap in banking book at commercial banks (left-hand panel) and cooperative banks (right-hand panel)



Notes: The gap means 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.

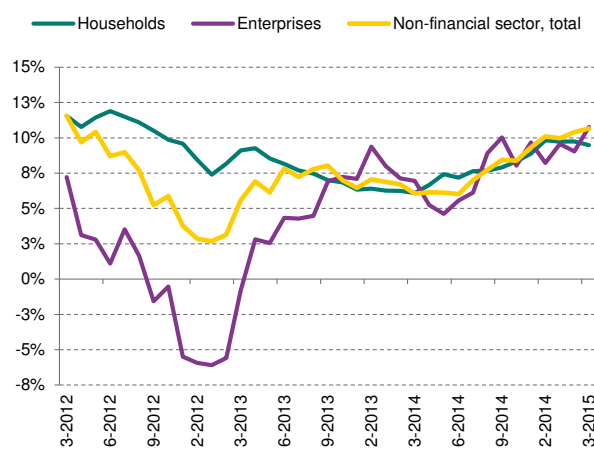
Source: NBP.

(see Chapter 2.7.2.) indicate that the majority of banks would be able to absorb an even more severe depreciation of the zloty.

2.4. Funding structure and liquidity risk

The funding structure of banks continued to improve. A rapid growth of deposits of households and enterprises (see Figure 2.24), despite historically low interest rates, helped the downward trend of the average funding gap to continue (see Figure 2.25).

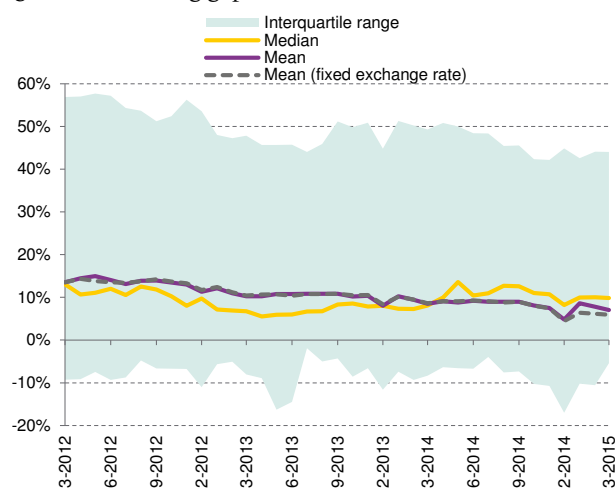
Figure 2.24. Annual growth rate of deposits



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

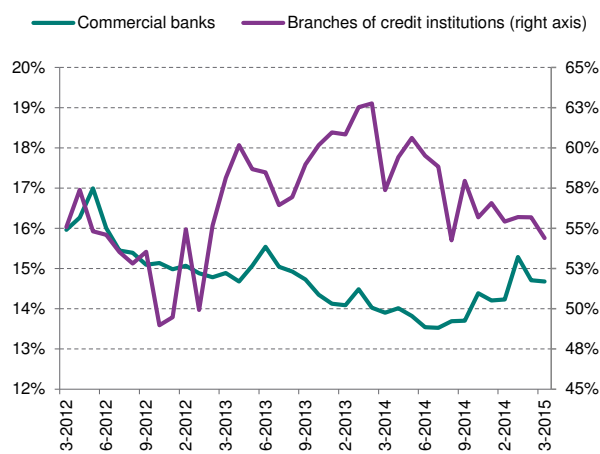
The downward trend of the share of liabilities towards foreign financial institutions in the funding structure of banks was brought to a halt (see Figure 2.26). However, the increase applied only to a small group of banks⁵⁰, and the nature of the funding they received was long-term.

Figure 2.25. Funding gap



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 2012.
Source: NBP.

Figure 2.26. The ratio of liabilities towards foreign financial institutions to balance-sheet total



Source: NBP.

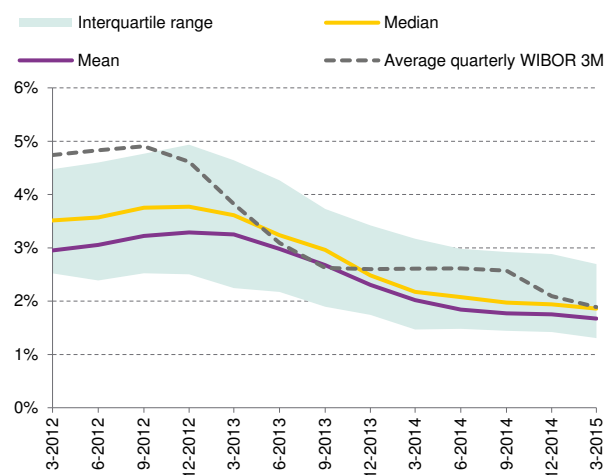
In the longer term, the downward trend of foreign liabilities is associated, to a large extent, with lower needs for foreign currency funding resulting from a steady repayment of foreign currency hous-

⁵⁰To some extent, the depreciation of the zloty against the Swiss franc and the US dollar was also responsible for an increase in liabilities at the level of the whole sector.

⁵¹For tax considerations, Polish banks issue Eurobonds via foreign special purpose companies. In stand-alone financial statements, these funds are therefore shown not as bond issue liabilities, but as liabilities towards a foreign financial institution.

ing loans. At the same time, the share of funds received from parent banks is diminishing in favour of bond issues⁵¹ and loans from international financial institutions. Consolidation processes also has contributed to a fall in intragroup liabilities.⁵² Such a change in the foreign funding structure reduces the risk of concentration and dependence on the condition of foreign controlling entities. On the other hand, the risk of rollover of maturing liabilities may be higher than for transactions with affiliates.

Figure 2.27. Effective interest on liabilities

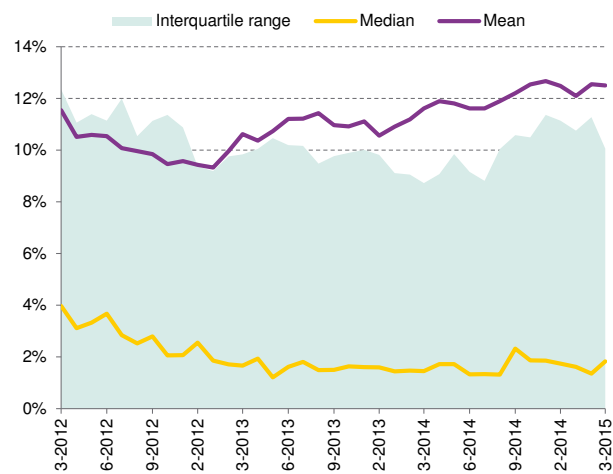


Notes: Effective interest – the ratio of annualised interest expense to annual average balance-sheet value of liabilities. The calculations include zloty and foreign currency liabilities. Source: NBP.

There was an increase in the average cost of funding of banks compared to interbank market rates (see Figure 2.27). Interest expense of banks did not adjust to the interest rate decreases of March 2015 and, to a lesser extent, of October 2014. This mainly stemmed from the structure of the repricing dates of the interest on liabilities (see Chapter 2.3.). Adjustment of interest expense to lower market interest rates can be expected by the end of 2015. However, the possibility of a full translation of a decrease in interest rates will be limited, because the interest on

current deposits is already close to zero. There was also a marked decline of the spread banks earned on new term deposits of households (against the WIBOR rates).

Figure 2.28. Share of domestic Treasury securities in banks' assets



Source: NBP.

The short-term liquidity position of banks remained favourable and did not change significantly. The share of NBP bills in banks' assets dropped and, on the other hand, the share of the Treasury bond portfolio increased despite substantial sales of "available-for-sale" bonds for profit-taking due to their price growth (see Chapter 2.5.). The majority of banks which were selling bonds reinvested their funds by buying new securities. Liquid assets remained highly concentrated and banks varied substantially in this respect (see Figure 2.28).

The good liquidity position of domestic commercial banks is confirmed by the levels of supervisory liquidity ratios.⁵³ Liquidity reserves were above the level of unstable external funds at all commercial banks (M2 liquidity ratio was higher than the regulatory minimum of 1.00). For all commercial

⁵²In some cases, a foreign controlling entity that sells a Polish company has pledged to maintain funding of its foreign currency portfolio. However, such funding is not shown by the purchasing bank as intragroup liability.

⁵³See 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 – December 2009", 2009, NBP.

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 coopera-

tive banks had problems meeting the liquidity ratios. In the future, the situation of cooperative banks will be strongly influenced by their choice of the affiliation model (see Box 4).

Box 4. Introduction of CRD4/CRR and challenges for cooperative banking sector

The basic purpose of the implementation of the CRDIV/CRR regulatory package¹ was to strengthen the security and resilience of the European financial system. To this end, banking activity regulations were reformulated and tightened, mainly in the area of capital adequacy, quality of capital and liquidity.

The specific structure of the cooperative banking sector in Poland is characterised by a significant scale of interconnectedness and mutual exposures between the affiliating banks and affiliated cooperative banks. This structure arises from historical circumstances, ownership changes and domestic legal provisions. These processes have also helped to produce the shape of the sector's current business and organisational model. Polish cooperative banks operate currently in a structure of affiliations, organized around two affiliating banks. The affiliating banks perform specific operational tasks for the cooperative banks, which are their shareholders, by, inter alia, providing access to payment systems. Moreover, the affiliating banks, in cooperation with UKNF, also perform certain supervisory and control functions in relation to the affiliated banks. Under the current business model, the majority of cooperative banks hold sizeable funds on their accounts with the affiliating banks, both current deposits for clearing and settlement as well as deposits of excess liquidity. As the interest rate on deposits at the affiliating banks was satisfactory, starting from 2010 the value of the deposits was growing along with the increase in deposits collected from the non-financial sector by cooperative banks. The high level of cooperative banks' deposits at the affiliating banks led to a strong concentration of the sources of cooperative banks' interest income and, in effect, raised the sensitivity of their earnings to the interest rates of deposits offered by the affiliating banks.²

The existing model of cooperative banking faces challenges related to the need to adapt to the provisions of the CRDIV/CRR package. The major challenges relate to elements of initial capital, Tier I capital, as well as short- and long-term liquidity requirements. The entry into force of the CRR Regulation will imply the obligation for all cooperative banks to comply with the Liquidity Coverage Requirement (LCR³) and the Net Stable Funding Requirement (NSFR⁴). Initial simulations carried out by UKNF as early as in 2011 have shown that the sector would not be able, given the binding manner of the organisation of financial management at the affiliations, to meet the future LCR.⁵ Problems with compliance with the LCR, both by some cooperative banks and the two affiliating banks, arise from the fact that it will not be possible to classify deposits placed at the affiliating banks as liquid assets of cooperative banks and to regard these funds – by the affiliating banks – as a stable source of funding of their assets. Although a cut in interest rate by the affiliating banks led to a decrease in the balance of deposits of cooperative banks (from 32.4 billion zlotys reported at the beginning of the first quarter of 2013 to 26.9 billion zlotys at the end of March 2015, i.e. by almost 17%), the high level of deposits still makes it impossible for the affiliating banks to comply with the future requirements. Under current regulations and in a limited period of time, it is not possible to rebuild the structure of balance sheets of the entities.

Under provisions of the CRDIV/CRR package, an Institutional Protection Scheme (IPS) can be set up to enable operation of structures similar to the Polish cooperative banking sector in the environment of new regulatory requirements. The essence of the IPS is to mutually guarantee the liquidity and solvency of each scheme member as well as to monitor scheme member risk and counteract excessive risks.⁶ A given structure has to be approved by a supervisory authority to be regarded as an IPS. If an IPS is established, it will be possible to classify deposits of cooperative banks at the affiliating banks as liquid assets and to regard funds accepted by the affiliating banks from cooperative banks as stable funds. Additionally, complying with the LCR will be required at group level.

Implementation of an IPS will enable the affiliating banks and cooperative banks to apply 0% credit risk weight for mutual exposures and increase the equity exposure limit towards IPS members.

Table 1. IPS vs. integrated affiliation

Issue	IPS	Integrated association
Objective	<ul style="list-style-type: none"> • Mutual guarantees of liquidity and solvency of each and every member, according to the principles defined in the Act and IPS Agreement 	<ul style="list-style-type: none"> • No explicitly defined objective
Entities with right to establish	<ul style="list-style-type: none"> • Affiliating banks or • Cooperative banks or • Affiliating bank and its affiliated cooperative banks 	<ul style="list-style-type: none"> • Affiliating bank and its affiliated cooperative banks
Management body	<ul style="list-style-type: none"> • Affiliating bank or • Managing unit established specially for that purpose by the members of protection scheme 	<ul style="list-style-type: none"> • No explicitly defined unit
Support mechanisms for members	<ul style="list-style-type: none"> • Aid fund for supporting solvency, financed by contributions from IPS members - (contributions cannot be lower than the sum of 50% of annual fee paid to BFG and entire prudential fee) and also from other sources provided for by IPS Agreement • Liquidity support mechanisms defined in IPS Agreement 	<ul style="list-style-type: none"> • Aid fund for supporting solvency, financed by contributions from integrated affiliation members, as well as from other sources provided for by Affiliation Agreement. The value and the principles regarding contributions to be decided by Affiliation Agreement, • Liquidity support mechanism provided for by Affiliation Agreement (in particular, legal requirement to hold mandatory deposits at affiliating bank)
Main powers of management body	<ul style="list-style-type: none"> • Executing internal control among IPS members • Power to order the cessation of an infringement of the law or IPS Agreement, issue a letter of formal notice of infringement, make a request to an IPS member's competent body to dismiss a member of Board of Management or Supervisory Board • Request to KNF to appoint a trustee for and IPS member or to establish receivership for an IPS member 	<ul style="list-style-type: none"> • Provided for by Affiliation Agreement

Source: NBP.

The amendments to the Act on the operation of cooperative banks, their affiliation and affiliating banks passed by the Sejm provided a response to the challenges arising from the EU regulations. The new provisions are designed to help cooperative banks and the affiliating banks to adapt to all the areas that are critical to the whole cooperative banking sector (in particular: own funds and liquidity requirements). The proposal included in the original draft law sent to the Sejm, provided for the building of the new architecture of Poland's cooperative banking exclusively on the basis of protection schemes. Also, the draft offered detailed legal and organisational solutions on the functioning of the scheme. The draft, prepared during several years' cooperation of a number of parties, was

the effect of arrangements made between safety net institutions and representatives of the cooperative banking sector. At this stage, such a solution was supported by the two affiliating banks during their General Shareholders' Meetings.

In the course of the legislative work on the act, the decision was made to introduce a provision that would help establish an alternative institution to the protection scheme – i.e. an integrated affiliation. The purpose of this change was to allow cooperative banks (large cooperative banks in particular) to choose the form of integration. While the aim of the creation of a protection scheme is to ensure liquidity and solvency of each protection scheme member, the objective of such an integrated affiliation has not been specified. Moreover, the design of the protection scheme ensures the control mechanism of risks taken by banks participating in the scheme by setting up a management unit authorised to control their activities and to counteract excessive risk they take. At the legislative level, such solutions are not included in the proposed design of an integrated affiliation.

According to the KNF⁷, the proposed design of an integrated affiliation does not meet the European requirements for an IPS. In consequence, the establishment of an integrated affiliation by cooperative banks will not yield regulatory benefits, as in the case of an IPS. This will result in non-compliance with the prudential requirements and the need to substantially rebuild the banks' balance sheets. This will provide a significant challenge to the stability of the cooperative banking sector, most notably to the affiliating banks.

Narodowy Bank Polski, concerned with long-term stability of the financial system, including the cooperative banking sector, has shown consistent support for the concept of an affiliation with a protection scheme as an optimal solution for the cooperative banking sector.⁸ Establishing a protection scheme may spark a further integration of the sector of cooperative banks. This solution will help banks which exhibit low effectiveness and high cost intensity levels to compete more effectively with other financial institutions on the nationwide market, using their strengths, especially their knowledge of local markets. By taking decisions on future forms of cooperation, cooperative banks should not only consider their own short-term interests as an individual institution, but also the security of the entire sector and its common long-term interest.

Narodowy Bank Polski believes that it is necessary to implement protection schemes in the cooperative banking sector to ensure the safe operation and development of cooperative banking in Poland. A strong position of the well-managed cooperative banking will be a factor that has a positive influence on domestic financial system stability.

¹ The package includes: Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC (Capital Requirements Directive IV, CRD IV) and Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (Capital Requirements Regulation, CRR)

² For more information on the issue, see Financial Stability Report, NBP, December 2013.

³ LCR will become effective in October 2015.

⁴ NSFR will probably become effective from 2018.

⁵ The affiliating banks may also encounter problems with compliance with the NSFR due to the large share of liabilities towards cooperative banks on their balance sheets. The lack of a final NSFR formula hinders a precise evaluation of the scale of the challenge.

⁶ See Article 113(7) of the CRR Regulation.

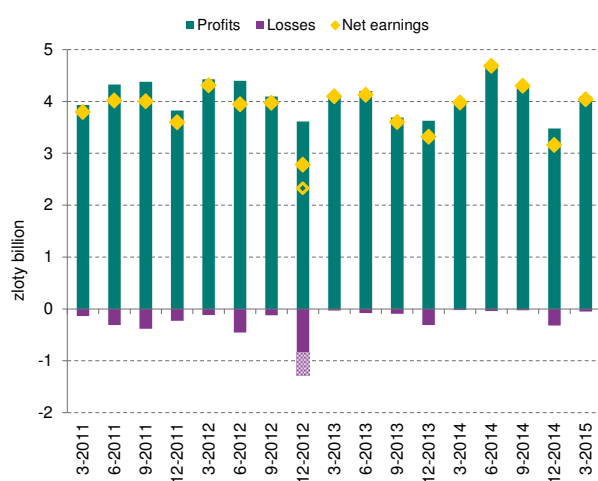
⁷ Letter of 28 May 2015 Ref DBS/DBS_W5/7111/4/24/2015/MW
www.senat.gov.pl/gfx/senat/userfiles/_public/k8/komisje/2015/kbfp/materialy/908_knf.pdf

⁸ More details in Financial Stability Report (July 2014 and January 2015 editions).

2.5. Earnings

In Poland, positive earnings are the main source of capital for banks (since 2007, they accounted for approximately 70% of growth of regulatory capital). For this reason, the current and future level of earnings is a significant input for assessment of the resilience of the banking sector to the materialisation of risks.

Figure 2.29. Quarterly net earnings of the banking sector

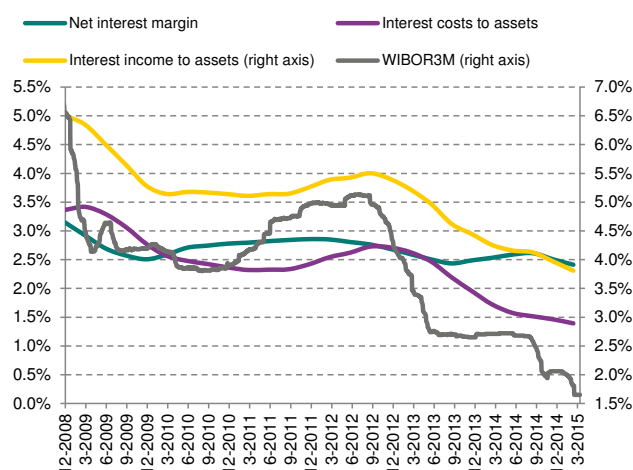


Note: The empty marker and the dotted bar are used to mark the estimated net earnings and the sum of losses of the banking sector adjusted for the net earnings of banks that either ceased their operations in the fourth quarter of 2012 or carried them on in a modified form.
Source: NBP.

The earnings and profitability ratios of the banking sector fell in the period analysed (see Figure 2.29 and Table 2.3). At the same time, the number of entities with negative profitability (19) and their share in the sector's assets (1.7%) remained unchanged, although the composition of the group was partly altered.⁵⁴ Losses reported by the majority of these

institutions were low as compared with the magnitude of their operations and the value of regulatory capital. However, losses posted by two banks led to problems in maintaining the capital adequacy ratios above the regulatory minimum (see Chapter 2.6.).

Figure 2.30. Interest income and expense



Note: Data on income/expense/margin ratios – annualised.
Source: NBP.

The fall in net interest margin was mainly responsible for the deterioration in the banking sector's profitability. The impact of this factor was partially mitigated by a rise in non-interest margin and a certain increase in leverage, while the burden of operating costs and credit risk materialisation costs on earnings remained stable (see Table 2.3). This happened despite significantly higher contributions to BFG and the implementation of supervisory recommendations resulting from the AQR by banks.

The decrease in net interest margin resulted mainly from interest rate cuts. The interest on assets adjusted to market interest rate changes at a

⁵⁴At the end of the period analysed, negative profitability ratios were shown by three commercial banks (a 1.5% share in the sector's assets), eight branches of credit institutions (0.1%) and eight cooperative banks (0.05%) against two commercial banks (a 1.4% share), eight branches of credit institutions (0.3%) and nine cooperative banks (0.05%), respectively, at the end of September 2014.

⁵⁵A positive interest rate gap in a period up to one year, reported by the majority of Polish banks (see Chapter 2.3.), implies that *ceteris paribus* in the first months after an interest rate decrease the interest on assets decreases faster than the interest on liabilities, which leads to a decline in net interest income. Historical experience shows that after around two quarters, the situation is reversed, i.e. the interest on assets stabilises or falls at a slower rate as the interest on liabilities falls faster and net interest margin grows. After around a year from the original impulse, net interest margin stabilises at a lower level than before the falls, but at a higher level than the initial minimum in the adjustment process.

Table 2.3. Selected operating indicators of the banking sector

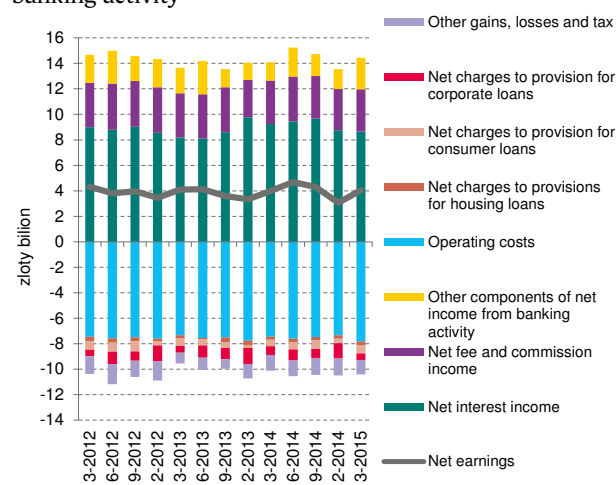
	2013		2014				2015
	Q3	Q4	Q1	Q2	Q3	Q4	Q1
As % of average assets¹							
Net interest income	2.44	2.49	2.53	2.59	2.61	2.50	2.41
Net non-interest income	1.62	1.49	1.43	1.39	1.37	1.38	1.42
Net income from banking activity	4.06	3.98	3.96	3.98	3.98	3.89	3.83
Operating costs ²	2.19	2.16	2.14	2.12	2.08	2.02	2.00
Net charges to provisions for impaired loans	0.54	0.55	0.56	0.57	0.56	0.54	0.53
Pre-tax earnings	1.36	1.34	1.32	1.35	1.39	1.35	1.32
Net earnings (ROA)	1.10	1.09	1.07	1.09	1.12	1.08	1.06
As % of net income from banking activity¹							
Net interest income	60.0	62.5	63.9	65.1	65.6	64.4	63.0
Net non-interest income	40.0	37.5	36.1	34.9	34.4	35.6	37.0
Net income from banking activity	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Operating costs ²	54.0	54.4	54.1	53.3	52.1	51.8	52.1
Net charges to provisions for impaired loans	13.3	13.9	14.1	14.3	14.0	14.0	13.8
Pre-tax earnings	33.4	33.8	33.3	34.0	34.9	34.7	34.6
Net earnings	27.1	27.3	26.9	27.4	28.0	27.8	27.7
As % of Tier 1 capital^{1,3}							
Pre-tax earnings ⁴	14.7	14.5	14.4	14.9	15.5	15.2	15.1
Net earnings (ROE) ⁴	11.9	11.8	11.5	11.8	12.2	11.9	11.8

¹ Annualised data.² Operating costs = general expense and depreciation.³ Tier I 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.

faster pace than the interest on liabilities⁵⁵ (see Figure 2.30). Moreover, the possibility of a further lowering of interest on some categories of liabilities was limited (see Chapter 2.4.).

As a result, the estimated profitability of almost all analysed credit products decreased (see Figures 2.32–2.35). Only in the case of loans to SMEs did the adjusted net interest margin ratio remain stable due to the lower burden of credit risk materialisation costs. The most notable decrease in estimated profitability concerned consumer loans (the most profitable product), which was primarily the effect of a fast fall of effective interest on loans, related to the lowering of the maximum permissible nominal interest on loans from 16% to 10% (the level is set at four times the NBP Lombard rate). The fall in consumer loan profitability was also driven, albeit to a lesser extent, by a rise in impairment provisions (see Chapter 2.2.).

Figure 2.31. Sources and allocation of net income from banking activity

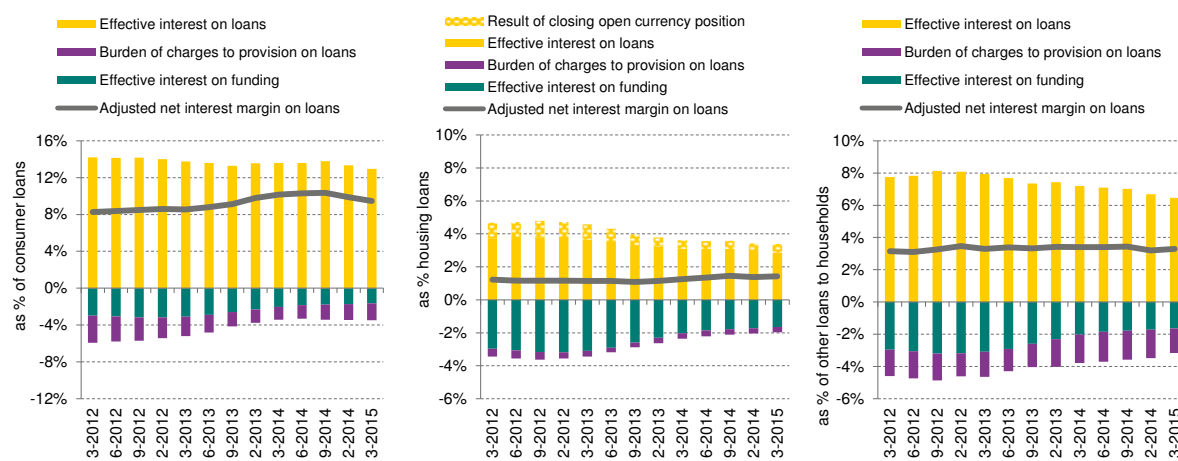
Note: Quarterly data.
Source: NBP.

In the period analysed, the increase in non-interest margin by banks was a result of the sale of financial assets. The sale concerned government bonds from the “available-for-sale” portfolio and other in-

struments, such as shares of financial institutions. The largest component of net non-interest income, i.e. net fee and commission income, declined despite the fact that the level of existing fees and commissions were gradually raised by banks and that new fees and commissions were imposed (see Figure 2.31). It seems that clients may have avoided

at least some of the fees and commissions by giving up services covered by the fees or by using them to a lesser degree. Banks' fees and commissions revenue was limited by a further reduction of the interchange fee⁵⁶ and the finalisation of adjusting their activities to Recommendation U on good practices with regard to *bancassurance*.⁵⁷

Figure 2.32. Estimated profitability of consumer loans (left-hand panel), housing loans (middle panel) and other loans to households (right-hand panel)



Notes: Annualised data.

Adjusted net interest margin values 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 costs of capital needed to cover the capital requirements. The estimate takes also no account of fees and commissions income (except for those included in the effective interest rate), related, inter alia, to cross-selling of bank products that may significantly differ depending on product type. Estimated profitability takes no account of profits earned on foreign currency-denominated loans due to the difference between the bid and offer prices of currencies (FX spread).

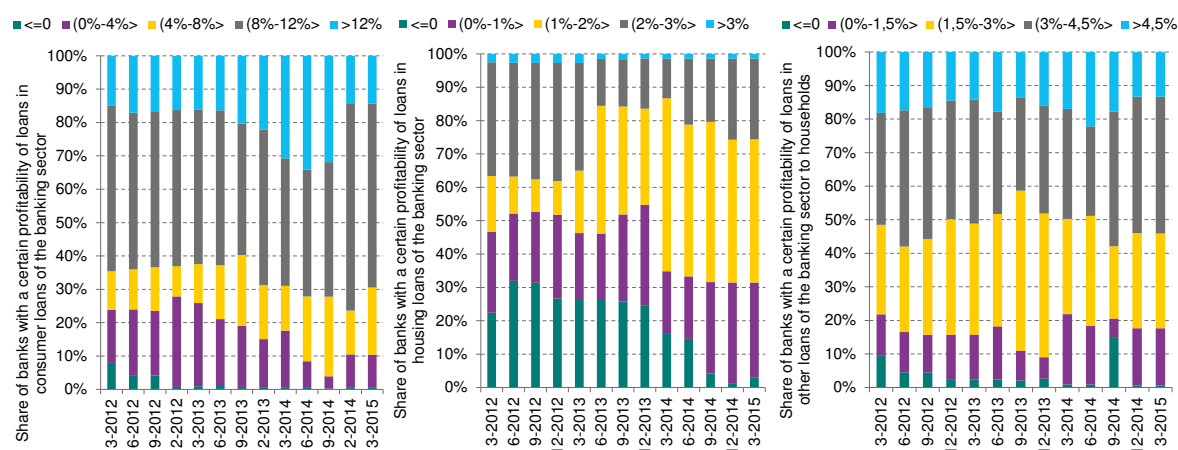
The "result of closing an open currency position" for housing loans is the estimated net gains/losses on closing an open on-balance-sheet FX position (related to the granting of Swiss franc-denominated housing loans), assuming the use of rolled over 3-month *fx swap* CHF/USD and USD/PLN swaps. The forward exchange transaction (the so-called long leg) of a *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.

⁵⁶See the Act of 28 November 2014 on amending the Act on payment services, Journal of Laws of 2014, item. 1271. The Act allows for alignment with its provisions within three months from entry into force (29.01.2015).

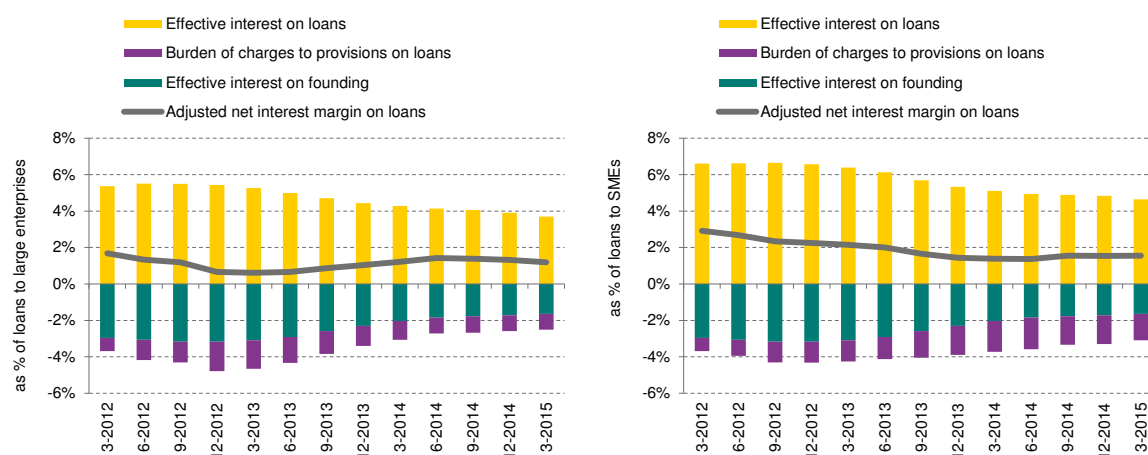
⁵⁷This adjustment was to be completed in the first quarter of 2015. See Resolution No. 183/2014 of KNF of 24 June 2014 on issuing of Recommendation U on good practices with regard to *bancassurance* (Journal of Laws of KNF of 2014, items 12).

Figure 2.33. 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) extended by the banking sector



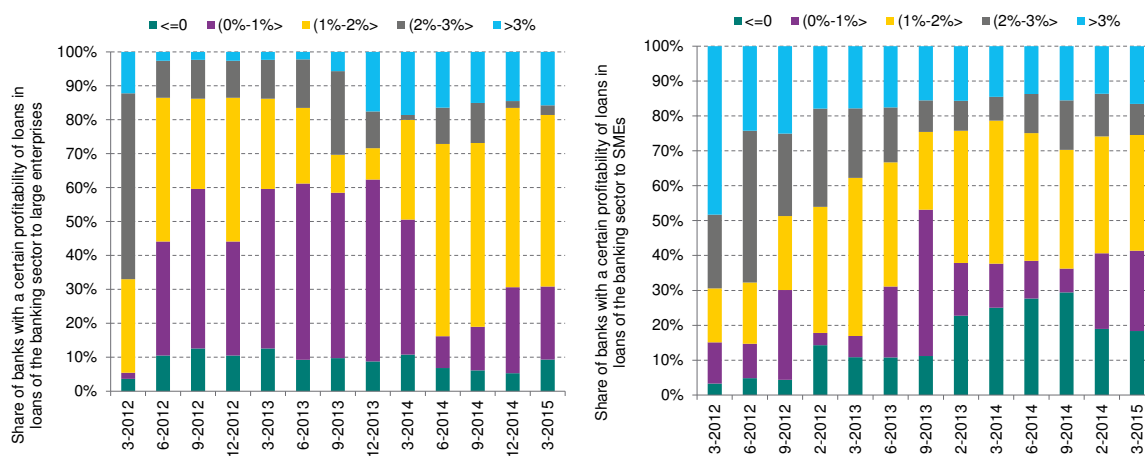
Note: For description of estimated profitability measurement, see Notes to Figure 2.32.
Source: NBP.

Figure 2.34. 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 2.32.
Source: NBP.

Figure 2.35. 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 2.32.
Source: NBP.

Outlook

A further fall in the profitability of the Polish banking sector (measured by ROA and ROE) may be expected in the upcoming quarters. This will be affected by:

- **A fall of net interest margin.** In line with the mechanism of adjusting the interest on assets and liabilities to market interest rate changes discussed above, the fall of net interest margin sparked by the March 2015 decision of the Monetary Policy Council should last for a few months. This trend can be expected to come to a halt (or even be partially reversed) only at the

turn of 2015 and 2016. Financial market participants do not expect further interest rate decreases in the near future (see Chapter ??). The magnitude of the fall of interest margin may be reduced by a potential shift in the structure of lending consisting in an increased share of more profitable products in banks' portfolios (see Chapter 2.1.).

- **A fall of non-interest margin.** Earnings will continue to be negatively influenced by regulatory interventions, such as the statutory reduction of the interchange fee or the restriction of sales of insurance and investment products. The rise in fees and commissions announced

by banks will probably reduce the decline in income at the most. In addition, competition for clients' funds in the environment of a relative growth in the attractiveness of investments directly in financial markets or via investment funds may help to mitigate the process of raising deposit-related fees. Some banks may try to increase net non-interest income by selling financial instruments, but taking such measures will be limited by the recently observed fall in government bond prices (see Chapter 1.2).

- **An increase in contributions paid by banks to the Bank Guarantee Fund** related to the raising of the rates of an annual contribution and a prudential fee for 2015⁵⁸, and in the longer term, also with changes planned in the deposit guarantee scheme and introduction of forced restructuring proceedings.⁵⁹
- **Stabilisation or a further fall of the burden of charges to loan impairment provisions on earnings** due to a relatively good economic situation and a fall in interest on loans. Banks' implementation (by the end of 2015) of the AQR-related supervisory recommendations, including measures concerning a more conservative approach to restructured loans and models used in estimating impairment provisions and IBNR provisions, may have an opposite impact. However, the impact of this factor should not be significant. The earnings of some banks could also be negatively affected by potential restructuring or

other Swiss franc loan-related measures (see Box 2).

Although profitability ratios are expected to fall, they will remain on relatively high levels, and a vast majority of banks will still be profitable. The capital position of the majority of banks will also allow them to dampen the decline of ROE by increasing leverage.

The profitability outlook may be revised by a possible implementation of the currently discussed proposals to levy a tax on banks and convert, on a mandatory basis, foreign currency housing loans into zlotys, especially at a foreign exchange rate significantly lower than the current market rate. Introduction of measures that would significantly limit banks' earnings would adversely affect their ability to raise capital and, as a consequence, to extend loans.

Although the level of interest rates in Poland is historically low, in comparison with other EU countries it leaves more room for the attainment of positive deposit margins, while keeping positive interest rates on deposits to clients. The persistence of low inflation and interest rates at the current level in the long term should, therefore, have no negative impact on banks' earnings. After adjusting to recent interest rate cuts, net interest margin should stabilise. The main risk factor for such a scenario can be a potential intensification of competition for deposits of the non-financial sector, which could result in an increase in their interest, including offering clients interest on deposits with a negative deposit margin.

⁵⁸The former was raised from 0.1% to 0.189% of 12.5 times the sum of capital requirements, and the latter – from 0.037% to 0.05% of 12.5 times of the sum of capital requirements. See Resolution No. 28/2014 of the BFG Council of 19 November 2014 *on determining the amount of the rate of a mandatory annual contribution for 2015 paid by entities covered by the obligatory guarantee scheme to the Bank Guarantee Fund* and Resolution No. 29/2014 of the BFG Council of 19 November 2014 *on determining the amount of the rate of a prudential fee for 2015 paid by entities covered by the obligatory guarantee scheme to the Bank Guarantee Fund*.

⁵⁹See draft law of 26 February 2015 *on the Bank Guarantee Fund, the deposit guarantee scheme and forced restructuring proceedings* available on the website of the Government Legislation Centre.

Box 5. Assessment of the impact of the persistence of a historically low level of nominal interest rates on the stability of the commercial banks' sector in Poland

Nominal interest rates in the global economy have been displaying a secular downward trend and currently they remain at historically low levels in many countries. In the group of 90 major global economies, the main interest rates of central banks do not currently exceed 2% in almost half of the cases, whereas in several European countries the interest rates are even negative. Both in the United States, and in the euro area the interest rates are close to zero.

There are many reasons for this, but often such factors are indicated as, *inter alia*¹: structural conditions of weaker economic growth, high savings (although unevenly distributed – mainly in some of the so-called emerging markets countries), high economic risk and low investment. Many central banks conduct monetary policy aimed at, among others, mitigation of adverse effects of these conditions. In particular, high indebtedness of many economies, comprising various groups of debtors, may be one of the premises to carry out the policy of low interest rates. Because of these factors, the global interest rates may continue to be relatively low over a long period of time, although processes conducive to increasing the current interest rates exist (e.g. the improvement of the general economic climate).²

International capital flows may act as a stimulus which decrease disparities in the interest rates levels between countries. As significant differences in interest rates levels may cause the inflow of speculative capital, some countries not experiencing economic problems may also hold low interest rates.

The current level of nominal interest rates in Poland is, in historical terms, not only low but also the lowest one. Although Poland currently belongs to the group of countries with low nominal interest rates, their causes are, in many respects, different than in several developed countries. In particular, they neither include the low economic growth rate nor the restructuring measures of central banks resulting from the problems of the financial sector. The economic growth in Poland is one of the highest in Europe, and the situation of the financial sector is assessed as exemplary.³ The low level of interest rates in Poland results, to a large extent, from the effects of low, mostly imported, inflation. In Poland it is also a new, still short-term situation, whose effects so far have been reflected in current economic processes to a relatively limited extent. Mainly for this reason, it is important to conduct a forward-looking analysis of its consequences for the Polish economy, including the banking sector, based both on international experience, and on the scenario and simulation research.

Both the literature and international experience show that the impact channels of the low interest rate environment on the banking sector may be diversified. They may have both direct and indirect effects – shaping the economic situation of the banking system's stakeholders. The most important channels are listed below:

- the balance sheet channel, comprising the adjustments on the supply and demand side for financial resources, as well as measures optimising the regulatory costs of banks' operations (zombie effect, *evergreening*, etc.),
- the risk perception and risky behaviour channel (*risk taking channel*),
- the asset prices channel (resulting, *inter alia*, in the formation of price bubbles in certain markets - particularly, in the real estate market),
- the channel associated with interest rate growth risk (*reversal effect*).

One of the main mechanisms activating these channels may be the adverse impact of low interest rates on bank margins and on the relatively low costs of credit. Although the impact of market interest rates on bank net interest margins (NIMs) is quite complex and may be asymmetrical depending, *inter alia*, on whether they are raised or cut, and on different effects of changes in these rates in a shorter and longer horizon, nevertheless, a positive correlation

exists between NIMs and short-term interest rates.⁴ In the case of very low interest rates, the so-called zero lower bound on deposit rates also occurs, due to which in a certain area of interest rates their decline may be transferred exclusively to cuts in the price of credit, thus resulting in reduction of margins. Accordingly, low interest rates may encourage commercial banks to search for strategies to compensate the effect of NIMs decline; in particular, to undertake more risky actions, but associated with the possibility of obtaining higher interest rates. Behaviour of banks stimulated in this way takes exactly the form of the so-called excessive risk appetite⁵, including the measures defined as the search for yield.⁶ Such strategies are fostered by the easing of lending requirements by commercial banks - a documented fact is the negative correlation between the level of interest rates and the restrictiveness of banks' lending policy.⁷ They also include the attitude of depositors, who being less risk-averse or unaware of the risk scale, and at the same time discouraged by the low interest rates on deposits, look for alternative investments. Such a phenomenon may generate speculative bubbles, mainly, but not only in the real estate market⁸, posing a significant threat for the stability of the banking sector.

One should also remember about the positive effects associated with the reduced costs of servicing liabilities by banks' debtors (as long as their interest rate is variable). In particular, such a situation proved to be beneficial, at least within a shorter horizon, for the corporate sector. International experience shows that despite low interest rates, the debt of this sector remained relatively stable and did not generate an increased threat for the financial system due to the excessive growth of credit demand. On the other hand, the low level of interest rates contributed to the decline in interest payments and to an increase in companies' ability to service debts.

However, certain problems could have appeared in a longer-term perspective –because of the "loose" financial environment mechanisms for the elimination of permanently ineffective economic entities became weaker.⁹ Thus, from the banking sector point of view, such a situation meant the possibility of improving the quality of the corporate loan portfolio in a short-term perspective, although with a certain risk of postponing these problems. Other potential adjustments of the banking sector to the declining NIMs may include an attempt to increase the non-interest incomes or reduction of certain costs (e.g. of employment).

Regarding the impact of low interest rates on the stability of the Polish banking sector, it should be emphasised that its current situation is very good – it has a low leverage, adequate capital endowment and generates high profits, which provide a basis for increasing the capital buffers. The condition of the non-financial corporate sector is also very good. The economic standing of households has also been systematically improving – unemployment is falling, employment and wages are growing. If historically low interest rates persist, it may be presumed that this situation will affect the directions of banks' activities and it will have a certain impact on their financial results and capacity to create capital buffers.¹⁰ However, this should not lead to deeper changes in the structure of the banking sector operations or jeopardise its stability.

On the other hand, a certain modification of banks' strategies towards higher sales of more profitable products, simultaneously generating a lower capital requirement, may be expected. The trends to increase the scale of banks' operations may also be accompanied by excessive loosening of lending policy standards and the phenomenon of adverse selection. So far, no symptoms of mounting risks in this area have been observed. However, prolonged period of low interest rates or their further reduction may result in the occurrence of non-linear effects, including significant changes in the behaviour of banks and their clients. In the case of clients, such changes could mainly involve a marked growth of interest in alternative and more profitable forms of saving compared to bank deposits and accounts. This could subsequently lead, inter alia, to the growth of competition both for depositors and for borrowers, which would result in an increase in the cost of money for banks with the simultaneous possible deterioration of yield and quality of the loan portfolio.

One of the main risks for the banking sector operating over a longer period of time in the environment of low interest rates could be a strong growth in the level of those rates in the subsequent period. In the current situation, it seems that the probability of such a growth is limited and its potential causes would include: a strong acceleration of economic growth in the euro area, a strong depreciation of the zloty, or supply shocks in commodity

markets, in particular, in energy markets. However, the materialisation of this scenario will depend, inter alia, on the level of interest rates in the international environment of Poland. In order to estimate the potential impact of materialisation of such a scenario on the banking system, the simulation of an impact of a one-off, strong growth in interest rates on the economic situation of banks in Poland was performed. The simulation was based on the assessment of reactions of corporations and households to such an incident and their transmission to the banking sector. In the simulation it was assumed that the current level of NBP interest rates will be maintained until the end of 2017, to be followed by a shock increase to 5% or 7% (two variants), i.e. to the highest levels recorded in Poland over the recent 10 years. The results show that a very strong growth in interest rates after 2017 could significantly decrease the profitability of banks. In eight or nine banks capital shortfalls would occur, with respect to the levels recommended by the KNF. However, even in the extreme variant, the aggregate shortfall amount would be limited – reaching approximately 2.5 billion zlotys (in the basic variant – 1.5 billion zlotys).

To conclude, it can therefore be assumed that the maintenance of the current environment of low interest rates should not generate substantial risks to the stability of commercial banks. The potential effects of a significant growth in interest rates will also not pose a serious threat for this sector. However, it is necessary to maintain the current high credit standards. In particular, banks should ensure that borrowers drawing long-term loans with a variable interest rate hold adequate income buffers in case of any significant growth in the level of interest rates.

Table 1. Results of simulation

	Historical data for 2014	Results of simulation	
		basic variant	extreme variant
Annual average (as % of assets)			
Net charges to provisions for impaired loans	0.6	1.1	1.5
Pre-tax earnings	1.5	0.8	0.4
Value at the end of period			
Share of banks generating losses in assets of analysed banks (in%, as at the end of 2014)	1.6	16.0	20.2
Capital needs (zloty billion) ¹	0.4	1.7	3.3
Share of banks requiring increase of capital in assets of analysed banks (in %, as at the end of 2014)	1.4	14.9	15.8

¹ The capital needs of banks have been determined in relation to the levels of capital ratio compliant with the KNF recommendations concerning dividend payouts (12.5% for the total capital ratio, 9% for the Common Equity Tier 1 ratio). Source: NBP.

¹ See G. Thwaites, „Why are real interest rates so low? Secular stagnation and the relative price of investment goods”, Bank of England, 2015.

² See M.J. Rudolph, „Sustained Low Interest Rate Environment: Can It Continue? Why It Matters”, Rudolph Financial Consulting, LLC, 2014.

³ See „Republic of Poland: Concluding Statement of the 2015 Article IV Mission”, IMF, 2015.

⁴ See P. Alessandri, B. Nelson, „Simple banking: profitability and the yield curve”, Bank of England Working Paper 452, 2012.

⁵ See A. Maddaloni, J.-L. Peydró, „Bank Risk-Taking, Securitization, Supervision and Low Interest Rates. Evidence from the Euro Area and the U.S. Lending Standards”, ECB Working Paper Series 1248, 2010; T. Paligorova, J.A.S. Jimenez, „Monetary Policy and the Risk-Taking Channel: Insights from the Lending Behaviour of Banks”, Bank of Canada Review Autumn, 2012.

⁶ See C. Borio, H. Zhu, „Capital regulation, risk-taking and monetary policy: A missing link in the transmission mechanism?”, Journal of Financial Stability 8, 2011.

⁷ See G. Dell'Ariccia, L. Laeven, G. Suarez, „Bank Leverage and Monetary Policy's Risk-Taking Channel: Evidence from the United States”, IMF Working Paper 13, 2013.

⁸ See K. Forbes, „Low interest rates: King Midas' golden touch?”, Speech, The Institute of Economic Affairs, Bank of England, 2015.

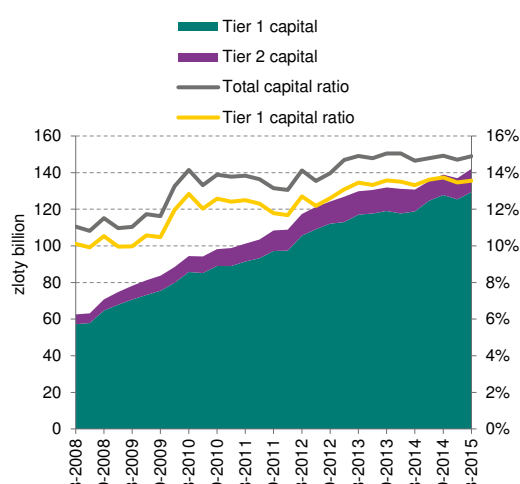
⁹ See R.J. Caballero, T. Hoshi, A.K. Kashyap, „Zombie Lending and Depressed Restructuring in Japan”, American Economic Review 98, 2008.

¹⁰ See Box 2. Impact of a fall of zloty interest rates on the situation of banks, "Financial Stability Report. January 2015, NBP, Warsaw 2015".

2.6. Banks' capital position

In the period analysed, banks' regulatory capital continued to grow⁶⁰ (see Figure 2.36). Regulatory capital rose by a total of 2.3%, with the increase distributed evenly on Tier 1 and Tier 2 capital (each approx. 1.5 billion zlotys). Common Equity Tier 1 rose mainly due to the retention of earnings of 2014 and those from the first quarter of 2015⁶¹, and Tier 2 capital – on an increase in subordinated debt.

Figure 2.36. 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 increased at a rate close to the growth of regulatory capital. The increase in capital requirements mainly applied to

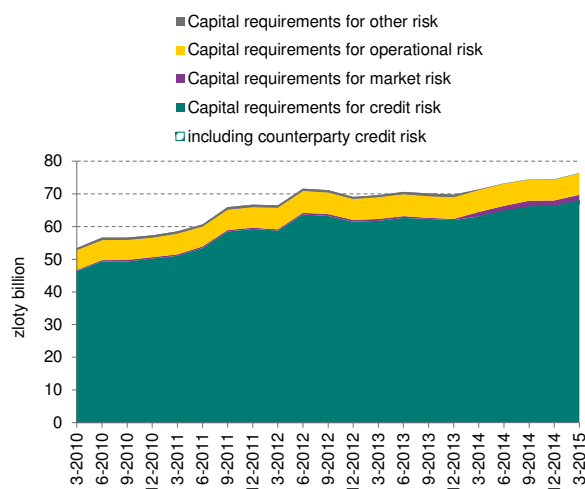
credit risk (see Figure 2.37), which was associated with lending growth and, to a lesser extent, with a depreciation of the zloty. The capital requirement for credit risk was influenced by the supporting factor used for loans extended to SMEs. The impact of this factor was stronger at cooperative banks, where the share of exposures towards SMEs in assets was relatively large. Owing to this, cooperative banks reduced the capital requirement for credit risk by over 11% as compared with the requirement with no supporting factor applied.

The capital requirement for market risk, which is traditionally insignificant in the Polish banking market, declined. A small value of this requirement stems from the business strategy of Polish banks which are, to a small extent, involved in activity classified in the trading book (see Chapter 2.3.). Position risk in traded debt instruments (around 68%) and credit value adjustment risk (CVA) (around 30%) had the largest share in the requirement for market risk. The requirement for FX risk remained minor, as most banks hedged their FX balance-sheet positions.

⁶⁰ The analysis includes commercial banks with their foreign branches and cooperative banks. Three domestic banks have foreign branches, but the scale of their operations is very small (the foreign branches' assets account for less than 0.2% of the banking sector's assets and around 1% of the three banks' assets). BGK was excluded from the analysis because it is not subject to the CRDIV/CRR regulatory package.

⁶¹ The growth in capital in the whole sector was possible despite PKO BP's acquisition of Nordea Bank in the fourth quarter of 2014. The acquisition led to a decrease of the items Share capital and Share premium (by approx. 0.9 billion zlotys) and increase of the items Goodwill and Other intangible assets (by around 1 billion zlotys), by which Common Equity Tier 1 is decreased.

Figure 2.37. Capital requirements



Note: The value of the capital requirement 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 (in the previous edition of the Report, in order to ensure better comparability with series before CRDIV/CRR, the capital requirement for credit valuation adjustment (CVA) was included in this category, now it is classified into the category of market risk). Source: NBP.

The domestic banking sector was characterized by a high ratio of risk-weighted assets to total assets (around 67%), which however is not evidence of taking high risk, but of conservative risk estimation methods. Most banks used simple methods for calculating capital requirements⁶² that produce, in principle, more conservative estimates than advanced methods permitted in the CRDIV/CRR package.⁶³

The average total capital ratio in the domestic banking sector did not change due to a similar increase in regulatory capital and capital requirements. At the end of March 2015, it was 14.9%, and

average Common Equity Tier 1 and Tier 1 capital ratio was 13.6%.⁶⁴

Most banks more than met minimum capital adequacy ratios. Banks with a total capital ratio above 12% represented 97.7% of assets of domestic banks (see Figure 2.38). However, at the end of March 2015, two banks, which were subject to recovery programmes and other UKNF measures, did not meet the standards specified in the CRDIV/CRR package.

The majority of banks would meet the capital standards, if today they had to deduct regulatory capital by the items which, according to the provisions, are to be gradually excluded from this capital. These deductions concern, inter alia, a gradual amortisation of the paid-up members share fund at cooperative banks and the maturing of other instruments grandfathered as capital instruments. Should these items be excluded – as at the end of March 2015 – commercial banks' funds would fall by around 1 billion zlotys (i.e. by 0.8%), and co-operative banks' funds by around 0.7 billion zlotys (i.e. by 6.7%).

In the case of cooperative banks, the actual decline in capital can be much smaller after entry into force of the amendments to the *Act on the operation of cooperative banks, their affiliation and affiliating banks*⁶⁵. According to the amendments, cooperative banks will be allowed, inter alia, to reduce the possibilities of making payments from the paid-up members share fund, which will help them to classify

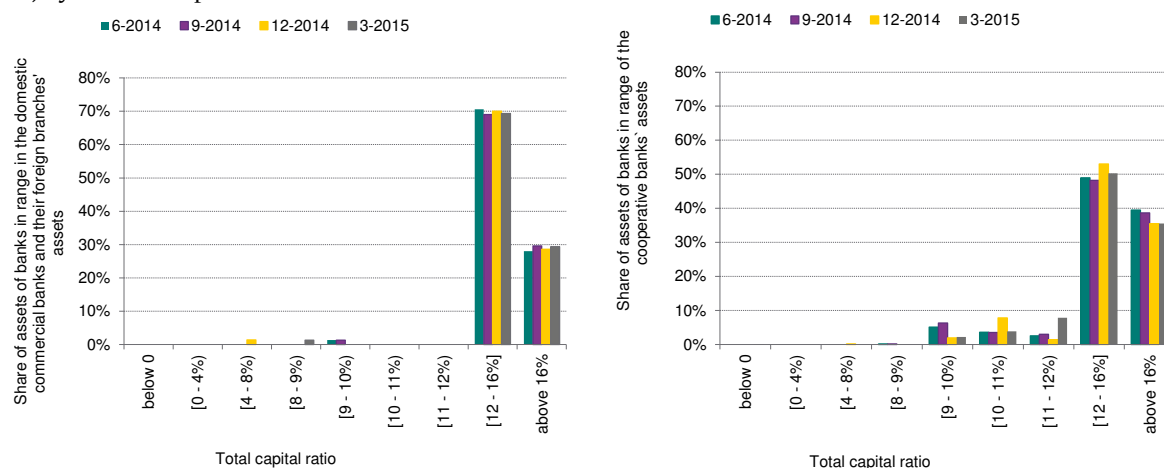
⁶²The methods are: standardised approach for credit risk, basic indicator approach or standardised approach for operational risk and the simplest methods under market risk.

⁶³Two banks (with a 29% share in the sector's assets) calculated the capital requirement for operational risk using advanced measurement approach, and four other banks (with a 20% share in the sector's assets) used internal ratings based approach for the needs of calculating the capital requirement for credit risk. During the co-called transitional phase, banks using advanced methods cannot lower their capital requirements below the reference amount arising from the application of the standardised method or Basel I methodology. It can be estimated that owing to the application of advanced methods, the six banks discussed here, lowered their capital requirements by around 3 billion zlotys, and as a result, increased their total capital ratios by, on average, 1.2 percentage points (as compared to the situation as if they used simple methods).

⁶⁴In accordance with CRDIV/CRR, the minimum levels of these ratios, effective since 2015, are respectively: 4.5% and 6%, and total capital ratio – 8%. From 1 January until the end of 2014, these levels amounted to 4%, 5.5% and 8%, respectively.

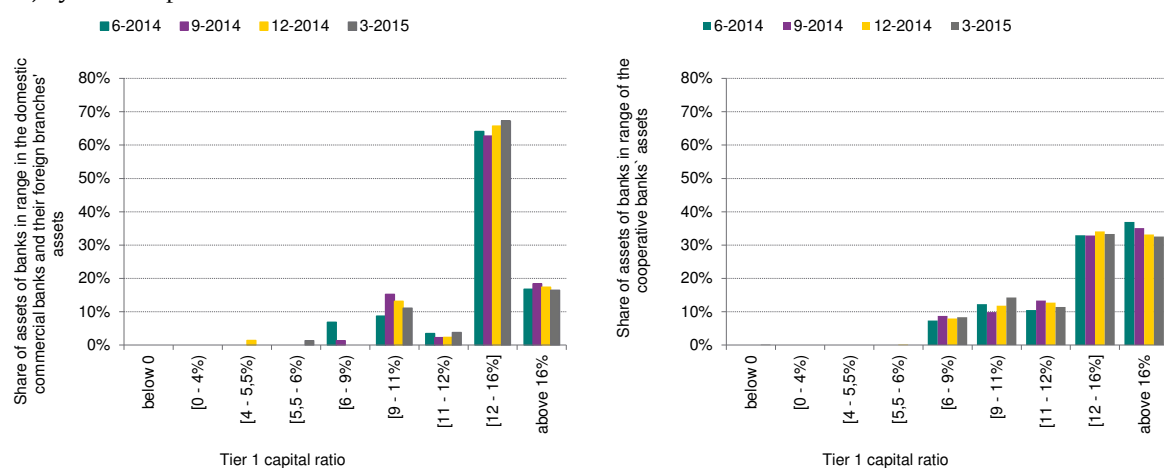
⁶⁵The law of 25 June 2015 on amending the Act on the operation of cooperative banks, their affiliation and affiliating banks and certain other laws.

Figure 2.38. Distribution of assets of domestic commercial banks (left-hand panel) and cooperative banks (right-hand panel) by the total capital ratio



Source: NBP.

Figure 2.39. Distribution of assets of domestic commercial banks (left-hand panel) and cooperative banks (right-hand panel) by Tier 1 capital ratio



Source: NBP.

these funds as Common Equity Tier 1 instruments. Also, after establishing the institutional protection scheme (IPS), cooperative banks participating in an IPS will be allowed to use a zero risk weight for exposures to other participants in a given IPS and will not have to deduct regulatory capital by the value of capital exposures to other participants of the IPS. This, in particular, applies to deposits and equities of cooperative banks in the affiliating associating banks. However, it should be noted that the law also provides for the creation of the so-called integrated affiliations, whose participants will not be authorised to enjoy preferential treatment of mutual exposures for the calculation of capital adequacy and liquidity standards, unless these affiliations fulfil the conditions enabling them to be considered as IPSs. In the case of banks participating in such affiliations, meeting the capital adequacy and liquidity standards will represent a big challenge (see Box 4).

The Polish banking sector is characterised by low leverage, which confirms the positive assessment of its capital position. At the end of March 2015, the traditional leverage ratio (i.e. the ratio of banks' assets to Tier 1 capital) amounted to 11.4, and the ratio calculated according to the CRDIV/CRR requirements⁶⁶ amounted to 8.4%. The EU standard for the leverage ratio, defined in the CRDIV/CRR regulatory package, is yet to be set, and its value should be determined by the European Parliament by the end of 2017. According to the Basel Committee, the minimum leverage ratio should be 3%.⁶⁷ At present, the leverage ratio standard at this level would not be met by only two banks (with a 1.2% share in the sector's assets).

2.7. 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 of these approaches investigates the impact of standardised shocks that are not assigned to the macroeconomic scenario, but comparable over time. The second of these approaches considers a specific, consistent macroeconomic shock scenario and tests resilience of banks to its materialisation.

2.7.1. 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 performed⁶⁸ the results of which indicate the scale of the deterioration in the quality of performing loans that individual banks may absorb without breaching any of the capital adequacy standards. The results of the simulation allow to rank the banks by their resilience to a deterioration in the quality of their loan portfolios. The share of banks – in the banking sector's assets – that would be able to absorb only a minor (10%) deterioration in their loan portfolio quality is analysed in the simulation as the measure of their sensitivity.

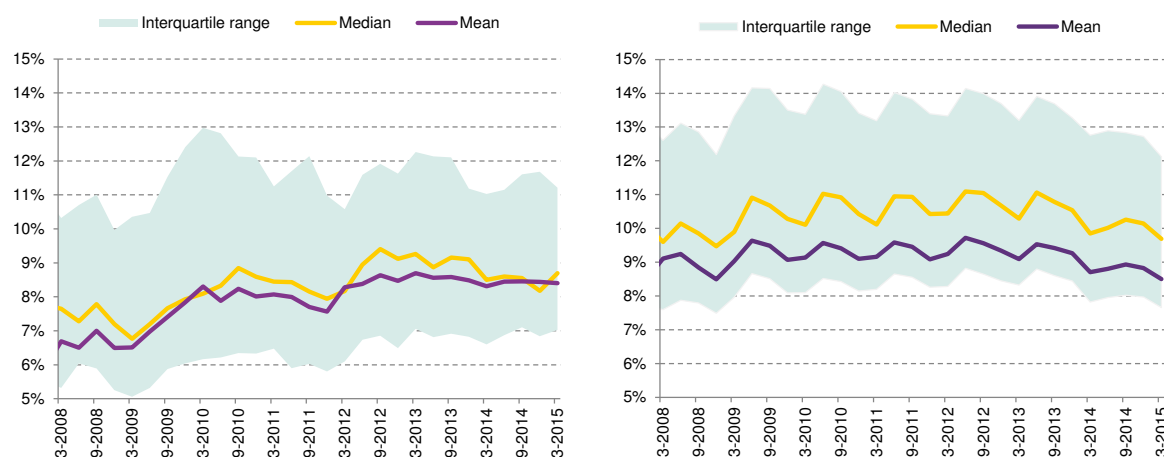
The simulation performed on March 2015 data (see Figure 2.41) points to a minor deterioration in the resilience of some banks to an arbitrarily assumed shock. For domestic commercial banks, a deteriora-

⁶⁶According to CRDIV/CRR, the leverage ratio is calculated as expressed in a percentage quotient of Tier 1 capital to the exposure measure that includes both on- and off-balance-sheet exposures.

⁶⁷The Basel Committee proposal is contained in: "Basel III leverage ratio framework and disclosure requirements", Basel Committee, January 2014.

⁶⁸The simulation was performed for domestic commercial banks and cooperative banks. Bank Gospodarstwa Krajowego was excluded from the simulation.

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

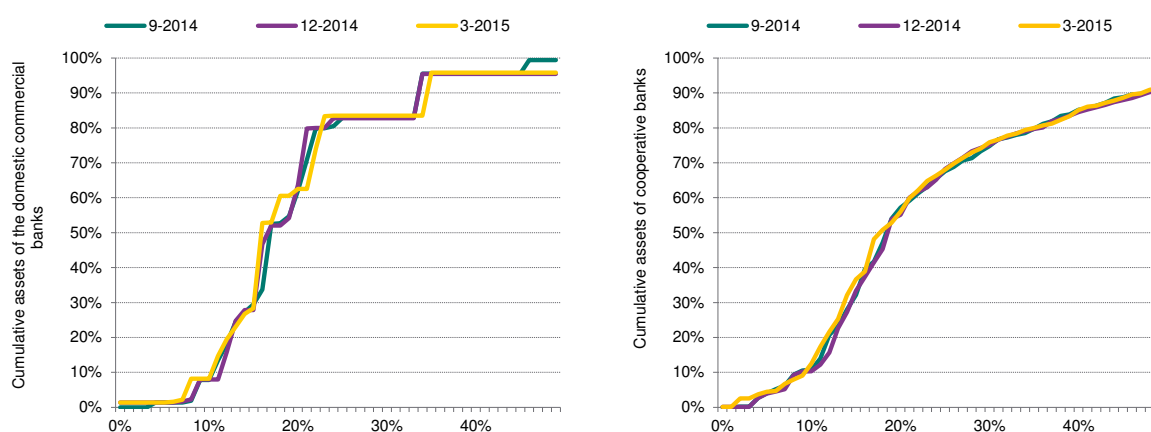


Notes: The leverage ratio prior to 2014 based on estimates.

The leverage ratio at cooperative banks is characterised 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 grandfathered components of Tier 1 capital.

Source: NBP.

Figure 2.41. Simulation results: assets of domestic commercial banks (left-hand panel) and cooperative banks (right-hand panel) ranked by percentage of loans without identified impairment, deterioration in quality of which would result in a breach of any capital standards



Assumptions of the simulation:

1. Deterioration in loan quality means that 50% impairment is recorded for the loans. 2. Hypothetical charges to impairment provisions decrease, firstly, the bank's current profit not recognised 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 portfolio of the bank. 4. No release of impairment provisions.

Source: NBP.

tion in the quality of 10% of the loan portfolio would result in a breach of any capital adequacy standards at banks with an 8.2% share in the banking sector's assets (in September 2014, the share was 7.8%). For cooperative banks, the assumed shock would have caused the capital adequacy ratios to fall below the applicable minimum at banks with a 12.5% share in assets of all cooperative banks (compared with 10.7% in 2014).

The decrease in the resilience of banks results mostly from the losses posted by several banks and a further amortisation of grandfathered components of regulatory capital. The decrease was also driven, to some extent, by the tightening of capital standards from the beginning of 2015, i.e. of Common Equity Tier 1 standard from 4% to 4.5% and Tier 1 capital standard from 5.5% to 6%.⁶⁹ However, other banks held sufficient capital to be able to absorb the effects of a potential deterioration in loan portfolio quality, and their resilience improved.

2.7.2. 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 banks⁷⁰ to negative shocks. The central path of the NBP macroeconomic projection from "Inflation Report. July 2015", developed under the assumption of fixed interest rates served as a reference scenario. The analysis was aimed at quantifying the effects of hypothetical shocks on banks in the period from the second

quarter of 2015 to the end of 2017. The outcome of the simulation for the reference scenario and results of other simulations included in this section should not be regarded as a forecast of the condition of the banking sector.

The analysis was performed as a three-stage examination. The first stage comprised an assessment of the impact of two macroeconomic (reference and shock) scenarios on credit risk materialisation costs and on banks' net interest income. Owing to a multi-equation macroeconomic model used in the analysis, the assumed scenario takes into account, to the extent possible, the combined impact of investigated shocks on the economic situation. In the second stage, the analysis of macroeconomic shock scenario was accompanied by an additional market shock on the capital position of banks. In the third stage, the influence of a market shock on the liquidity position of banks was considered.

The hypothetical capital needs of banks under both scenarios were calculated, assuming that banks had to hold sufficient regulatory capital to keep their total capital ratio at 12.5%, and Common Equity Tier I at 9.0%.⁷¹ The criteria for capital adequacy ratios assumed in the analysis are compliant with the criteria adopted by the KNF in its recommendations regarding banks' dividend policy⁷² and are higher than the applicable regulatory requirements and criteria assumed for EBA and ECB stress tests of European banks in 2014.

For banks complying with the above mentioned criteria of the capital adequacy ratios at the end of a given quarter of the simulation period, it was assumed that in a subsequent quarter they would

⁶⁹The tightening of capital standards had a bigger impact on cooperative banks than on commercial banks due to a proportionally larger decrease in regulatory capital at cooperative banks, resulting from the share of the amortised grandfathered components of regulatory capital.

⁷⁰Stress tests were performed for domestic commercial banks. Bank Gospodarstwa Krajowego was excluded from the simulation.

⁷¹In the vast majority of the banks analysed, Tier I capital is composed exclusively of core capital, therefore no separate criterion was assumed for Tier I capital ratio.

⁷²See "Stanowisko KNF z 2 grudnia 2014 r. w sprawie polityki dywidendowej instytucji finansowych [The KNF stance of 2 December 2014 on the dividend policy of financial institutions]".

increase their loan and securities portfolios and other assets at the quarterly growth rate of nominal GDP.⁷³

The balance sheet value of the loan portfolio was also affected by loan impairment provisions, and the value of the portfolio of debt securities – by the market shock. 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.⁷⁴

Banks complying with the minimum capital adequacy ratios were also allowed to pay out dividends from profits earned from the second quarter of 2015. The dividend rate depends on the excess of capital adequacy ratios above the assumed minimum. The retention of undistributed (according to March 2015 data) profit for 2014 and the first quarter of 2015 was assumed. Changes in banks assets were balanced by changes in liabilities.

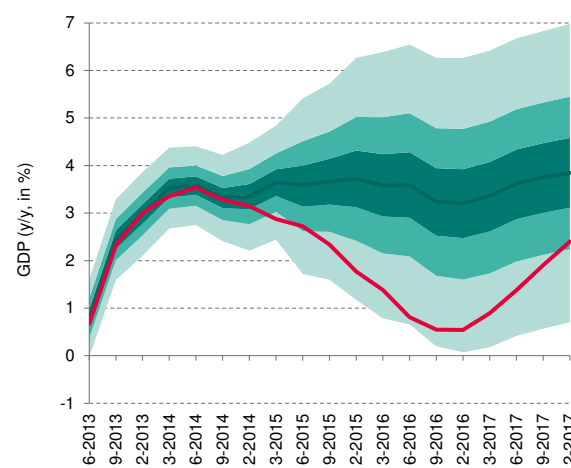
The following assumptions were made for the macroeconomic shock scenario:

- A shock in global financial markets that results in asset price volatility growth, and the dampening of the growth rate of emerging economies, triggered by excess investments in the past and demographic factors, would be the factor behind a deterioration in the global economic outlook.
- The sustainability of deflationary trends in the euro area, leading to an increase in real interest rates and the real value of debts of government and private sectors and also to a long-term decline in demand and economic stagnation, would worsen the economic situation.
- Geopolitical tensions in the Middle East would

rise and the conflict between Russia and its neighbours would intensify, which would contribute to increasing barriers to international trade and rising the prices of energy resources.

Given these assumptions, Poland would see a substantial slowdown in the pace of economic growth (see Table 2.4). The likelihood of such a combination of shocks and such a deep slowdown in Poland's GDP growth can be assessed as minor (see Figure 2.42).

Figure 2.42. Macroeconomic shock scenario against the fan chart of GDP from “Inflation Report. July 2015”



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

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. This outflow would be reflected in an increase in the yield of Polish Treasury debt securities and a depreciation of the zloty. The depreciation of the zloty would also bring about an increase in the capital requirements and a deterioration in the quality of banks' loan portfolios due to the growth of the

⁷³As long as the GDP growth rate was positive; if it was otherwise, a connection between bank assets and GDP was excluded. In addition, the growth rates for particular banks were limited by their excess of capital adequacy ratios above the assumed criteria.

⁷⁴It was assumed that the 2015 rates of an annual contribution to BFG and a prudential fee would be maintained in 2016-2017.

value (expressed in zloty) of foreign currency loans and the related rise in the 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.⁷⁵

Table 2.4. Major economic indicators in macroeconomic scenarios (%)

	2015	2016	2017
GDP growth y/Y			
Reference scenario	3.6	3.4	3.6
Shock scenario	2.4	0.8	1.6
LFS unemployment rate, annual average			
Reference scenario	7.8	7.3	6.9
Shock scenario	8.5	9.3	10.0
CPI inflation y/y			
Reference scenario	-0.8	1.5	1.6
Shock scenario	0.1	2.1	0.8
WIBOR3M			
Reference scenario	1.8	1.7	1.7
Shock scenario	2.3	2.4	1.4

Source: NBP.

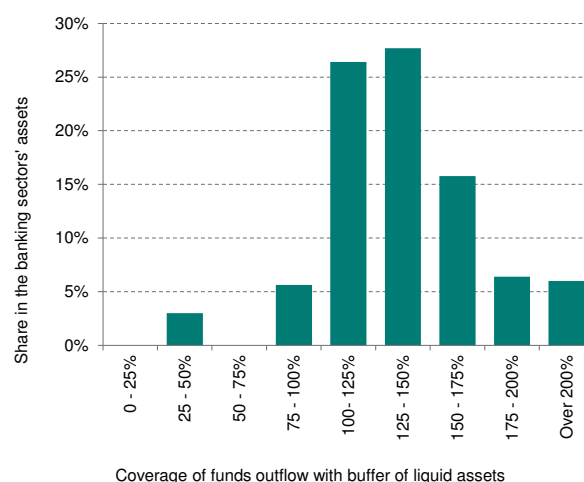
The impact of a market shock and additional liquidity turmoil on the condition of banks was also analysed. The aim of the simulation was to test whether banks had an adequate buffer of liquid assets in the event of depreciation of the zloty and a rise in Polish government bond yields assumed in the shock scenario and, additionally, of an outflow of a portion of foreign funding and falling confidence from both domestic financial institutions and real sector entities, resulting in a withdrawal of a part of their deposits.⁷⁶

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

Results

The majority of banks would keep a regulatory capital surplus allowing them to meet the adopted capital adequacy criteria and expand business under both the reference and shock scenario. The estimated value of a hypothetical increase in banks' regulatory capital, which would be required if the shock scenario were to unfold, would amount to 3.0 billion zlotys (i.e. around 18% of their regulatory capital at the end of March 2015) at the end of the simulation period (see Table 2.5). Losses arising from inter-bank market exposures would not push banks' capital needs (the domino effect would not occur). The share of banks which would have to raise the level of regulatory capital to meet the criteria adopted for the analysis in the banking sector's assets would be 1.5% under the reference scenario, and 11.7% under the shock scenario.

Figure 2.44. Assets of domestic commercial banks by coverage of funds outflow with a buffer of liquid funds under the shock scenario



Source: NBP.

The simulation of liquidity risk has shown that, should a very restrictive shock scenario materialise, a group of domestic commercial banks with an approximate 9% share in the sector's assets

⁷⁵Against the bond yields and the zloty exchange rate as of the end of March 2015.

⁷⁶The following, inter alia, were assumed: a withdrawal of 100% of deposits, 10% of loans and 25% of other liabilities towards 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, additionally, 5%, 10% and 10% of other deposits.

Table 2.5. The results of macro stress tests

	Historical data for the period Q2 2014 – Q1 2015	Simulation results for the period Q2 2015 – Q4 2017	
		reference scenario ¹	shock scenario
On average per year (as % of assets)			
Charges to loan impairment provisions	0.6	0.6	0.9
Net interest income ²	2.29	2.27	2.23
Net earnings	1.2	0.9	0.5
Capital needs ³ (zloty billion)			
Macroeconomic and market shocks	0.4 ⁴	0.5	3.0
Domino effect	n/d	0.0	0.0
Additional information – market shock in the simulation period (zloty billion)			
Change in bond value recognized in the profit and loss account	n/d	n/d	-2.0
Change in bond value recognized in capital	n/d	n/d	-10.6
Zloty depreciation impact (impairment charges to FX loans to households) recognized in the profit and loss account	n/d	n/d	-2.7

¹ Scenario based on the central path of the NBP macroeconomic projection from “Inflation Report. July 2015”

² “Net interest income” includes fees and commissions income on extended loans, but does not include interest income on debt securities.

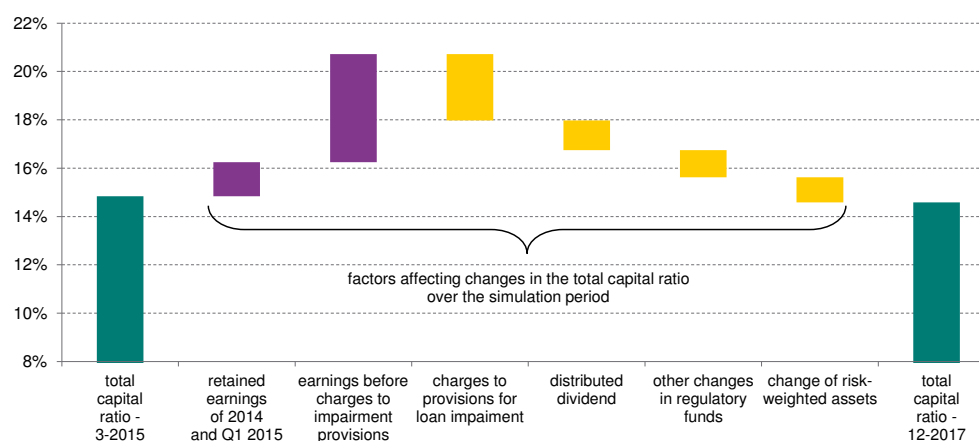
³ The value of capital injection necessary to ensure that total capital ratios remain above 12.5% and Common Equity Tier I ratios – above 9%.

⁴ At the end of March 2015, one bank under analysis did not comply with the regular capital standards. The share in the banking sector's assets of banks, which did not comply with the tightened capital standards assumed for stress tests, amounted to 6.6%.

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 2.43. 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 in the simulation period are marked with violet bars, and those with an adverse influence – with yellow bars. The influence of these factors is expressed in percentage points.

“Retained earnings of 2014 and Q1 2015” is an increase in banks’ capital by a part of undistributed (at the end of March 2015) profit for 2014 and the first quarter of 2015, resulting from the adopted assumptions.

“Earnings before charges to impairment provisions” are equivalent to net income from banking activity, decreased, inter alia, by operating costs.

The simulation assumed that banks with positive earnings that comply with the assumed minimum capital adequacy levels would pay out dividends. The dividend rate would depend on the excess of capital adequacy ratios over the criteria.

Source: NBP.

would not have sufficiently high buffers of liquid assets to cover liabilities associated with foreign capital outflow, zloty depreciation and falling customer confidence (see Figure 2.44). 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 20 billion zlotys. When compared with the results of the simulation performed in the previous edition of *Report*, the resilience of the banks sector improved slightly.

It should be stressed that even banks that 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 approximately 51 billion zlotys. Most likely, in conditions analyzed in shock scenario central bank would have to be involved to carry out the major part of these transactions.⁷⁷

The results of the stress tests and loss absorption capacity simulation show that banks' resilience to shocks is high. The majority of banks would be able to operate safely and absorb the effects of the materialisation of the restrictive scenario of a substantial slowdown in economic growth. At the same time, capital buffers are discrepant among banks, and a few banks exhibit relatively low resilience. These banks should seek to increase their capital buffers to reduce their sensitivity to potential shocks. In addition, banks that play a particularly important role in the financial system should exhibit an increased capacity to absorb potential losses.⁷⁸

It is essential that banks with currently sufficient capital buffers should not reduce them excessively in the coming periods. In particular, the growth rate of lending should not lead to an excessive increase in leverage. Adequate capital surpluses above the current regulatory requirements will be necessary in view of a gradual increase in the requirements stemming from the timetable of the imposition of particular buffers set forth in CRDIV/CRR. Sustaining capital adequacy buffers should result, inter alia, from an appropriate dividend policy.

The results of the liquidity shock simulation have shown that the resilience of the banking sector has improved slightly and is good, 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 run a diversified funding structure, and therefore, do not rely too heavily on funding provided by their foreign parent entities.

2.8. Market assessment of Polish banks

Investors' assessment of Polish banks continues to be good. After a period of falls in the second half of 2014, the value of the WIG-Banki index⁷⁹ stabilised above the level substantially higher than that prior to the outbreak of the global financial crisis in September 2008 (see Figure 2.45). The falls came mainly due to investors' expectations of NBP reference rate cuts and uncertainty over the costs that some banks may incur to eliminate the risk associated with the foreign currency loan portfolio. The

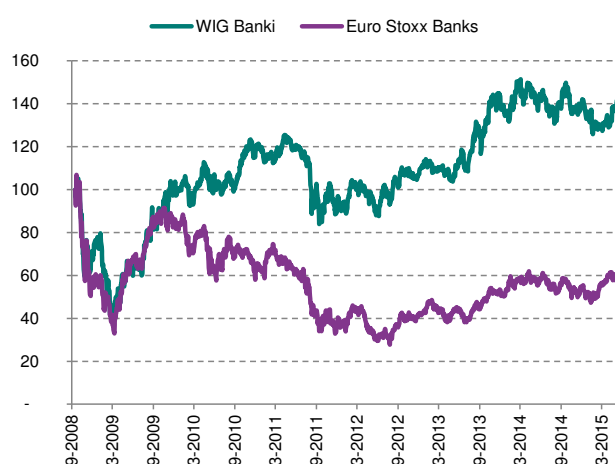
⁷⁷In the simulation the value of treasury bonds was decreased by an average haircut applied by the NBP in lombard facility, intraday credit and repo operations.

⁷⁸"The KNF stance on the dividend policy of financial institutions" of 2 December 2014 recommends that banks with a "significant share" (above 5%) in the market of deposits of the non-financial should make dividend pay-out dependent on the "systemic risk buffer" (3 percentage points above the capital adequacy ratios recommended to other banks).

⁷⁹Idea Bank was included in WIG-Banki after its IPO on 16 April 2015.

noticeable rise in the share prices of Polish banks in the second quarter of 2015 may be linked to the upward correction of the share prices of Western European banks, observed after the ECB decision to launch a bond purchase programme. Despite a slight decline, the “price-to-book value” ratio of Polish banks remained at a high level, nearly twice as high as that of Western European banks (see Figure 2.46).

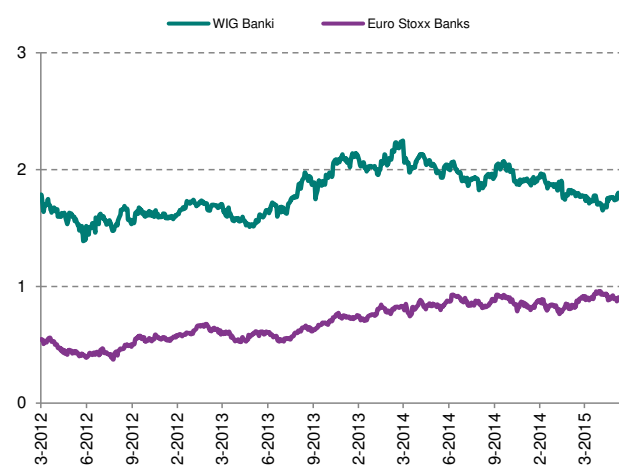
Figure 2.45. Index prices of Polish and European banks



Note: Index prices rescaled to 100 on 15 September 2008.
Source: NBP calculations based on Thomson Reuters.

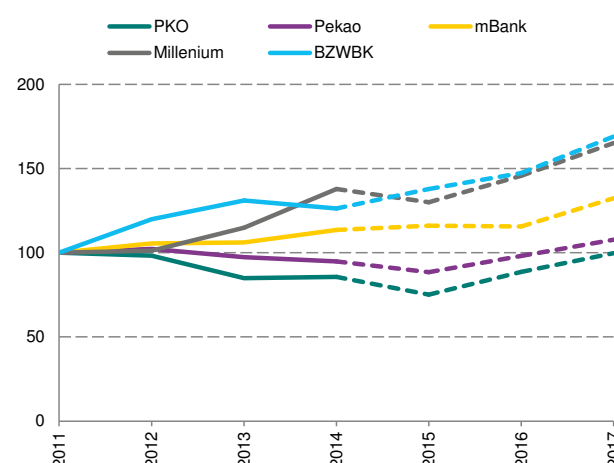
Market analysts expect that earnings of the majority of banks after stabilisation or decline in 2015 will rebound in subsequent years (see Figure 2.47). Expectations of higher profits in the longer term confirm a good fundamental assessment of Polish banks and the belief in their capacity to effectively adapt the business model to the environment of low interest rates.

Figure 2.46. P/BV “price-to-book value” ratio of Polish and European banks



Source: Thomson Reuters.

Figure 2.47. Historical and forecasted earnings per share of selected banks



Note: Earnings per share forecasts for 2014–2016, calculated as the median of all market forecasts for a given bank, normalised at the start of 2011.
Source: NBP calculations based on Thomson Reuters.

The good situation of the Polish banking sector and the macroeconomic environment led to ratings upgrades of the majority of domestic banks by Moody's. Creditworthiness assessment of banks according to revised methodology⁸⁰ was the basis for

⁸⁰New methodology was introduced in March 2015. The rating agency withdrew from the financial strength rating of a bank, and adopted as its main indicator *baseline credit assessment*, *BCA*, assigned according to the new methodology. *BCA* represents the probability of a failure of a bank without external financial support and stems from the bank's financial situation and the condition of macroeconomic environment in which it operates.

an upgrade of the long-term deposit rating at seven banks and a downgrade at one bank, and an upgrade of the short-term deposit rating at four banks and a downgrade at one bank. Moreover, the agency downgraded the baseline credit assessment of two banks and upgraded the rating outlook of nine banks (see Table 2.6).

The ratings of some Polish banks were down-

graded by Fitch, but the downgrades were not motivated by their financial situation. According to the rating agency, the implementation of the BRR directive⁸¹ reduces the probability that European banks will receive government assistance. In the case of subsidiaries of foreign banks, the rating downgrades were directly prompted by the assessment downgrades of the parent banks.

⁸¹Directive 2014/59/EU of the European Union and of the Council of 15 May 2014 *establishing a framework for the recovery and resolution of credit institutions and investment firms and amending Council Directive 82/891/EEC, and Directives 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007/36/EC, 2011/35/EU, 2012/30/EU and 2013/36/EU, and Regulations (EU) No. 1093/2010 and (EU) No. 684/2012*, of the European Parliament and of the Council (OJ L 173/190, 12.06.2014).

Table 2.6. Ratings of Polish banks by Moody's, Fitch and S&P

Moody's	Baseline credit assessment	Long-term deposit rating	Short-term deposit rating	Outlook
PKO BP	baa2 (baa2)	A2 (A2)	P-1 (P-1)	STA (NEG)
Pekao	baa1 (baa1)	A2 (A2)	P-1 (P-1)	STA (STA)
Bank Zachodni WBK	baa3 (baa3)	A3 (Baa1)	P-2 (P-2)	STA (NEG)
mBank	ba2 (ba2)	Baa2 (Baa3)	P-2 (P-3)	STA (NEG)
ING Bank Śląski	baa3 (baa3)	A3 (Baa1)	P-2 (P-2)	STA (NEG)
Getin Noble Bank	b1 (ba3)	Ba2 (Ba2)	NP (NP)	STA (NEG)
Bank Millennium	b1 (b1)	Ba1 (Ba2)	NP (NP)	STA (NEG)
Bank Handlowy	baa3 (baa3)	A3 (Baa3)	P-2 (P-3)	STA (STA)
BGŻ	ba2 (ba2)	Baa2 (Baa3)	P-2 (P-3)	STA (STA)
BPH	ba3 (ba2)	Ba2 (Baa3)	NP (P-3)	STA (NEG)
Credit Agricole	ba2 (ba2)	Baa1 (Baa3)	P-2 (P-3)	STA (STA)
Fitch	Viability rating	Long-term rating	Short-term rating	Outlook
Bank Zachodni WBK	bbb (bbb)	BBB+ (BBB+)	F2 (F2)	STA (STA)
mBank	bbb- (bbb-)	BBB- (A)	F3 (F1)	POS (NEG)
ING Bank Śląski	bbb+ (bbb+)	A- (A)	F1 (F1)	STA (NEG)
Getin Noble Bank	bb (bb)	BB (BB)	B (B)	STA (STA)
Bank Millennium	bbb- (bbb-)	BBB- (BBB-)	F3 (F3)	STA (STA)
Alior Bank	bb (bb)	BB (BB)	B (B)	STA (STA)
BOŚ	bb (bb)	BB (BBB)	B (F3)	NEG (NEG)
mBank Hipoteczny	brak (brak)	BBB- (A)	F3 (F1)	POS (NEG)
Pekao Bank Hipoteczny	brak (brak)	A- (A-)	F2 (F2)	STA (STA)
S&P	Stand-alone credit profile (SACP)	Long-term rating	Short-term rating	Outlook
PKO BP	bbb (bbb)	A- (A-)	A-2 (A-2)	NEG (NEG)
Pekao	bbb+ (bbb+)	BBB+ (BBB+)	A-2 (A-2)	STA (STA)

Notes: In brackets – as of the end of November 2014. The baseline credit assessment at the end of November 2014 is presented according to the earlier unmodified methodology. For definitions of ratings, see *Glossary*. The banks are listed according to total assets. Ratings assigned by Standard and Poor's only on the basis of publicly available data are not included in the Table. SACP - stand-alone credit profile.

Source: Publicly available data on the websites: www.moody.com, www.fitchpolska.com, www.standardandpoors.com.

2.9. Selected indicators of banking sector's condition

in %	2014				2015
	Q1	Q2	Q3	Q4	Q1
Return on assets (ROA) ¹	1.07	1.09	1.12	1.08	1.06
Return on Tier 1 capital (ROE) ^{1,2}	11.5	11.8	12.2	11.8	11.8
Net interest margin (NIM) ^{1,3}	2.53	2.59	2.61	2.50	2.41
Operating cost ³ to net income from banking activity ³ (C/I) ¹	54.1	53.3	52.1	51.7	52.0
Burden of charges to provisions for impaired loans ³ to net income from banking activity ¹	14.1	14.3	14.0	14.0	13.8
Loan growth rate (y/y) ⁴					
nonfinancial sector	4.4	5.5	4.9	4.5	4.3
households	4.9	5.4	4.8	4.2	4.0
consumer loans	3.8	5.5	4.5	4.3	5.0
housing loans	4.6	4.7	4.4	3.8	3.6
enterprises	3.3	5.5	5.2	5.1	5.0
large enterprises	6.7	8.1	6.5	5.6	5.6
SMEs	1.8	1.6	3.9	4.3	4.2
Impaired loan ratios ³					
nonfinancial sector	8.4	8.3	8.2	8.1	8.2
households	7.0	7.0	6.9	6.5	6.7
consumer loans	14.4	14.1	13.8	12.7	13.0
housing loans	3.1	3.2	3.2	3.1	3.4
enterprises	11.4	10.9	10.6	11.3	11.3
large enterprises	9.4	8.7	8.4	9.3	9.3
SMEs	12.8	12.6	12.3	12.7	12.7
Charges to provisions for impaired loans ³ to net value of loans ¹					
nonfinancial sector	1.00	1.02	1.00	0.98	0.95
households	0.79	0.85	0.86	0.86	0.84
consumer loans	1.39	1.47	1.66	1.74	1.83
housing loans	0.33	0.37	0.34	0.31	0.33
enterprises	1.40	1.35	1.26	1.23	1.16
large enterprises	1.04	0.87	0.90	0.87	0.87
SMEs	1.70	1.73	1.56	1.58	1.45
Funding gap ³	8.6	8.0	8.7	6.9	6.8
Short-term liquidity standard M2 ^{3,5}	1.47	1.39	1.37	1.42	1.37
Long-term liquidity standard M4 ^{3,5}	1.20	1.19	1.19	1.20	1.19
Total capital ratio ²	14.6	14.8	14.9	14.7	14.9
Tier 1 capital ratio ²	13.3	13.6	13.7	13.5	13.6
Common Equity Tier 1 capital ratio ²	13.3	13.6	13.7	13.4	13.6
Financial leverage (multiple) ^{2,3}	11.56	11.26	11.13	11.27	11.40

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 Banks from the domestic banking sector with total assets over 200 million zlotys.

Source: NBP.

Chapter 3.

Credit unions sector

The situation in the credit unions (SKOK) sector remains difficult. Restructuring activities are conducted with regard to a number of credit unions. Out of 50 credit unions which carried out their operations at the end of March 2015,⁸² 41 were obliged to prepare a recovery programme, whereas this programme was accepted by the Polish Financial Supervision Authority (KNF) in only 8 cases. KNF also obliged the National Association of Credit Unions to present such a programme due to the balance sheet loss generated in January 2014.

Under the restructuring processes, in the previous year, two credit unions were taken over by commercial banks⁸³ (with the financial support of BFG), and in the case of another two - KNF took the de-

cision to suspend their operations due to their poor economic and financial standing⁸⁴ and the loss of the possibility to settle liabilities in the scope of payment of funds towards depositors⁸⁵. Continuing the recovery measures in the sector, in 2015 KNF invited banks to participate in the restructuring of another SKOK and took the decision on the appointment of an administrator in two credit unions⁸⁶.

A consequence of the restructuring activities in the sector is the reduction of the scale of its operations. The assets of the credit unions system declined to 12.9 billion zlotys, and the rate of decline in first quarter of 2015 was higher than in the whole of 2014 (7% against 6.3%). The relation of assets of operating credit unions to banking sector assets

⁸²The analysis was conducted based on the reporting data of 50 credit unions continuing their operational activities. In order to maintain comparability, the data of previous periods also comprise only active credit unions. Reporting data do not include all adjustments proposed by auditors, resulting from the verification of the 2014 annual financial statements of credit unions.

⁸³SKOK im. św. Jana z Kęt was taken over by Alior Bank as of 1 September 2014, whereas SKOK im. M. Kopernika was taken over by Bank Pekao SA as of 22 December 2014.

⁸⁴In its communication, KNF indicated that the necessity to suspend the operations of SKOK Wspólnota and file a petition to declare it bankrupt arises from the economic and financial situation found in the credit union by the administrator, in particular, due to the lack of perspectives to mitigate the growth of losses and improvement of the situation and from the unfavourable multi-annual agreements for the credit union, concluded before the appointment of the administrator in the credit union, which outsourced significant areas of operations. The agreements were concluded in a manner which, in practice, significantly limited the possibility to change them. In September 2014, the District Court Gdańsk-Północ ruled on bankruptcy of SKOK Wspólnota.

⁸⁵SKOK Wołomin, according as at 10 December 2014, lost its financial liquidity following the prior exhaustion of own liquid assets, including all assets deposited in the National Association. In February 2015, the District Court for the capital city of Warsaw issued the decision on bankruptcy of SKOK Wołomin.

⁸⁶On 15 June 2015, an administrator was introduced in SKOK Kujawiak and on 10 July in SKOK im. S. Wyszyńskiego, whereas on 18 June 2015 KNF approved the takeover of SKOK Wesoła by PKO BP.

amounted to 0.8%, whereas loans and deposits of the non-financial sector in the credit union sector reached, respectively: 0.8% of loans and 1.4% of deposits of non-financial entities in the banking sector. The restructuring processes implemented last year resulted in the growth of the concentration level in the sector — the share of the biggest credit union in assets of the sector amounts to approximately 52%.

In order to reduce the irregularities identified in the course of supervision, the Financial Supervision Authority (KNF) in June 2015 issued two recommendations for credit unions (The A-SKOK Recommendation concerns good practice in credit risk management in credit unions, and the B-SKOK Recommendation concerns good practice in corporate governance in credit unions). At the end of June 2015 the draft Recommendation C, concerning credit unions' accounting, was put to public consultation. Recommendations of KNF are a set of good practices based on both guidance issued by World Council of Credit Unions (WOCCU) and national as well as international experiences.

The scale of interconnectedness between the banking sector and the credit union sector remains significant. Receivables of credit unions due to deposits and current accounts at banks amounted to 0.7 billion zlotys, whereas their liabilities to banks were 0.002 billion zlotys. The National Association's receivables at banks amounted to only 0.8 billion zlotys, declining by approximately 45% in the last two quarters.

The capital position of credit unions

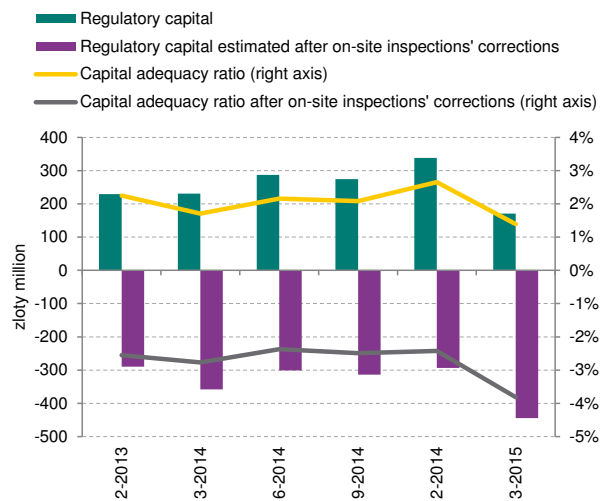
The capital position of the credit union sector deteriorated. The increase in capital, observed in the fourth quarter of 2014, resulted from a capital injection by the National Association in several credit unions through taking up optional participations and recognising the amount of additional liability of members as regulatory capital of several credit unions.⁸⁷ On the other hand, the decline in the regulatory capital of credit unions by over 50% in the first quarter of 2015 resulted from the realisation of losses incurred by credit unions as a result of deteriorating quality of loans and decreasing interest income. At the end of March 2015, the total regulatory capital of operating credit unions amounted to 171 million zlotys, whereas the capital adequacy ratio reached 1.39%. In order to reach the required minimum capital adequacy ratio at a level of 5%, the credit unions would need an additional capital of 443 million zlotys. After accounting for the adjustments resulting from the post-inspection recommendations of KNF the regulatory capital of credit unions would drop to -444 million zlotys, whereas the solvency ratio would reach -3.81%, and the deficit of capital would amount to 1 028 million zlotys (see Figure 3.1).

The inspections findings concerning irregularities in asset valuation were confirmed by additional review of approved financial statements for the year 2013, carried out in several credit unions by auditors commissioned by the Financial Supervision Authority. After accounting for the objections resulting from auditors' opinions the financial results of 2013 should be reduced by 233 million zlotys, and

⁸⁷In accordance with Article 24 of the Act on Credit Unions, the regulatory capital of credit unions comprises the following: the share capital, the resource fund, the revaluation fund, subordinated debt (subject to the approval of KNF), unrealised gains on debt and capital instruments classified as available for sale, and the amount of additional liability of credit union members (subject to the approval of KNF). So far, 45 credit unions amended their the articles of association, enabling them to increase the regulatory capital by recognising the amount of additional liability of credit union members. 10 credit unions have already received the approval of KNF. KNF approval means that the liability of members for losses of the credit union is raised to a specified (up to double) multiple of the amount of paid participations.

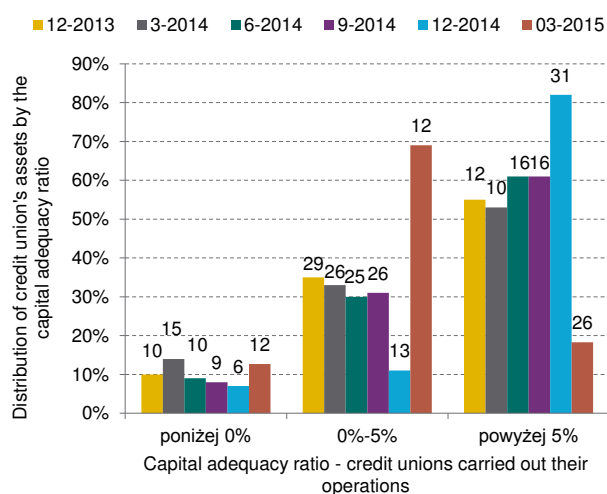
regulatory capital by 995 million zlotys.

Figure 3.1. The regulatory capital and the capital adequacy ratios of credit unions



Source: KNF.

Figure 3.2. Distribution of assets of credit unions continuing operations by the capital adequacy ratio



Source: KNF.

Despite the unfavourable situation of the sector as a whole, 26 credit unions whose share in assets of the sector amounts to approximately 18% reported the capital adequacy ratio above the statutory requirement of 5%. At the end of 2014, 31 credit unions met the supervisory requirement, and for the majority the ratio was positive (see Figure 3.2).

The earnings of credit unions

The credit unions sector continues to generate losses. At the end of the first quarter of 2015, the losses of operating credit unions amounted to 103 million zlotys and were slightly lower than in the whole of 2014 (-142.5 million zlotys). After fully accounting for the adjustments resulting from post-inspection recommendations, the result should be adjusted by a further 615 million zlotys.

The financial results of credit unions were significantly affected by the deteriorating quality of loans and decreased interest income (due to the low level of interest rates).

The persisting high share of restructured loans in the loan portfolio, whose value may be subject to further revaluation, constitutes a risk for the results of credit unions in the subsequent periods. Moreover, due to the portfolio of shares and stocks and other securities held by credit unions⁸⁸, there is a risk that their revaluation may also have a negative effect on their results.

The number of credit unions reporting negative results is growing (see Figure 3.3). Among the 50 credit unions continuing operations, at the end of the first quarter of 2015, 30 credit unions reported a loss.

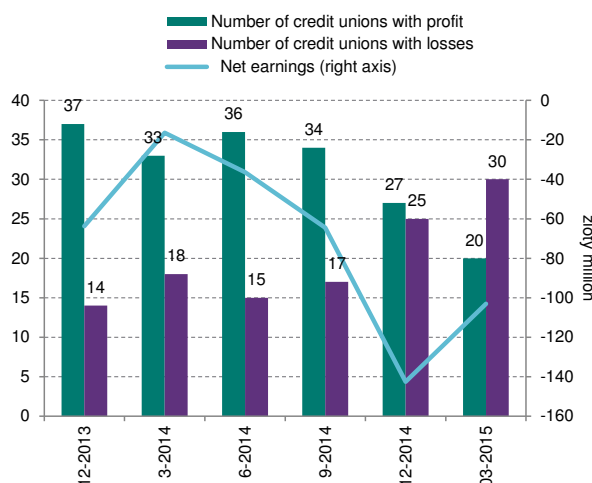
Lending and credit risk in credit unions

Credit unions reduced their activity on the credit market. The value of loans granted by operating credit unions decreased in net terms to below 7 billion zlotys and currently accounts for approximately 54% of total assets. The decline in lending observed in the last two quarters resulted both from revaluation of the deteriorating part of the portfolio and from sales of a part of overdue debt. In the struc-

⁸⁸In the first quarter of 2015 some credit unions sold debt securities in exchange for shares or participations in commercial companies.

ture of the loan portfolio consumer loans prevail, with their current share reaching approximately 80% (see Figure 3.4). Loans with maturity of over 12 months constitute about 74% of the portfolio. Taking into account the original maturity, over 60% of the portfolio are loans with a maturity of over 5 years, and the share of this group continues to grow⁸⁹. Extending the duration of loans in the environment of declining interest rates increases the client's creditworthiness, but it also enhances the risk in the operations of the credit union in future periods.

Figure 3.3. Net earnings of credit unions

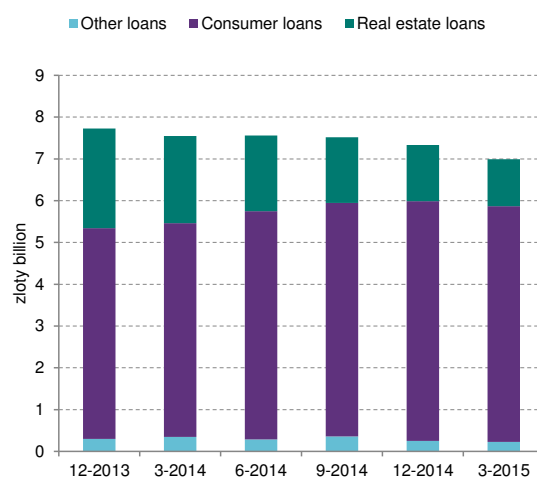


Source: KNF.

The quality of the loan portfolio of operating credit unions remains poor, although over the recent two quarters the share of overdue loans⁹⁰ slightly decreased (a decline of the ratio by 1.3 pct. pts.). The improvement resulted mainly from the sale of overdue loans — in the first quarter of 2015 credit unions sold debt with the value of 0.34 billion zlotys (mainly overdue loans with arrears in repayment of more than 12 months)⁹¹. Overdue loans constitute almost 24% of the loan portfolio (see Figure 3.5).

Loans with arrears in repayment of more than 12 months constitute the biggest group (80%) of overdue receivables, whereas in terms of product – consumer loans dominated (approximately 50%). The share of real estate loans is also significant (around 44%), which, together with the limited share of this type of loans in the total portfolio, confirms their low quality. About 7% of the loan portfolio was subject to restructuring (including 37% of loans with the value over 1 million zlotys), which may negatively affect the results of the sector in the future. Until the end of March 2015, credit unions created provisions of 1.77 billion zlotys, which covered almost 85% of overdue receivables with arrears in repayment of over 3 months. Credit unions also created provisions for 99% of the value of promissory notes received from the subsidiary of the National Association in exchange for the debt sold.

Figure 3.4. The structure of credit unions' loan portfolio



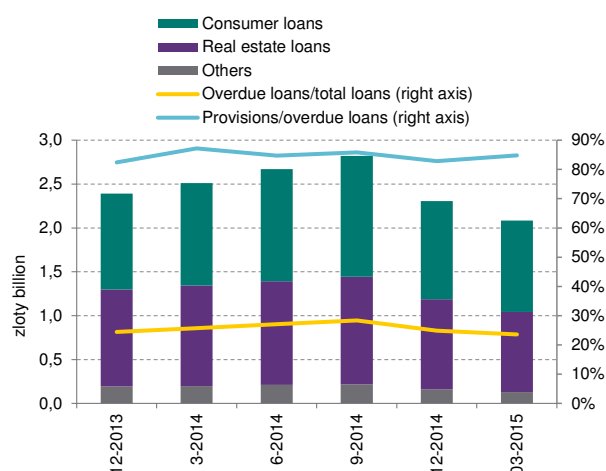
Source: KNF.

⁸⁹In accordance with the provisions of the Act of 2009 on Credit Unions, from October 2012 credit unions may also grant loans with a maturity of over 5 years (earlier only up to 5 years). In the whole of 2014, the share of this group of loans in the credit unions portfolio increased by over 11 percentage points.

⁹⁰Presented data refer to overdue loans with arrears in repayment of more than 3 months.

⁹¹The gross value of all debt sold by credit unions as at the end of 2014 amounted to 2.4 billion zlotys.

Figure 3.5. Overdue loans at credit unions – structure, share in loan portfolio and the level of coverage by provisions



Source: KNF.

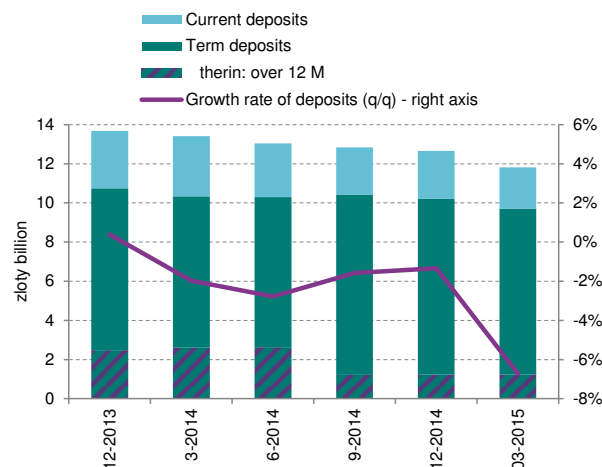
Liquidity risk at credit unions

Deposits of credit unions members still represent the main source of financing, however, their value is declining. In the first quarter of 2015, a decrease in the balance of deposits by 6.6% to 11.8 billion zlotys was recorded. The outflow of funds from the credit unions system was partly the effect of the materialisation of reputation risk as a result of public discussion concerning the functioning of the sector.

In the group of deposits, term deposits prevail, including deposits over 12 months constituting more than 10% (see Figure 3.6).

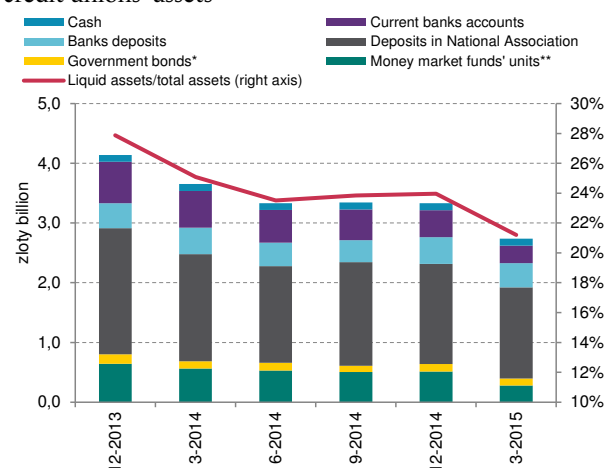
As a result of the payout of deposits, the level of liquid assets⁹² decreased. At the end of March 2015 credit unions reported 2.7 billion zlotys of liquid assets (against 3.3 billion zlotys at the end of 2014), and their share in total assets amounted to 21.2% (see Figure 3.7).

Figure 3.6. The structure of credit unions' deposits and quarterly rate of changes in the balance of deposits



Source: KNF.

Figure 3.7. Structure of liquid assets and their share in credit unions' assets



* This item also includes debt instruments guaranteed by the State Treasury.

** Units of money market funds.

Source: KNF.

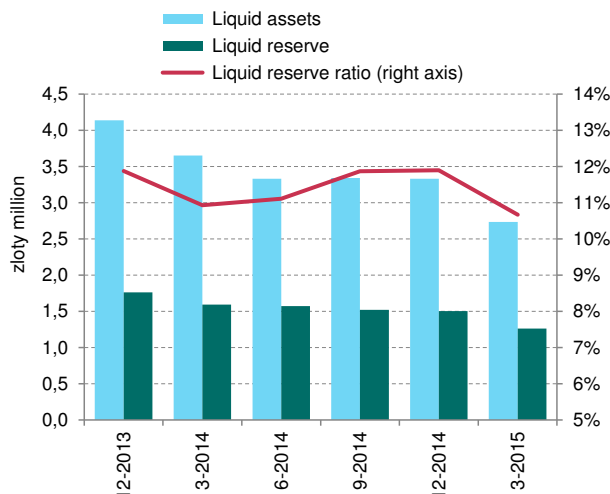
At the end of 2015 Q1, the value of liquid reserve⁹³ amounted to 1.3 billion zlotys, whereas the reserve ratio reached 10.7% (see Figure 3.8). In individual

⁹²Liquid assets comprise mandatory and non-mandatory deposits at the National Association, money assets, i.e. cash and funds at current bank accounts, bank deposits and debt instruments (Treasury bonds and units of money market funds).

⁹³Funds classified as liquid reserve may be maintained only as cash, deposits at the National Association or units of money market funds. In order to secure their liquidity, credit unions are obliged to maintain the liquid reserve at a level of at least 10% of the savings and lending fund which, under Article 25 of the Act of 5 November 2009 on Credit Unions is created from membership contributions and savings collected by members.

cases in the first quarter of 2015 the requirements of minimum rate of liquid reserve have been infringed. Credit unions did not use liquidity credit from National Association.

Figure 3.8. Liquid assets and liquid reserve of credit unions



Source: KNF.

The balance-sheet of the National Association and its functions

The National Association's mandate is to ensure financial stability of credit unions, and most notably, to provide them with financial support from the stabilisation fund. At the end of the first quarter of 2015, the National Association's assets amounted to 2.8 billion zlotys. Their substantial decline (by 16.8%) was recorded in the fourth quarter of 2014 as a result of the takeover of two credit unions by banks and the suspension of the operations of one credit union by KNF (see Figure 3.9).

Changes occurring in the credit unions system also affected the change in the National Association's assets structure. The main items continue to include cash (cash in hand and at bank) and debt instruments, whose total share in assets was approximately 61%. However, the value of cash in par-

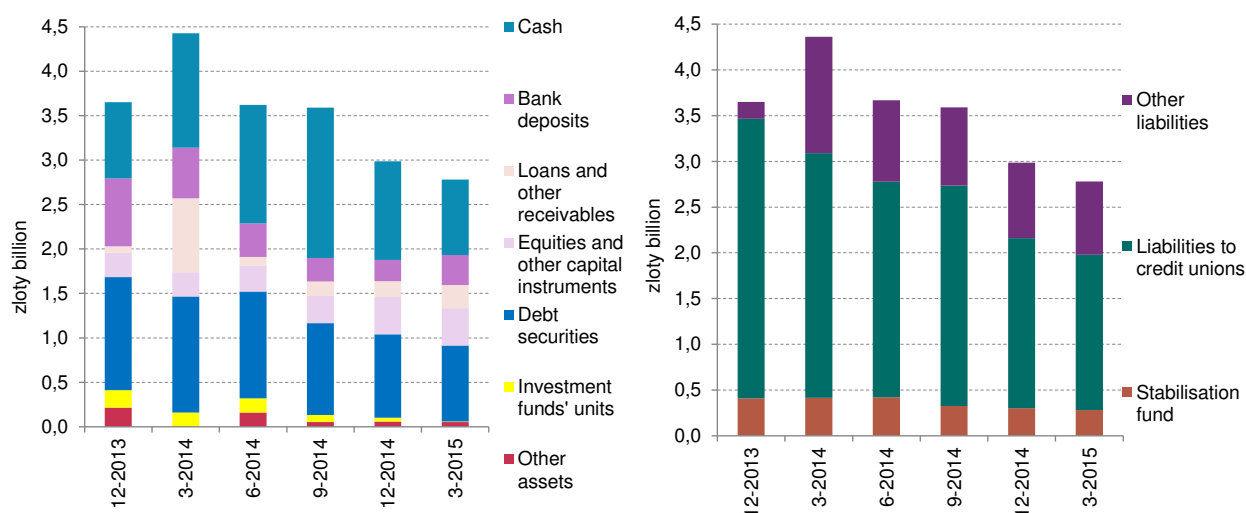
ticular decreased in the last quarter by almost 24% (whereas in relation to the end of the third quarter of 2014 it decreased by almost 50%). This resulted from the increased demand of credit unions for liquidity. Consequently, the share of this item in assets of National Association decreased to less than 31%.

At the same time, since the end of 2014 the role of capital instruments in the National Association's assets has been growing – reaching 15% at the end of the first quarter of 2015. This resulted from the capital injection of the National Association in several credit unions in the form of purchase of optional participations.

Funds coming from deposits (both mandatory and non-mandatory) and credit unions accounts maintained in the National Association continue to constitute the main source of the National Association's funding. At the end of March 2015, credit unions kept over 1.7 billion zlotys in the National Association, of which 50% were deposits forming part of liquid reserve. Moreover, the National Association gathers funds due to the due reserve requirement of credit unions, transferred on their behalf to the account at NBP.

The value of the Stabilisation Fund, the main source of financing of the intra-sectoral restructuring of credit unions, amounted to 281.3 million zlotys. The National Association, used money from the Fund to provide loans to credit unions. The value of these loans at the end of the first quarter of 2015 amounted to 153 million zlotys. In the fourth quarter of 2014, a part of funds coming from the stabilisation fund was allocated for the capital injection of credit unions (purchase of optional participations amounting to 146 million zlotys), which enabled a certain improvement of their capital situation.

Figure 3.9. Composition of the balance sheet of the National Association: assets – left-hand panel, liabilities – right-hand panel



Source: KNF.

Box 6. Why fast introduction of the European regulations concerning the resolution into the Polish law is necessary?

Costs of crises in banks

During the recent financial crisis, governments all over the world have intervened to save insolvent banks for fear of the destructive effects of their bankruptcy for the financial system and the whole economy. However, such activities were very costly for taxpayers, which turned out particularly severe in the European Union. In 2007-2014, the European Commission took over 450 decisions approving public aid for 112 banks, whose assets constitute over 30% of banking sector assets in the whole of the EU. The governments spent over 671 billion euros on bailing out the banks in the form of capital and repayable loans (5.4% of EU GDP of 2008) and 1.3 trillion euros of guarantees for liabilities (10.3% of GDP). Such a policy contributed to a significant increase in public debt of the EU countries, in particular, of the euro area, which was most affected by the crisis. In those countries, public debt increased from 66% of GDP in 2008 to over 90% of GDP in 2014.

This experience has proved that a new approach to banks exposed to the risk of bankruptcy is necessary, where shareholders and creditors are primarily affected by poor management, and public sector funds are - as a rule - not engaged. This approach is defined as the mechanism of compulsory restructuring of financial institutions (in other words - resolution). An effectively functioning resolution system is the prerequisite for the efficient operation of the financial safety net of the country and protection of public finance against the effects of bank crises.

The relevant solutions in the European Union were introduced by the BRR directive¹, with the deadline for implementation into the national law of member states set for the beginning of 2015. The Directive makes a number of restructuring instruments available to public authorities, i.e. (1) mandatory sale of the business, (2) asset separation tool, (3) the setting up of a bridge institution, (4) bail-in tool. Their detailed description in the legal provisions is required due to the fact that they assume interference with the rights of bank owners

and creditors in order to protect the stability of the functioning of the financial system and the economy. The Directive also enables intervention at an early stage, before the problems of the financial institution lead to its bankruptcy.

The need to introduce the resolution mechanism into Polish law

The resolution mechanism in Poland is to be introduced by the Act on the Bank Guarantee Fund (BFG), the deposit guarantee scheme and compulsory restructuring². The work on the draft Act has been underway since 2011; however, it has still not been completed.

The introduction of a legal basis for the resolution process in Poland is urgent in terms of the needs of the national financial system. Delays in the introduction of the provisions of the BRR Directive in Poland prevent the application of the full range of tools offered by the Directive to the restructuring of the credit unions sector (see Chapter 3). The restructuring of this sector is conducted with the use of the limited set of tools permitted under the currently applicable Acts on the BFG and credit unions, i.e. (1) takeover of a whole credit union by another credit union or by a bank; and (2) takeover of selected property rights and liabilities of the credit union.³ The significant scale of outsourcing in the activity of some credit unions makes the first of these methods difficult to apply due to the lack of interest from potential investors. On the other hand, the second of these solutions has not been used in practice due to the expected final adjudication of the Constitutional Tribunal in relation to the contested provisions regulating this activity and the resulting lack of legal certainty. As a consequence, the restructuring of the sector is slow and costly. The only alternative to the takeover of the whole institution is to file for the bankruptcy of the credit union, which is certainly the most expensive way of solving the problem. It results in the necessity to pay guaranteed deposits from the BFG funds. As the resources collected in the BFG by the credit unions themselves are insufficient, the costs are, in fact, incurred by the banks, which have paid over the years contributions to the assistance fund at the BFG. The higher burdens for banks due to the payments to the BFG are subsequently transferred to their clients in the form of an increase in the prices of financial services. Moreover, the disbursement of resources from the BFG funds is classified as expenditure of the public finance sector, which comprises the BFG, which, under the specific level of budgetary deficit, may mean the need to abandon other, socially justified expenses.

Whereas in the case of the credit unions sector, the available restructuring tools are limited, in relation to banks they practically do not exist. In the case of potential problems in the banking sector, the only available instrument is the voluntary takeover of the bank by another bank, without the financial support of the BFG. The standard procedure of bank bankruptcy, with all its adverse consequences of a systemic nature, remains as an alternative. At the same time, it should be remembered that an average cooperative bank, or even a small commercial bank, may create a much higher burden for the BFG funds than the current costs of deposit payments to credit union clients.

On the other hand, the potential public aid which is theoretically possible pursuant to the Act on recapitalisation of some financial institutions requires notification and the approval of the European Commission. However, it may refuse to grant its consent, since public aid is contradictory with the basic rules of the resolution process aimed at maintaining the critical functions of the bank, however, with no need to use public funds. In case the BRR Directive is not implemented on time, the Member State should, in accordance with the European Union law and the case law of the European Court of Justice, refrain from applying measures contradictory to the objectives of the Directive that has not been implemented.

Apart from formal reasons, public aid should not be the only available tool of the procedure applicable towards banks endangered with the risk of bankruptcy, due to the associated costs to the taxpayer and the unmeasurable costs in the form of creating potential moral hazard. The experience of the recent crisis in the developed economies has indicated that such a policy generates significant risk for public finance.

Cross-border aspect of resolution process

In addition, there exist broader consequences of postponing the introduction of the provisions of the BRR Directive into the domestic law, arising from the cross-border dimension of the provisions of the BRR Directive. This is extremely important for Poland as a country with a significant share of entities constituting parts of large European banking groups. The Directive requires the cooperation of bodies responsible for the resolution process from home countries and host countries. In such circumstances, the lack of a formally appointed Polish resolution authority is a problem. In the European Union, resolution colleges are created for cross-border banking groups present in Poland. The role of the colleges is to develop resolution strategies and plans for such groups. The lack of participation of a Polish authority or its participation without voting rights⁴ means that Poland may not have a real impact on the shape of these plans, and the adopted solutions will not reflect the situation in the Polish market. Moreover, Poland is represented in the EBA Resolution Committee by the BFG which – until the Act enters into force – may not be treated as a formal resolution authority in Poland. When EBA starts taking significant decisions, the position of Poland will not be equal to other Member States and probably our participation in the EBA Resolution Committee will be possible only as an observer with no voting rights.

The lack of an authorised body may have even more impact under the circumstances of launching a resolution process. The group resolution plan created by the authority of the home country may envisage the application of the resolution tools towards the subsidiary in the Polish jurisdiction. At the same time, the Polish authorities will not have comparable resolution tools to be applied to the Polish part of the cross-border group. This creates a substantial uncertainty related to the possibilities of effective crisis management in the bank, taking into consideration the consequences for the domestic financial system and the domestic taxpayer.

The last argument indicating the need to effectively complete work on the implementation of the provisions of the BRR Directive into Polish law is the fact that the delay in implementation of the directives exposes Poland to negative opinions as a country with an ineffective legal system as well as the possibility of the European Commission filing a complaint to the European Court of Justice. The consequences of such measures, besides reputation costs for Poland, may also include a financial penalty.

¹ Directive of the European Parliament and of the Council 2014/59/EU establishing a framework for the recovery and resolution of credit institutions and investment firms.

² Apart from the implementation of the BRR Directive, this Act will adjust the Polish law to the DGS Directive, to be transposed on 3 July 2015.

³ Under the rules defined in Chapter 6b of the Act on credit unions.

⁴ It may be assumed that the participation of the BFG itself, as the planned Polish authority for resolution (the resolution authority) will be possible; however, it will certainly not be membership equal to the formally assigned authorities of other countries. Moreover, it is doubtful whether the BFG will have access to the data related to individual banks until it becomes the formally appointed resolution authority.

Chapter 4.

Non-credit financial institutions

In the first quarter of 2015, the sector of non-credit financial institutions (NIF) was developing at a faster rate than the banking sector (see Table 1.1). The asset growth of non-credit financial institutions was primarily driven by an increase in funds accumulated by investment funds.

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

- the sector's resilience to risks and capacity of its individual segments to ensure continuity of segment-specific 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, credit and financing).

Additionally, risk specific to each segment is analysed.

4.1. Investment fund management companies and investment funds

Given the implemented business model and specific nature of services offered by domestic investment funds, they do not generate risk to financial system stability. The funds do not guarantee the attainment of the set investment target, and the risk associated with their operations is wholly borne by their participants. Unlike in countries like the United States, France, Luxembourg or Ireland, constant net asset value (CNAV) money market funds – which given their significant role as the source of short-term financing for banks, are regarded as systemically important – do not operate in Poland. However, the potential impact of domestic investment funds on financial stability may be to influence financial markets and the prices of financial instruments.

The impact of investment funds on financial markets is largely dependent on their participants' behaviour. This, in particular, applies to participants in open-end funds that redeem units at the request

of investors. If investors choose to withdraw their capital should market distortions arise, the funds may be forced to sell off assets that they hold.⁹⁴ This may lead to a (further) decline in the prices of financial instruments, and even constrain market liquidity. As a consequence, losses by both unit holders who have remained funds participants, and other participants in the financial market, may grow further.

It is essential for the safety of funds accumulated by investment funds that they keep their investments at an appropriate liquidity level. In the case of the investment funds that redeem participation units at the request of unit holders, a large share of instruments with reduced liquidity may lead to difficulties in executing orders placed by clients to redeem participation units and subsequently in paying them funds as required by the execution of the orders. Situations where investors cannot withdraw funds deposited as participation units may bring about more difficulties in fulfilling their obligations. Such situations also negatively impact the image of entities operating in the investment funds market and undermine confidence in them.⁹⁵

In 2014 net asset of investment funds grew. Throughout the year, they grew by 24.5 billion zlotys, reaching their all-time high, i.e. 219.5 billion zlotys. It was mainly the result of a net inflow of 17.2 billion zlotys. Similarly to 2013, the largest amount of funds was paid to funds classified as 'other funds'⁹⁶ (9.3 billion zlotys) and to debt security funds (11.4 billion zlotys, including 7.9 billion zlotys to domestic debt security funds). The largest amount of funds was paid to investment

funds by households (8.7 billion zlotys) and enterprises (6.7 billion zlotys).

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

	NIF			NIF	Banks	NIF / Banks
	OFE	ZU	FI			
2013	299.3	167.2	195.0	661.5	1 404.7	47.1%
2014	149.1	178.6	219.5	547.2	1 529.6	35.8%
2015	155.2	182.8	231.1	569.1	1 566.6	36.2%

Note: Data for 2015 as at the end of March. Data for OFEs and FIs correspond to net assets, and for ZUs – total assets. Due to the adjustments made, the data may differ from those presented in the previous editions of the *Report*.

Source: UKNF, NBP.

The asset structure of investment funds

The structure of investment funds' assets did not change significantly (see Figure 4.1). At the end of 2014, domestic government bonds continued to account for the largest portion of investment funds' assets (24.3%). As compared with the end of 2013, the share of other debt securities increased, while that of other equity financial instruments diminished.⁹⁷ Instruments issued by enterprises were of major importance in the portfolio of other debt securities, and among other equity financial instruments, securities not listed on organised markets were of major importance. Securities held by investment funds were not a major source of funding of enterprises, so the impact of investment funds on the financial cycle was limited.

The structure of assets of the investment funds is affected by the structure of allocation of assets to funds that pursue a specific investment policy. As in the past, at the end of 2014 funds classified as

⁹⁴When the participants demand redemption of participation units on a large scale, a fund may suspend the repurchase for a specified period of time. It is also possible to apply a solution that involves the repurchase of participation units in instalments by applying proportional reduction (Article 89(4) and (5) of the Act of May 27 2004 on *Investment Funds*).

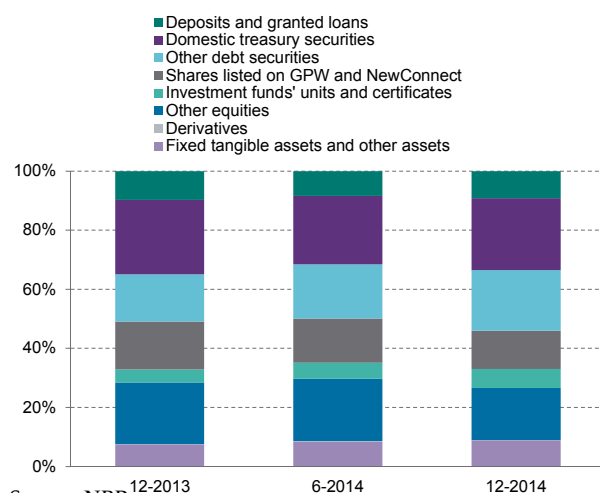
⁹⁵The example of such a situation is the case of investment funds managed by Inventum TFI, which lost authorisation to conduct its activities in October 2014. For more information, see previous editions of the *Report*.

⁹⁶Other funds are funds other than equity funds, balanced funds, stable growth funds and debt security funds.

⁹⁷Other debt securities are securities other than domestic Treasury securities, while other equity financial instruments are instruments other than those quoted on the Warsaw Stock Exchange Main List and NewConnect, and participation units of investment funds.

other funds, which mainly included non-public asset funds, prevailed. Some of these funds were designed as individual investment solutions addressed to specific investors (mainly enterprises). Domestic debt securities funds also held a big share.

Figure 4.1. Structure of assets of investment funds



Financial results of investment fund management companies

The financial condition of investment fund management companies was good and did not pose a threat to maintaining the continuity of financial services provided by the sector (see Table 4.2). As investment funds' assets grew, there was an increase in the sum of management fees charged by TFIs as well as their revenues and earnings.⁹⁸ In 2014, profit was reported by 50 TFIs, and eight TFIs posted losses.⁹⁹

The TFI losses should not have a bearing on the security of funds accumulated in investment funds. TFIs and the funds they manage are separate legal persons, and funds' assets are separated from the assets of TFIs. Holders of participation units are also unlikely to suffer the consequences of a potential bankruptcy of custodians entrusted with keeping investment funds' assets, as these funds are separated from their bankruptcy estate.

Equity capital of investment fund management companies

The capital position of the sector improved in 2014. The aggregate equity capital of TFIs was over five times higher than the capital requirement for the whole sector.¹⁰⁰ As compared with the end of 2013, the aggregate equity capital of TFIs increased by nearly 1/3. The increase was associated with the IPO of one TFI. The sector's equity capital relative to the sum of investment funds net assets was low and did not exceed 1%.

4.2. Pension fund management companies and open pension funds

In Poland, there are 12 pension fund management companies. At the end of May, the net assets they managed amounted to 159.6 billion zlotys.

⁹⁸The fee for investment fund management is the main source of TFI revenues. In 2014, investment fund management fee revenues accounted for 92.4% of the sector's total revenues.

⁹⁹"Raport dotyczący sytuacji finansowej towarzystw funduszy inwestycyjnych w 2014 r." UKNF, April 2015, p. 9.

¹⁰⁰As provided by Articles 49 and 50 of the Act of 27 May 2004 on *Investment Funds*, an investment fund management company is obliged to keep its shareholders' equity 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 activities has been extended to include managing portfolios including 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 exceeds the zloty equivalent of euro 250 million, such management company is obliged to increase the level of its shareholders' equity 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. A TFI is not obliged to increase its shareholders' equity if the sum of the initial capital of such a management company and the additional amounts exceeds the zloty equivalent of euro 10 million.

Table 4.2. Financial results and basic indicators for the TFI sector vs. average monthly net asset value of investment funds

	12-2012 (zloty million)	12-2013 (zloty million)	12-2014 (zloty million)	Change 12-2014/12-2013 (in %)
Total revenues:	2 169	2 654	2 834	6.8
- management fee	1 978	2 416	2 618	8.3
Total costs	1 764	2 129	2 249	5.6
Pre-tax profit	405	525	585	11.4
Net profit	325	426	477	12.0
Equity capital	976	1 102	1 451	31.7
Equity capital requirement	232	249	275	10.2
Average value of investment funds net assets	138 251	176 902	212 118	19.9
Equity capital coverage ratio	4.2	4.4	5.3	0.9
Pre-tax profit margin (%)	18.7	19.8	20.6	0.8 pp.
ROE (%)	31.7	42.2	38.4	-3.8 pp.

Note: Due to the adjustments, the data on the average net asset value of investment funds may differ from the data presented in the previous editions of the *Report*. ROE calculated on the basis of the average value of equity capital at the end of particular quarters of a given year.

Source: UKNF, NBP.

Due to the structure of investment portfolios of open pension funds (OFEs), their current investment behaviour can mainly influence the prices of shares quoted on the domestic market and, to a lesser extent, non-government debt securities. Following changes in legal regulations made in 2014, the current character of OFEs and the way they potentially impact systemic risk is partly similar to the investment funds sector.¹⁰¹ From the point of view of financial stability, the most important fact is that investment risk is entirely borne by OFE participants. However, unlike investors in participation units of investment funds, OFE members cannot freely decide about the value of assets being invested at the moment of market disruption. With respect to this, an open pension funds can reallocate assets into categories of assets within their investment portfolio. Only to this extent, can they influence the supply of financial instruments on given

markets and thereby on their prices.

Structure of OFE investments

There have been no marked changes in the structure of OFE investment portfolios as compared with the end of the first half of 2014 (see Figure 4.2). Domestic equity instruments, mainly shares quoted on the Warsaw Stock Exchange, prevailed. In the period under analysis, their share in the OFE investment portfolio remained at an unchanged level of 79-80%.¹⁰² This approximates the nature of OFEs to typical equity investment funds.

Treasury debt securities are the assets that are increasingly marginalised. At the end of the first quarter of 2015, they accounted for just 0.7% of investments. Due to the provisions in force since 2014¹⁰³, OFE can hold Treasury debt securities in their assets till 4 February 2016.

¹⁰¹The legal changes and their consequences were discussed in the previous editions of the *Report*

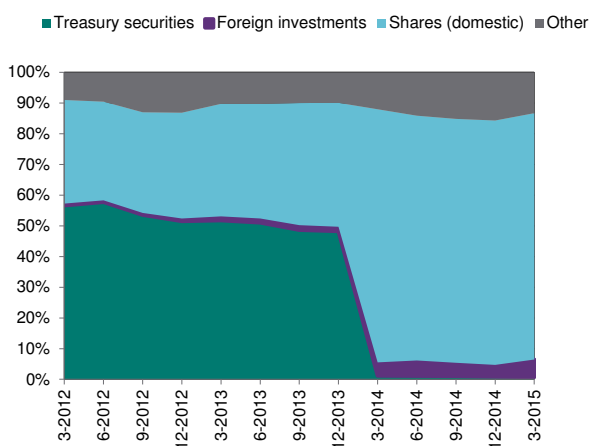
¹⁰²In accordance with the applicable Act of 6 December 2013 on Amending Certain Acts in Connection with the Determination of Principles for Old-age Pension Payments from Funds Collected in Open Pension Funds, the minimum limit for investments in equities till the end of 2014 was 75% of assets, and it currently amounts to 55% of assets.

¹⁰³Article 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.

¹⁰⁴In accordance with Article 22 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 the maximum limit for investments denominated in the currency of EU, EEA and OECD states amounted to 10% by the end of 2014, and now stands at 20%.

Although the foreign investment limit rose¹⁰⁴, OFEs are still fairly reluctant to make investments outside the domestic market. This reluctance arises from concerns about taking FX risk that cannot be hedged against by the funds. Despite these concerns, the first months of 2015 saw a certain upward trend. After the share of foreign investments in OFE had decreased to 3.9% at the end of 2014, it rose to a record high level of 5.7%.

Figure 4.2. Structure of investment portfolios of open pension funds



Source: UKNF.

Non-Treasury debt securities and bank deposits are of major importance among other OFE investments.

Financial results of pension fund management companies

The technical profit of the pension fund management companies sector for 2014 was almost one third higher than that of the preceding year (see Table 4.3). This was primarily due to a one-off revenue posted by PTEs from payouts from the Guarante

tee Fund¹⁰⁵ (it was as much as 977 million zlotys from the total amount of 2.018 billion zlotys in revenues from pension fund management). Other sources of revenue affected negatively the growth rate of the sector's technical result. The revenue from contribution fees fell by nearly 60%, which was the result of two main reasons: relatively few members of OFEs declared themselves willing to continue to pay contributions to the capital part of the pension system¹⁰⁶ and the maximum contribution fee was lowered by half (to 1.75%). The effect of these changes was to a minimal degree mitigated by an increase in the part of the contribution which is transferred to the OFE (in 2013, it was 2.8% of its base, in January 2014 – 3.1%, and in the following months – 2.92%). Revenues from management fees, which have been the main component of PTEs revenues in recent years, also fell by over 30%. The decrease resulted from a substantial reduction in the value of the assets under management.

Due to an increase in the aggregate revenues from OFE management, the technical profitability of the PTE sector also increased (by 5 percentage points, to 63%) (see Figure 4.3). However, it should be kept in mind that this was the result of the one-off event in the form of payouts from the Guarantee Fund. All PTEs posted positive technical profitability in the previous year; however, big differences can be seen across the sector. The technical profitability of three PTEs was below 20%, and that of the remaining ones was in the range of 47–76%.

The net profit growth rate of PTEs was very high, which can be primarily explained by technical profit. The additional factor that improved that growth rate was a relatively low net profit for 2013.

¹⁰⁵In accordance with Article 27 of the Act of 6 December 2013 on Amending Certain Acts in Connection with the Determination of Principles for Old-age Pension Payments from Funds Collected in Open Pension Funds the funds accumulated in the additional section of the Guarantee Fund returned to PTEs and constituted their revenues. Although the core section was increased, the balance of the operation remained positive for PTEs.

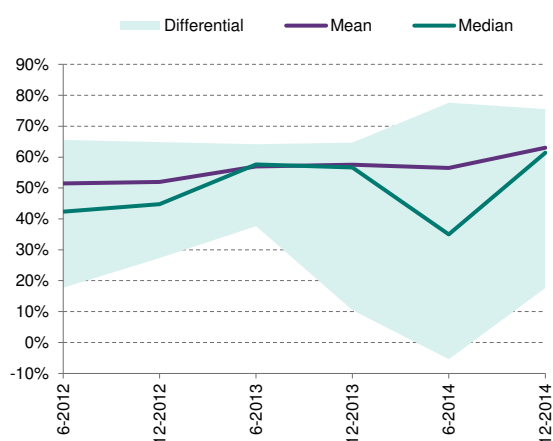
¹⁰⁶In July 2014, there were 16.6 million OFE members. A total of 2.56 million members declared to continue to transfer contribution fees to the funds.

Table 4.3. Financial results and profitability of the PTE sector

	12-2012 (zloty million)	12-2013 (zloty million)	12-2014 (zloty million)	Change 12-2014/12-2013 (in %)
Revenues from funds' management:	1515	1668	2018	21,0
- contribution fee	290	390	161	-58,7
- management fee	1032	1119	777	-30,6
- payments from Guarantee Fund	0	0	977	-
Funds' management costs	724	703	747	6,3
Technical profit on funds' management	791	966	1271	31,6
PTE's net profit	720	375	1094	191,7
Technical profitability on funds' management (%)	52,2	57,9	63,0	5,1 pp.
ROE	21,1	10,0	31,1	21,1 pp.

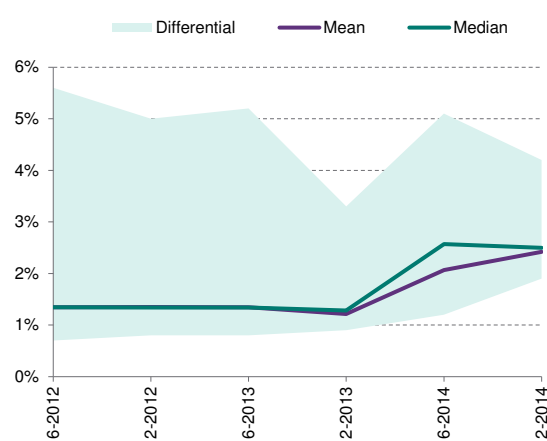
Note: Data were updated based on balance-sheet data at the end of particular periods and may differ from the data presented in the previous editions of the *Report*.
Source: UKNF.

Figure 4.3. Technical profitability of pension fund management companies



Note: Data were updated based on reports at the end of particular periods and may differ from the data presented in the previous editions of the *Report*.
Source: NBP calculations based on UKNF data.

Figure 4.4. Ratio of pension fund management companies' capital to the value of open pension funds' net assets that they manage



Note: Data were updated based on the balance sheet data at the end of particular periods and may differ from the data presented in the previous editions of the *Report*.
Source: NBP calculations based on UKNF data.

Equity capital of pension fund management companies

At the end of 2014, equity capital of pension fund management companies amounted to 3.6 billion zlotys. The ratio of equity capital to the assets under management increased when compared with the first half and amounted (on average) to 2.4% at the end of the year 2014 (see Figure 4.4).

4.3. Insurance companies

Traditional insurance activities carried out in Poland do not generate systemic risk. This results from the specific character of insurance activity, where the payment of claims is associated with the occurrence of a specific fortuitous event, which in most cases is independent from the business or

financial cycle. On the other hand, the liquidation of major claims and payment of claims is distributed over time and may take several years.

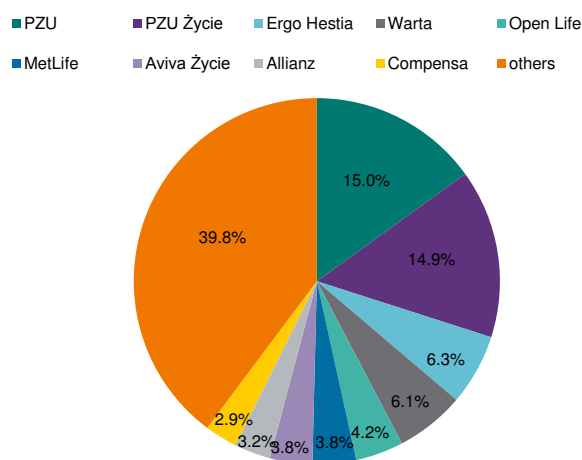
Insurance companies are exposed to liquidity risk to a lesser extent than other entities, which stems from a reverse product cycle. Insurance premium for the period of protection granted is paid in advance, and premium revenue is earmarked for the payment of claims and liabilities coverage. The inflow of premium revenue is distributed over time, and payments of claims are determined by an occurrence of a fortuitous event.

Domestic insurance companies are exposed to interest rate risk to a minor extent, which results from an insignificant share of life insurance with the guaranteed rate of return. Moreover, legal rules require insurance companies to match the term structure of assets earmarked for the coverage of liabilities arising from the insurance contracts (so-called technical insurance provisions), thereby minimizing differences in changes on the assets side and liabilities side resulting from movements in interest rates.

Life insurance, where investment risk is borne by the insured, has a limited influence on the solvency of specific entities. In the condition of distress on financial markets, a decrease in the value of assets (irrespective of reasons) results in a decrease in the capital requirements, as solvency parameters are correlated with the level of liabilities.

The insurance sector was dominated by large insurance companies owned by domestic and foreign capital groups. The value of the domestic insurance sector, measured by the value of gross written premium, did not change significantly. The premium written of the largest domestic insurance undertaking was 15% (see Figure 4.5).

Figure 4.5. The largest domestic insurance companies (share in gross written premium)



Source: UKNF.

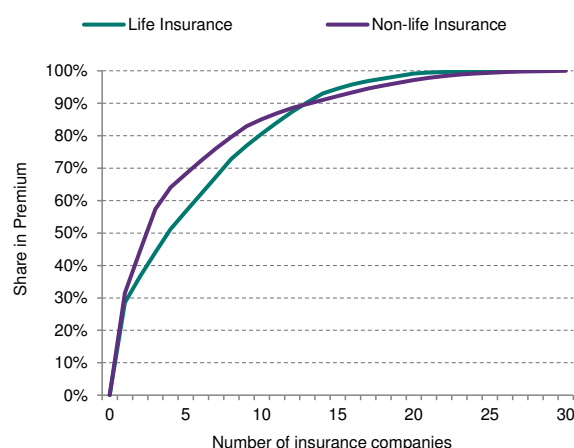
The share of premium written by domestic insurance companies points to market concentration in a few of the largest entities (see Figure 4.6). The three largest life insurance and three non-life insurance companies collected 50% of premiums, and the five largest entities collected 57% and 68% of premiums, respectively. High concentration of Polish insurance market was not untypical in comparison to international markets, though concentration across EU Member States is diversified.¹⁰⁷ According to IAIS, the share of the five largest life insurance companies ranges from around 30% to 80%. In non-life insurance, concentration is smaller and does not exceed around 50%.

The largest market share was held by the PZU group, which as a dominant insurance company set the standards for conducting business on the Polish insurance market. In life insurance, these standards related to group life insurance offered at a workplace. The standard of this service, which had a well-established use for several dozen years, has been offered by most insurance companies and is a vital part of their product offer. In non-life insur-

¹⁰⁷“Insurance and Financial Stability”, International Association of Insurance Supervisors (IAIS), 2011, p. 20.

ance, PZU set the standards for handling car insurance that consists in the direct liquidation of claims. Despite concerns about cost growth (insurance policy prices), the standard has been adopted by the insurance companies operating in the domestic insurance market.

Figure 4.6. Concentration curve in the insurance sector



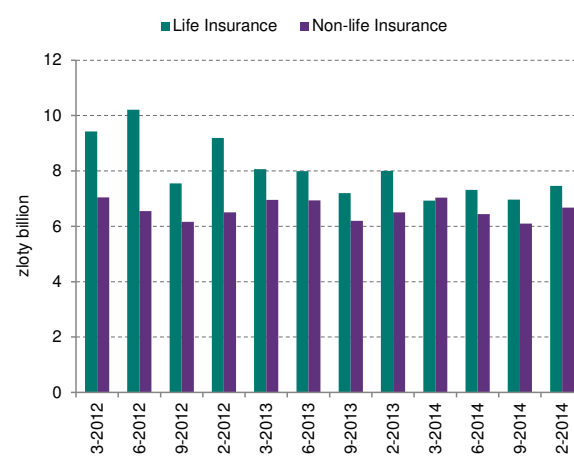
Source: UKNF.

Insurance premiums and claims

In 2014, the insurance sector recorded a decline in premium written (see Figure 4.7). Insurance sector I (life insurance) collected 8.3% less in premium written than in 2013, and this decrease was attributed mainly to a reduction in the distribution of the so-called insurance-wrapped insurance deposits (sold mainly via a bank network). Unit-linked insurance investments were the prevailing type of insurance (12.6 billion zlotys) and accounted for 44% of the sector's total premium written. After the sale of car insurance dropped, insurance sector II (non-life insurance and other personal insurance) collected 1.3% less in premium written than in 2013.

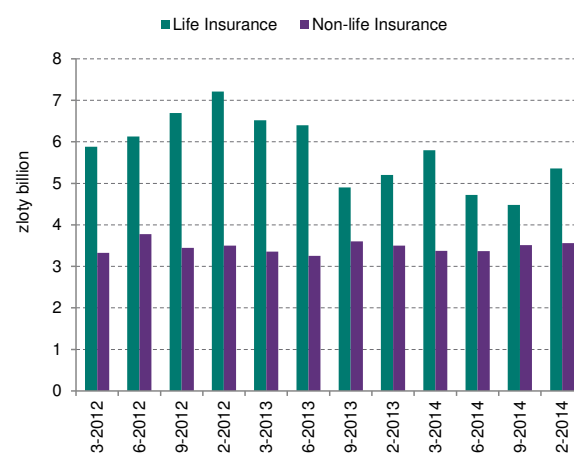
The lower number of insurance-wrapped deposits also led to a decrease in claims in the life insurance sector. In the non-life insurance sector, lower claims' payments were associated with a lower premium growth rate (see Figure 4.8).

Figure 4.7. Gross written premium



Source: UKNF.

Figure 4.8. Gross claims paid



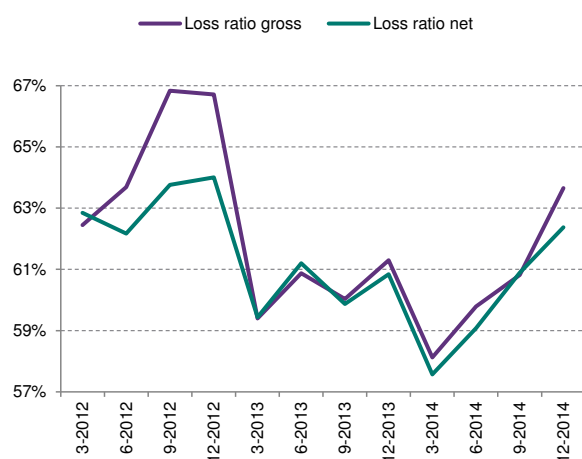
Source: UKNF.

Earnings of insurance companies

In 2014, the financial condition of insurance companies did not jeopardise the continuity of financial services provided in the insurance sector. The life insurance sector reported an increase in technical profit and financial result. This was primarily associated with a fall in the value of claims paid out and costs related to investment activities. The better results helped improve the ROE ratio (see Table 4.4).

The ratio of claims to premium income (the so-called loss ratio) in the non-life insurance sector deteriorated (see Figure 4.9). The ratio's decrease at the end of 2014 led to a fall in the profitability of insurance activities and had a direct impact on the sector's results. The technical result decreased mainly as a result of a worse record of claims in car insurance history. The decrease in technical result was also driven by a lower (than in 2013) dividend paid out by PZU Życie to PZU. At the end of 2014, the ROE ratio dropped as compared with 2013 and returned to the level recorded before that year (see Table 4.4).

Figure 4.9. Loss ratio in non-life insurance

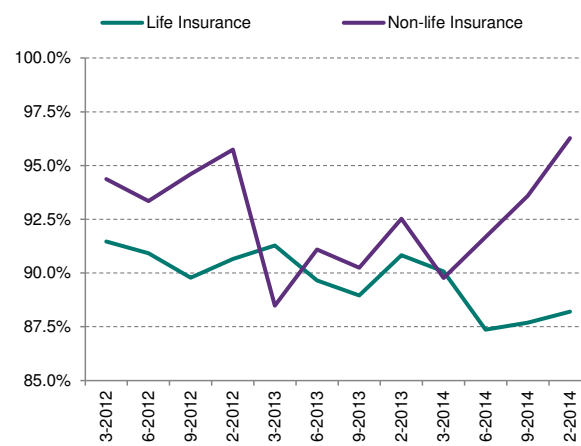


Source: UKNF.

The strong price competition observed in the non-life insurance sector led to a decrease in premiums (in relation to costs incurred) to the level nearing the break-even point. This was demonstrated by a rise in the loss ratio and the ratio of claims paid and expenses to premium earned (the so-called COR) (see Figure 4.10). At the end of 2014, the Combined Operating Ratio rose to 96.3%. In the car third party liability insurance, COR grew to 113%, which meant that the insurance was sold at a loss. Continuing strong competition (consisting in the lowering

of premiums) among insurance companies could result in a fall in equity capital and a deterioration of solvency parameters.

Figure 4.10. COR in the insurance sector



Source: UKNF.

Assets and investments of insurance companies

Insurance companies held sufficient assets to cover liabilities arising from insurance contracts and equity capital (see Figure 4.11).

Domestic insurance companies invest mainly in government bonds. Except for unit-linked insurance investment, these companies practically do not invest in shares of companies quoted on the regulated market, which means the value of their assets is exposed to stock market fluctuations only to a minimum degree.

In the second half of 2014 the value of investments of life insurance companies increased by 0.6%¹⁰⁸ and at the end of 2014 amounted to 45.2 billion zlotys. The largest items were government bonds (61.7%), participation units and certificates of investment funds (primarily funds managed by TFI PZU). Term deposits accounted for a small portion of investments and were earmarked for servicing current

¹⁰⁸Life insurance investments excluding unit-linked insurance investment.

Table 4.4. Earnings and basic indicators of the insurance sector

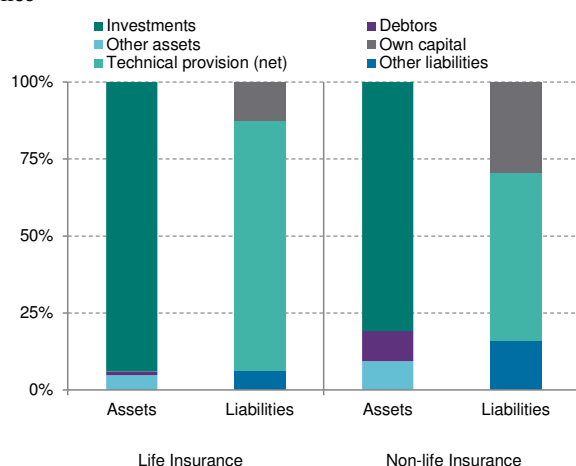
	12-2012 (zloty million)	12-2013 (zloty million)	12-2014 (zloty million)	12-2014/12-2013 Change (in%)
Life Insurance (Sector I)				
Gross Written Premium	36 264	31 264	28 667	- 8.3
Technical Result	3 127	3 008	3 308	10.0
Financial Result	2 968	2 808	3 137	11.7
ROE (%)	23.2	21.8	24.2	2.4 pp.
Non-life Insurance (Sector II)				
Gross Written Premium	26 250	26 602	26 253	- 1.3
Technical Result	665	1 257	752	-40.2
Financial Result	3 333	6 109	3 668	-40.0
ROE (%)	17.0	29.3	17.4	-11.9 pp.

Note: ROE – the ratio of financial results in a year to an average value of equity. Due to the adjustments, data may differ from the data presented in the previous editions of the *Report*.

Source: UKNF.

payments and covering liabilities associated with so-called insurance-wrapped deposits (see Figure 4.12).

Figure 4.11. Balance-sheet structure of insurance companies



Note: Technical insurance provisions net.
Source: UKNF.

The value of investments of non-life insurance companies amounted to 59.1 billion zlotys (an increase of 6.6% in the second half of the year). The largest share in investments was that of government bonds (38.9%), participation units and certificates of investment funds (26.3%) and stocks or shares in subsidiaries (see Figure 4.12).

Investments associated with unit-linked insurance products grew to 54 billion zlotys (a 3.8% rise in the

second half of the year). Their structure is determined by the decisions of the insured, who choose the type of fund. These investments do not directly influence insurance sector stability as the investment risk is borne by the persons who conclude the insurance contract and have taken the fund selection decision. Participation units, certificates of investment funds and debt securities had the largest share in the investments. The portfolio of unit-linked insurance investments may pose a potential operational risk for those insurance companies which have infringed on the interests of the insured.

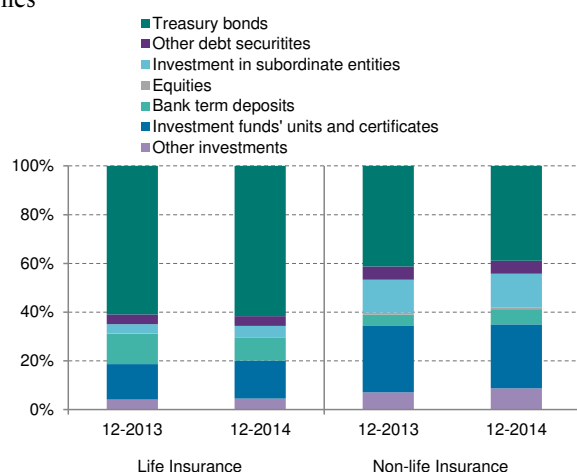
Solvency of the insurance sector

In 2014, all entities of the domestic insurance sector met the statutory solvency requirements. The current principles for calculating the capital requirements remain in force till the end of 2015. New principles for setting these requirements will become effective from 1 January 2016 (under the Solvency II project). It can be expected that the application of the new principles will result in a moderate fall in the solvency ratios of insurance companies, which means that some of them will have to increase own capital.

Assets of the insurance sector were higher than li-

abilities towards the insured. At the end of 2014, the ratio of liabilities arising from insurance contracts covered by assets of life insurance companies amounted to 114.6%, while that of non-life insurance companies was 127.3%. These ratios net after reinsurance amounted to 115.4% and 148.3%, respectively. Own capital was 34.7 billion zlotys (life insurance – 13.2 billion zlotys, non-life insurance – 21.5 billion zlotys). The changes in own capital in the Polish insurance sector were mainly associated with dividend payouts (see Figure 4.13).

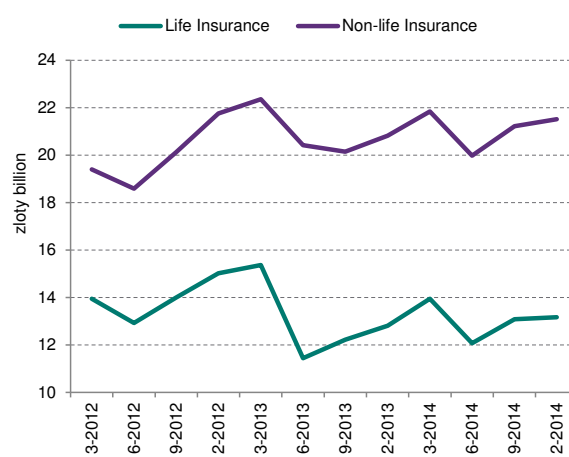
Figure 4.12. Structure of investments of insurance companies



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

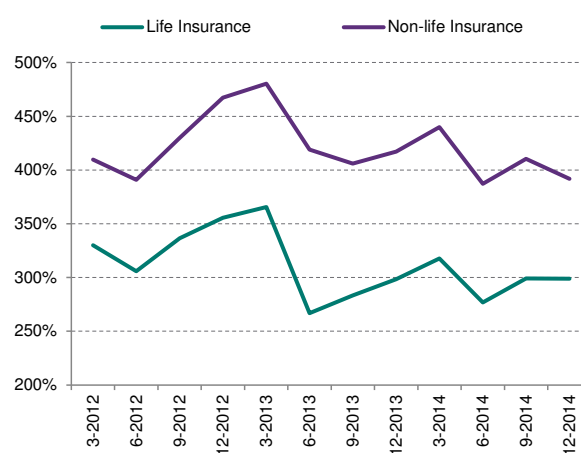
The solvency of the domestic insurance sector remained at high level. At the end of 2014, the average value of own capital in the life insurance sector was three times higher than the minimum level required by law, and in the non-life insurance sector it was four times higher (see Figure 4.14). This ratio for the whole domestic insurance sector amounted to 346.6% (357.9% in 2013).

Figure 4.13. Own capital in the insurance sector



Source: UKNF.

Figure 4.14. Activity monitoring ratio in the insurance sector



Source: UKNF.

In November 2014, EIOPA published a report from the stress testing exercise carried out for European insurance companies (see Box 7). The main purpose of the tests was to examine the resilience of the insurance sector to macroeconomic shocks, sector-specific shocks and to identify the sector's vulnerabilities to various shock scenarios.¹⁰⁹ The results of the tests show that the Polish insurance sector posted the highest solvency ratios in Europe. The re-

¹⁰⁹For more information on the issue, see the previous edition of the *Report*.

sults of the tests and results of the LTG Assessment¹¹⁰ have little impact on the stability of the domestic insurance sector. also revealed that long-term low interest rates will

Box 7. Results of the stress tests carried out by EIOPA for European insurance companies in 2014

On 30 November 2014, the European Insurance and Occupational Pensions Authority (EIOPA) published¹ the report on the stress testing exercise carried out for European insurance companies in 2014. The main purpose of the exercise was to examine the resilience of the insurance sector to macroeconomic shocks and sector-specific shocks and to identify the sector's vulnerabilities to shock scenarios. The tests were carried out for the core module and the low interest module, according to the balance-sheet values of insurance companies as at 31 December 2013.

The core module focused on the impact of asset market shocks on eligible own funds at the group level. A total of 167 insurance groups and insurance companies² representing 55% of gross written premium for the European market participated in the core stress test module. In the baseline scenario, the insurers' assets and liabilities were priced and eligible own funds and capital requirements were determined, in line with the rules arising from the Solvency II directive (based on standard models). In addition, the two scenarios examined the impact of asset market shocks on eligible own funds. In the first scenario, the equity market is assumed to be the source of a shock, which then affected other market segments, including corporate bond and government bond markets. The second scenario assumed a collapse in the corporate bond market, with the shock affecting other market segments, including government bond and bank bond markets. The core module also analysed the resilience of insurance companies to specific shocks associated with insurance activity.

The results of the core module have shown that in line with the directive requirements, the European insurance sector (aggregate data) had a sufficient capitalisation level. At the end of 2013, 86% of the core module participants (96% of the sample of the 30 largest insurance companies) reported a Solvency Capital Requirement (SCR) ratio of 100% or better. More than 25% of the core module participants had a very strong capital position (SCR above 200%). In the case of 14% of insurance companies, with assets representing 3% of the sector's assets, the SCR ratio fell below 100%. For the sample of the 30 largest companies, only one fell below the 100% SCR ratio (see Figure 1). In Scenario 1, the SCR ratio fell below 100% for 44% of insurance companies participating in the test, whereas the share of insurance companies with a high level of eligible own funds (SCR above 200%) dropped to 14.2%. The simulation of the Scenario 2 assumptions showed that own funds for SCR coverage of 27% of insurance companies dropped below 100% (Figure 1). Analysis of insurance sector-specific events indicated that the greatest insurance risks stem from mass lapse, provisions deficiency and longevity.

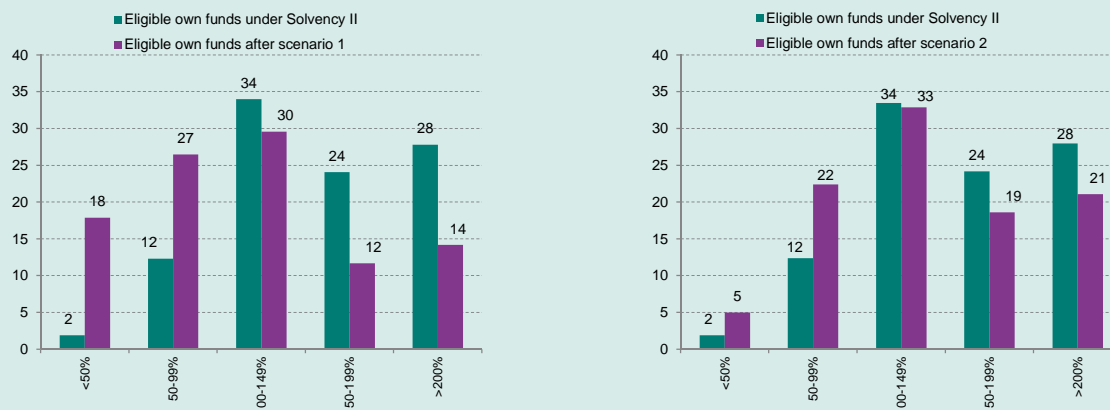
The low interest rate stress test module examined the impact of long-term low interest rates on eligible own funds of individual insurance companies. A total of 225 insurers with a 60% market share of gross technical provisions took part in the exercise, including seven domestic insurance companies representing half of the market measured by gross written premium³. The first so-called Japanese-like scenario assumed that low interest rates would persist for a long time, whereas the other scenario, i.e. an inverse scenario, assumed a sudden increase in interest rates for short-term maturities and a simultaneous decrease in interest rates for long-term maturities.

¹¹⁰In 2013, (*Long Term Guarantees Technical Assessment*, LTGA was carried out in the European Union to examine the impact of potential regulatory measures for insurance products with guarantees to the insured. The objectives of the LTGA were to assess the impact of the proposed measures on: the level of protection of the insured and insurers, the solvency position of insurance companies, preferences for investments in long-term assets and costs of the system implementation. In addition, the assessment was supposed to test the efficiency of risk management by insurance companies and the effectiveness of supervision.

The results of the LTGA for Poland's insurance companies stand out substantially from other EU countries. Polish insurance companies held the most funds to cover the solvency capital requirement. For the base scenario (without introducing the additional mechanisms that mitigate the effects of low interest rates), the SCR coverage ratio at the end of 2011 was approximately 302% (compared to the EU average of 77%), including for life insurance – 367%, and non-life insurance – 260%.

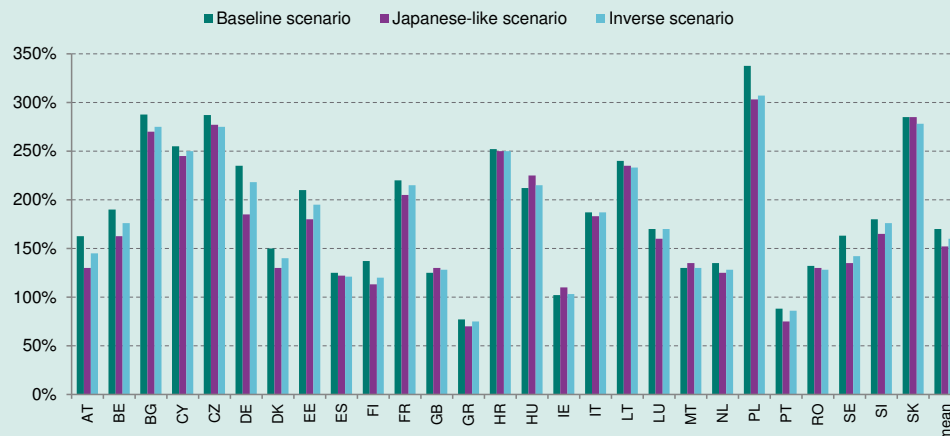
In addition, EIOPA analysed the resilience of insurance companies to an occurrence of double shocks or the so-called double hit; the concept assumed a combination of two scenarios. An abrupt price decrease affected the asset side on insurers' balance sheets, whereas persistent low interest rates affected the liability side.

Figure 1. Distribution of eligible own funds for SCR coverage in the core module (in%)



Source: EIOPA.

Figure 2. Eligible own funds for SCR coverage for the European insurance sector before and after stress tests in the low interest rate module



Source: NBP material based on EIOPA data.

The module results have shown that the assumed macroeconomic environment may lead to a decrease in own funds of insurance companies and cause problems with the fulfilment of liabilities by some companies in the future. In the baseline scenario, 16% of insurance companies participating in the tests held insufficient eligible own funds to cover the SCR, which corresponded to 8% of total sample assets. Own funds of 44% of insurance companies were higher than the SCR of 200%. The results of the first simulation analysing the impact of low interest rates showed that 24% of insurance companies did not meet the SCR, whereas in the inverse scenario the figure was 20%. In aggregate terms, the Japanese-like scenario seemed to be more severe for insurance companies; however, some of them were more vulnerable to an inverse scenario, which was the result of their structure of assets and liabilities.

Due to low interest rates persisting in the future, insurance companies in some countries may find it difficult to meet their liabilities over the 8-11 year horizon. The so-called double hit scenario seemed to be the most severe one, because it resulted that just 56% of insurance companies would hold sufficient funds to cover the SCR.

The stress tests for the European insurance market have shown that persistently low interest rates have a minor impact on the solvency of the domestic insurance sector. The solvency ratio of the domestic sector (in a situation before and after stress) was the highest among European countries and came to over 300% (see Figure 2).

¹ "EIOPA Insurance stress test 2014"; November 2014

² Group PZU took part in the exercise as a domestic insurance group.

³ TU na Życie Europa S.A., ING TUnŻ S.A., Metlife TUnŻir S.A., PZU Życie S.A., PZU S.A., TUnŻ Warta S.A. and TUiR Warta S.A.

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

Inter-sector linkages, including the ownership, credit and funding linkages of non-credit financial institutions with banks, could be a potential systemic risk factor. In the case of the Polish financial system, the ties are insignificant. Ownership linkages were limited and consisted in being part of the same foreign capital groups.

In May 2015, PZU signed a share purchase agreement to acquire a 25.25% equity stake in Alior Bank for 1.63 billion zlotys. Purchase or acquisition of other banks was also announced. According to PZU expectations it is a first step towards building a strong banking and insurance conglomerate. Realization of this plan would be a significant novelty in the Polish financial system.

Subsidiaries	Parent companies			
	Banks	TFI	PTE	ZU
TFI				
- number of entities				
(majority share)	6	x	–	6
(minority share)	–	x	–	–
- share in capital of TFI (in %)	11,1	x	–	17,1
- share in net assets of FI (in %)	9,9	x	–	20,6
PTE				
- number of entities				
(majority share)	2	–	x	5
(minority share)	2	–	x	–
- share in capital of PTE (in %)	22,4	–	x	30,8
- share in net assets of OFE (in %)	12,5	–	x	45,1
ZU				
- number of entities				
(majority share)	3	–	–	x
(minority share)	8	–	–	x
- share in capital (in %)	2,9	–	–	x
- share in gross written premium (in %)	5,1	–	–	x

Note: NBP estimation; for TFI data refer only to sole shareholders.

Source: For TFI – KRS, UKNF and NBP; for PTE and ZU – UKNF.

Table 4.5. Inter-sector linkages

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

Loans and other banks' receivables from NIF					
	ZU	FE	FI	NIF	NIF's Loans/ Loans total
2013	0.5	0.9	9.3	10.7	1.0%
2014	1.0	0.2	13.3	14.5	1.3%
2015	2.3	0.2	16.1	18.6	1.6%
Deposits and banks' liabilities to NIF					
	ZU	FE	FI	NIF	NIF's Deposits/ Deposits total
2013	20.9	18.4	22.0	61.3	5.0%
2014	21.4	11.1	24.3	56.7	4.3%
2015	18.3	9.7	28.4	56.5	4.1%

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

The risk of the banking sector associated with lending to non-credit financial institutions and their role in the funding of banks was insignificant. The share of loans to pension funds in total bank loans at the end of March 2015 did not exceed 0.01%, while the share of loans to insurance companies and investment funds was 0.2% and 1.4%, respectively (see Table 4.6). Exposures associated with off-balance sheet transactions (open credit lines, other liabilities and issued guarantees) with these three categories of entities were also insignificant and accounted for around 0.1% bank assets.¹¹¹ The ratio of deposits placed by insurance companies, pension funds and investment funds to total deposits in the banking sector stood at 1.3%, 0.7% and 2.1%, respectively.

Box 8. Analysis of non-credit financial institutions from the point of view of systemic risk

The aim of the box is to present an NBP-developed grid analysis of the impact of non-credit financial institutions (NIFs) on systemic risk, to be used in the subsequent editions of the Report. Although banks hold a dominant position in the Polish and (European) financial sector, a significant role for financial stability is also played by non-credit financial institutions. Their role may additionally grow if an increase of the regulatory requirements for banks results in a transfer of some of their activities to the non-banking sector.

This box analyses non-credit financial institutions understood as the following: insurance companies, undertakings for collective investment (pension and investment funds), lending companies, investment firms (brokerage houses and offices) and other financial institutions such as leasing and factoring companies, Private Equity (PE) and Venture Capital (VC) funds or Special Purpose Vehicles (SPVs) that participate in securitisation. In each case, when it was deemed substantive, institutions that apply and do not apply leverage were identified.

The analysis was performed as a three-stage examination. The aim of the first stage was to identify potential channels through which specific NIF categories may impact systemic risk. To this end, international experience was analysed. Next, specific channels were assessed for their significance in Polish conditions. In the third stage, the capacity of NBP to monitor specific channels was examined, in particular information gaps were identified.

Four basic channels of the impact of NIFs on systemic risk were distinguished in the course of the analysis:

1. Availability of financial services for the real economy – to what extent the cessation of activity by a given sector will be felt by entities of the real economy,
2. Impact of NIFs on financial phenomena significant for the preservation of financial stability, including in particular the following:
 - Financial cycle and indebtedness of the real economy and property prices,
 - Asset prices and financial market liquidity,

¹¹¹ Approximate date based on reporting of large exposures.

- Financial condition of borrowers, in particular households and enterprises (e.g. through the supply of savings products or the provision of services that facilitate risk insurance),

3. Direct impact on the banking sector, in particular the following:

- Credit risk arising from exposure of the banking sector to NIFs,
- Funding of the banking sector, e.g. through purchase of debt securities issued by banks (bonds, mortgage bonds) or placing of deposits at banks,
- Risk transfer, e.g. in securitisation (the assumption of part or the whole of the credit risk by the investor), through the insurance contract that includes debt default, or as a result of the issue of specific securities, such as CAT bonds,
- Competition with banks, both for customer savings and via sale of substitute products to bank loans (e.g. leasing, cash loans),
- Ownership linkages, including through international groups, resulting, for example, from operations under the same brand or the dividend policy of a parent company towards its subsidiary.

4. Participation in creating long chains of financial intermediation¹, which may lead to a transfer of risk among financial institutions and, at the same time, hinder assessment and identification of who the given risk-takers are.

The channels discussed above form a potential list of the areas in which the activity of NIFs may create weaknesses in the financial system or the real economy. The significance of the channels is assessed on the basis of the strength of a potential impact on the financial system and the real economy, being primarily dependent on the scale of a given activity.

Insurance companies (ZUs) play an important role in the economy as they provide the real economy with products that help to alleviate the negative consequences of fortuitous events, which has a beneficial effect on well-being. On this account, the cessation of activities of insurance companies may have a potentially significant impact on the real economy. Insurance companies may have a potentially significant impact on financial markets due to the scale of investments – in 2002-2013, in the euro area, together with pension funds they had, on average, a 15.7% share in the market for long-term debt securities and an almost 8% share in the market for equity and equity instruments. International experience shows that herding behaviour may lead to procyclical behaviour of insurance companies in financial markets.² Some insurance products, such as life insurance with a guaranteed rate of return, may create incentives for ZUs to take excessive investment risk in a situation where low risk instruments do not guarantee sufficient returns for the fulfilment of contractual obligations towards policy holders and contribute to build up of price bubbles in asset markets. Excessive exposure to illiquid assets, especially if accompanied by the possibility of an early withdrawal from the life insurance contract by policy holders, may lead to liquidity problems that will prompt fire sale of assets by insurance companies. It would bring about a fall in securities prices on the market and thereby a decrease in the valuation of assets that are on the balance sheets of other financial institutions, including banks. Other examples of insurance company's behaviour that is likely to generate systemic risk are: excessive exposure in financial risk insurance (e.g. through CDSs – the case of AIG, or through guarantees, as in the case of *monoline insurers*), or participating in the creation of long financial intermediation chains (securitisation). Ownership linkages may also turn out to be of significance, most notably in the case of banking and insurance conglomerates.

Polish insurance companies focus on activities that are traditionally associated with the sector. The share of insurance companies in the Treasury securities market amounts to around 10%, which gives them a potentially big influence on prices and yields; however, these investments are usually held to maturity. Gross premium written of the domestic insurance sector amounts to around 3% of GDP, and the value of its assets – 10% of GDP. Debt

securities, mainly Treasury securities, prevail in insurance companies' assets. Polish insurance companies are not involved in creating long financial intermediation chains. The importance of ownership linkages with banks has grown recently – PZU has signed a share purchase agreement to acquire a 25% stake in Alior Bank and offered to buy Raiffeisen Polbank. Insurance companies and banks owned by foreign banking and insurance conglomerates operate on the Polish market, as well as the Getin Holding Group, whose banks and insurance companies are linked by a single owner. The information gaps include insurance companies' exposure in the market for bank and corporate debt securities, the mortgage bond market, off-balance-sheet transactions and the precise scale of counterparty default insurance.

Undertakings for collective investment (IWI), which include investment funds (FIs) and pension funds (FEs), may potentially generate systemic risk via their impact on financial markets, funding of banks and competition with banks for savings. As a rule, pension funds have a stabilising effect on financial markets and are natural investors in long-term assets, e.g. mortgage bonds. However, undertakings for collective investment may also destabilise the market by (*fire sales*) of assets; the probability and a likely scale of fire sales depend on institutional solutions with regard to withdrawal of capital by clients (in the case of pension funds, such possibilities are limited, in the case of open-end investment funds – they are much bigger) and on whether undertakings for collective investment use leverage in the form of borrowing or exposure in derivatives. Undertakings for collective investment, through investments in debt securities and structured instruments, may have a substantial influence on the debt of the real economy. On the one hand, they provide funding to banks (deposits, bank debt securities, repos), but on the other hand they compete with banks for customers' savings. The undertakings that use leverage create credit risk that may be substantial (the case of *Long-Term Capital Management*).

The value of assets managed by Polish investment funds amounts to approx. 15% of GDP, and the value of assets managed by open pension funds – approx. 9% of GDP. In Poland, undertakings for collective investment are important investors in the stock market – in 2013, their share in turnover in the Warsaw Stock Exchange Main List totalled 20.4%, in the WSE capitalisation it was 24.7%, and in *free float* – 52.8%.³ As investment funds have around a 10% share in the Treasury securities market, their market impact is moderate. On the other hand, undertakings for collective investment have a minor impact on debt of the real sphere, as the value of corporate debt securities they hold is merely 3% of GDP (comparing to 15% of GDP, which is the value of bank credits). Polish undertakings are financing the banking sector only to a small extent – the value of banks' debt securities owned by them is approx. 14 billion zlotys, and deposits placed by them in banks are approx. 25 billion zlotys, which together make up about 2.5

Investment firms include providers of banking investment services such as fund-raising consultancy, brokerage services or arrangement of the issuance of securities. By providing such services, investment funds may indirectly exert a big influence on the financial condition of large enterprises that use market funding. They can also have a strong impact on financial markets via market making and investment on own account. The impact is stronger in the case of using leverage or having a large derivatives portfolio. If short-term funding is raised on the wholesale market, the risk of *fire sales* arises. The impact on the banking sector includes credit risk and funding channels (investments in banks' debt securities). Investment firms can also participate in the securitisation of transactions that results in the transfer of risk.

In Poland, investment firms include brokerage houses and offices. The value of assets of their clients amounts to approx. 9% of GDP. The bankruptcy of investment firms does not generate systemic risk because, firstly, such services can be provided by other entities, including banks that conduct brokerage activity, and, secondly, client assets are excluded from bankruptcy estate. Investment firms operating in Poland conduct very limited activities on their own account (asset value below 0.5% of GDP), do not provide funding to the banking sector, do not compete with banks and do not participate in creating long financial intermediation chains. The channel of ownership linkages is potentially significant (brokerage houses owned by banks), mainly due to the single brand risk.

The impact of lending companies on systemic risk hinges on the scale of their operations and competition with

the banking sector. They can provide financial services to the clients who are not attractive to banks, but can also vie for the same clients, which may increase the banks' appetite for risk. In the former case, the activity of lending companies may have a positive impact on the well-being of households by allowing for consumption smoothing over time. However, when borrowing costs are excessive, the effect is opposite. Lending companies, provided that they conduct large-scale activity, may substantially contribute to the growth of macro-economic imbalances, which is evidenced by the role of lending companies in the United States (such as *Countrywide Financial Corporation*) in granting *subprime* mortgage loans. The other example is a financial crisis in South Korea in 2003 triggered by mass credit card issuance by local lending companies. The impact on systemic risk is negligible if a lending company uses own funds or funds of its parent company to provide a loan, but when leverage is used, credit and liquidity risks arise. Lending companies can also securitise their loans, thereby initiating the financial intermediation chain and transferring the risk to other entities.

The activity of lending companies in Poland is of no significance for financial stability. Although there is no accurate data on the scale of operations of lending companies, according to estimates it is very small as compared with that of banks. Banks have very low exposure to lending companies (around 1 billion zlotys), and there are no ownership linkages with the banking sector.

Leasing and factoring companies may generate systemic risk via three main channels – through credit risk (when their activity is funded with bank loans), ownership linkages (they are often owned by banks) and securitisation (receivables of leasing and factoring companies may be used as the underlying assets). The companies rather pursue an activity that is complementary to that of banks, but in some cases they can compete with them, for example, for funding means of transport purchases. Globally, a small group of leasing companies with a dominant market position is of substantial importance for the operation of some industries (e.g. air transport).

The value of leasing contracts signed by Polish enterprises stands at around 3.5% of GDP. In Poland, most leasing companies are owned by domestic banks, and bank loans are the main source of funding. Leasing companies are the largest creditors of banks among non-bank financial entities; however, exposure to them does not jeopardise banks' solvency. Turnover of factoring companies is estimated at around 8% of GDP, but due to the short-term nature of receivables, their balance is likely to be significantly lower. The availability of data on the operations of leasing and factoring companies is limited as leasing and factoring service providers are civil liability companies, which involves limited reporting obligations.

Venture Capital and Private Equity funds have no major impact on systemic risk, except banks' potential credit risk. PE funds may generate that risk through Leveraged Buyout transactions (LBOs). Funding of such transactions involves significant risk for creditors, and liabilities arising from these transactions can be securitised. LBOs were very popular in the 1980s and also in the years 2006-2007, when they were used for the acquisition of large companies. Moreover, PE funds may own small banks. PE and VC funds do not impact the financial cycle in a substantial way, do not provide funding to the banking sector, do not transfer risk, and are present on the financial market only at the stage of disinvestment. In Poland, the activity of the funds is insignificant for systemic risk and is exclusively limited to holding stakes in small banks.

Securitisation transactions that are carried out using (*Special Purpose Vehicles*) may potentially contribute strongly to systemic risk growth, mainly through an indirect influence on the supply of credit and property prices. In the *originate to distribute* model, applied by some financial institutions in developed markets prior to the crisis, SPVs were used on a large scale for the refinancing of lending via securitisation, which caused a transfer of credit risk outside the lender and initiated long financial intermediation chains. Banks can incur risk due to the asset quality guarantees that are the object of securitisation and due to liquidity lines granted to SPVs. In Poland, the scale of operations of SPVs is insignificant – according to available data at the end of 2014, the value of active securitisation transactions totalled 2.3 billion zlotys.⁴

¹ The creation of long financial intermediation chains means a multi-stage process of securitisation, where credit risk is transferred on various occasions between participants in the financial market. The main risk associated with the creation of such a chain is ignorance about the investment risk taken.

² More on the issue, e.g., in "Procyclicality and structural trends in investment allocation by insurance companies and pension funds: A Discussion Paper by the Bank of England and the Procyclicality Working Group", 2014

³ See: Table 5.4.6., p. 165 and Table 4.6.3., p. 174 in "Rozwój systemu finansowego w Polsce w 2013", NBP, 2014

⁴ An analysis in this box does not include the sale of non-performing loans to securitisation funds, as stipulated by Articles 183-195 of the *Act on Investment Funds* (Journal of Laws of 2004, No. 146, item 1546); in Polish conditions – it is used for tax optimisation purposes of the sale of non-performing loans to debt collection agencies.

Chapter 5.

Risk assessment and recommendations

Poland's financial system functions in a stable manner and the nature and intensity of risks to its stability have not changed significantly since the publication of the previous issue of the *Report*. The increased uncertainty related to the macroeconomic developments in the environment of the Polish economy continued, although its sources have changed – the situation related to the crisis in Greece played a more important role than before. The persisting strong exchange rate of the Swiss franc has not posed risks to the stability of the Polish financial system so far, which arises mainly from significant buffers allowing borrowers and banks to absorb the effects of these market changes.

5.1. Risks and negative scenarios

Cyclical risk

In the Polish economy and the key segments of the financial system there are presently no significant imbalances whose adjustment could negatively affect financial stability. The growth rate of lending, which is similar to the nominal growth rate of GDP, does not generate such imbalances and is not a bar-

rier to economic growth. The level of household and corporate debt is also moderate. Developments in the commercial property 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.

The difficult condition of the credit unions sector does not directly generate systemic risk; however, it has certain significant negative consequences for the ability of public authorities to respond to problems in the financial system. The lack 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. Restructuring methods currently used for the sector

(bankruptcy, liquidation, takeover¹¹²) involve the use of funds of the Bank Guarantee Fund, which causes, *ceteris paribus*, a reduction of resources available in the case of potential problems in the banking sector. Additionally, using the funds of BFG to restructure the credit union sector¹¹³ will also cause an increase in costs, primarily for banks, in the future, which may *ceteris paribus*, limit their capacity to increase capital buffers. Due to the lower profitability of their activity, this will be potentially more challenging for cooperative banks and might make the creation of the financial potential of the institutional protection scheme more difficult.

NBP indicates that flexibility should be maintained in relation to the rate at which the target level of BFG resources will be achieved. The draft law introducing the European regulations related to the deposit guarantee system and the resolution of credit institutions into Polish law¹¹⁴ stipulates that the target level of BFG funds should be set at a higher level than the European minimum. Due to the fact that BFG, contrary to deposit guarantee systems in some EU member states, already holds significant financial resources, the build-up of funds to a level exceeding the minimum is justified. Moreover, this would provide an additional security buffer for the financial system. However, if further significant use of BFG resources occurred, the regulations should allow for flexibility regarding the deadline for achieving the target levels, which are higher than the European minimum.

Developments in the environment of the Polish economy, mainly in countries that are Poland's major trading partners, are a significant risk factor. Their condition affects the dynamics of the Polish economy, which in turn impacts the situation of borrowers. In the analysed period, growth forecasts for the euro area for the coming years were revised upward, which reduces the probability of negative shocks for the Polish economy. However, one still cannot rule out the scenario involving a recurrence of stagnation in the euro area still, which can be accompanied by deflation, and in consequence by an increase in the real value of sovereign and private debt. This could contribute to a downgrade of the emerging markets growth outlook and a deterioration of the condition of banking sectors in developed countries. As a result, this may trigger a rise in risk aversion in global financial markets. In addition, the intensification of the Russian-Ukrainian conflict may negatively affect the economic situation in the EU, and also provide an impulse for a more severe correction in emerging markets.

Developments in Greece continue to be a factor of uncertainty. The direct impact of the economic situation of Greece on other EU countries is minor, due to the relatively small size of the country's economy and the moderate business relationships. The current creditors of Greece mainly include other countries of the euro area and international institutions, rather than private entities. The exposure of Polish banks to Greek entities is also negligible. However, the developments in Greece may have an ad-

¹¹²The 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 under Article 74c of the Act on Credit Unions (Act of 5 November 2009 on Credit Unions, Journal of Laws of 2013 No. 1450, as amended). However, this approach is not used at present. An argument being raised by some is legal uncertainty due to the proceedings pending before the Constitutional Tribunal (Case no. K-41/12) regarding the conformity of certain provisions of the Act on Credit Unions, including some of the provisions of article 74c, with the Polish constitution.

¹¹³The resources of the BFG, which come from the contributions of banks and NBP (until 2008), have been collected for nearly 20 years, since the establishment of BFG in 1995. The last time the resources of BFG were used, before the payment of deposits from SKOK Wspólnota and SKOK Wołomin in 2014, was to pay deposits after the bankruptcy of Bank Staropolski in 2000.

¹¹⁴Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms and Directive 2014/49/EU of the European Parliament and of the Council of 16 April 2014 regarding deposit guarantee systems. These Directives indicate that by 2024 financial resources available for the purpose of guaranteeing deposits, recovery and resolution of credit institutions should be equal to at least 1.8% of guaranteed deposits.

verse effect on consumer and business sentiment in other countries of the euro area, contributing to the weakening of economic growth. In the long term, the method of resolving the economic problems of Greece may have a significant impact on the directions of the economic policy of other EU member states, including the occurrence of moral hazard which, in extreme cases, may even threaten the existence of the euro area in its current shape.

A materialisation of negative scenarios in the euro area, coupled with a surge in risk aversion in global and emerging markets, poses - apart from a serious geopolitical conflict scenario – the greatest risk to the stability of the domestic financial system. This factor would weaken Poland's economic growth. Credit risk would be the main channel through which the materialisation of such a scenario would affect financial stability. Credit risk growth would stem from the deterioration of both the condition of enterprises and the situation in the labour market as well as from a depreciation of the zloty, which – if it is strong and persistent – could negatively impact the quality of the foreign currency loan portfolio.

Such a scenario could negatively affect the situation of the state budget; however, Poland's relatively low debt does not generate credit risk of the government bonds portfolio. On the other hand, banks' exposure to market risk is limited and should not generate systemic risk.

If major central banks abandoned the current loose monetary policy faster than expected by financial markets, this could prompt investors to withdraw from emerging markets and result, inter alia, in a depreciation of the zloty and higher yields on Polish government bonds. The impact of such a scenario on domestic financial system stability can be viewed as moderate due to the hedging mechanisms used by banks. Moreover, the post-

poned perspective of monetary policy tightening by the US decreases the probability of this scenario unfolding.

The current historically low level of interest rates, even if maintained for longer, should not generate significant risk for the stability of commercial banks, despite the downward pressure on their financial results. The potential effects of a significant interest rate hike, following a period of their persistently low level, may pose a certain challenge for this sector, although they will not create a serious threat for its stability. Low interest rates create a more significant challenge for cooperative banks due to their specific product offer and business model. Both types of banks, should maintain prudence while defining the lending standards. An analysis of the reasons for and potential effects of low level interest rates on the stability of the banking system is presented in Box 5. In the case of non-credit financial institutions, particularly insurance companies operating in Poland, this situation will not generate significant threats due to the lack of products with guaranteed rate of return in their offer.

The implementation of economic policy measures discussed in the pre-election debate may become a source of risk for economic growth and financial stability. The reason for this is that the imposition of taxes on assets of the banking sector may have negative consequences for banks' capacity to lend to the economy. In Poland, the lending rate was the highest among the 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 resilience of the sector to the materialisation of other risk sources described in this chapter. It should also be kept in mind that the increase in taxes would take place in the period of lower income of banks, grow-

ing burdens associated with increasing deposit protection and restructuring funds at BFG as well as the potential costs of reducing the CHF portfolio. Under such conditions, some banks may report losses, which will additionally reduce their ability to create credit. 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.

Structural risk

The foreign currency loan portfolio is a vulnerable element of the balance sheet of banks; however, 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 this area arises from borrowers' exposure to market risk which is difficult for them to mitigate. A significant part of foreign currency loans demonstrates high LtV ratios. The foreign exchange rate changes that have so far been observed are not sufficient to generate a significant deterioration in the quality of this portfolio. The value of banks' exposures to the portfolio's risk is gradually diminishing due to a decrease in the value of the portfolio (adjusted for exchange rate changes)) as borrowers repay the loan principal.

The appreciation of the Swiss franc increased the intensity of the public debate regarding the advisability and method of potential measures aimed at reducing the risk associated with the foreign currency housing loan portfolio. Any measures aimed at mitigating or eliminating this risk from banks' balance sheets should be preceded by in-depth analysis of the costs and benefits of such measures, both in the short and long term. A detailed analysis of these issues is presented in Box 2.

It is hard to regard the level of concentration in the

Polish banking system as excessive. In an environment of low rates of return, decisions by the strategic investors of Polish banks regarding business models and the geographical scope of the group's operations may lead to a rise in concentration in the Polish banking sector. Having in mind information regarding plans for the sale of some banks operating in Poland by their strategic investors, it may be gauged that the intensity of that process increased in the period analysed.¹¹⁵ The increase in concentration in the banking sector may in turn lead to the emergence of a group of institutions that are "too big to fail". Such institutions may take excessive risk, taking advantage of the fact that their market position and expectations about support from authorities in the event of any problems will help them to obtain low cost-funding. Therefore, special attention should be paid to the impact of mergers and acquisitions in the domestic banking sector on market concentration. In this context, the participation of investors so far absent on the Polish banking market in the process of mergers and acquisitions as well as the fact that the consolidation processes will probably apply to medium-sized banks, reduces the risk of excessive market concentration. Irrespective of the progress of the merger and acquisition processes, institutions of high market share should demonstrate enhanced capacity to absorb the effects of risk materialisation.

The necessity of changes in the cooperative banking sector is a medium-term structural challenge. This sector does not utilize fully 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, simultaneously their effectiveness remains low. The sector's business model needs to be changed. It should comprise closer integra-

¹¹⁵In the view of banking market analysts, in the next few years ownership changes may affect banks of a total market share of about 10%.

tion, allowing, 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 SMEs. The knowledge of local market needs is a significant competitive advantage of the cooperative banking sector, whereas closer integration will enable it to strengthen its market position. A tool for such integration should be the introduction of the institutional protection scheme, which should meet the requirements defined in the CRR regulation. A detailed analysis of these issues is presented in Box 4.

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, may become systemic. Due to their non-economic character they are not a subject of the analysis in this publication. These are primarily operational risk, particularly 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, an example of which are client data leakages in one of the banks, which took place in the period analysed. A potential materialisation of such risks may have substantial implications for financial stability through the impact on reputation of the financial institutions that were subjected to cyber-attacks, and in extreme cases – on their capacity to provide services and, in a broader context, on the level of confidence in financial institutions.

5.2. 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 fulfil the mandate of performing activities to support the stability of the domestic financial system (Article 3 paragraph 2 item 6a of the Act on NBP). Most of the measures listed below are not new – the recommendations were presented in previous editions of the *Report*. As these conditions did not change or the measures were not undertaken, Narodowy Bank Polski presents them again, believing that their implementation would contribute to a further strengthening of the stability of the domestic financial system:

1. A speedy enactment of the act setting up a body responsible for macroprudential supervision of the domestic financial system should be pursued, the design and competences of which should ensure an effective identification, assessment and mitigation of systemic risk.

The creation of such an institution will help to strengthen the institutional framework of the domestic financial safety net. An example of a risk area which should have been subject to macroprudential policy action in the past is the issue of foreign currency loans, especially during their accumulation. This is due to their significance for the stability of the whole financial system, not just individual institutions, and the consequent potential influence on the economy as a whole. The creation of a macroprudential authority would also allow to implement the “Recommendation of the European Systemic Risk Board on the macroprudential mandate of national author-

ities”(ESRB/2011/3). The draft law also introduces into Polish law some of the provisions on capital buffers of the new CRD directive. A prompt implementation of other provisions of the said directive is also desirable through amendment to the Banking Law Act. The draft Act on macroprudential supervision over the financial system and crisis management in the financial system is currently the subject of debates of parliamentary committees.

2. **Legislative work aimed at introducing the recovery and resolution regime into Poland’s law should be accelerated, in particular through the implementation of Directive 2014/59/EU..**

Reducing the costs of the restructuring of the credit union sector requires fast implementation of the provisions of the BRR directive into Polish law. Moreover, as a host for European banking groups, Poland should be prepared for international cooperation in the resolution area, which requires the formal appointment of the authority responsible for resolution and endowing it with adequate powers, so it can conduct equal dialogue with corresponding authorities from other EU countries. Otherwise, Poland cannot be represented in EU resolution structures (resolution colleges), which might consequently make it more difficult to effectively influence the principles of cross-border cooperation in that field. The draft Act is still at the stage of interministerial consultations.

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

The National Association should mobilise the

internal resources of the credit union system to the fullest extent possible, in particular by using them to supply the stabilisation fund, and participate actively in the process. The capital position of many credit unions remains difficult. The current trends in the area of profitability and liquidity of credit unions do not indicate that over time, the 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.

4. **In order to strengthen the cooperative banking sector, it is advisable to pursue its closer integration and transformation of associations into associations with an Institutional Protection Scheme that covers banks’ liquidity and capital, and to change the business model of the cooperative banking as well as strengthen the resilience of the associating banks. To this end, it is necessary to rapidly implement the provisions of the law amending the Act on the operation of cooperative banks.**

The establishment of the IPS is necessary to ensure compliance with the LCR short-term liquidity standard (scheduled entry into force from October 2015) by the associating banks and cooperative banks themselves. A closer integration will help cooperative banks to better utilise their potential to expand, including their local market knowledge, and at the same time to stem the trends to transfer busi-

ness risk to the associating banks. At the same time, NBP points out that the design of the so-called integrated affiliation permitted by the legislator does not meet the requirements set for the Institutional Protection Scheme by the European regulations and thus cannot be treated as an alternative.

5. Banks should take special care to maintain their high capital position and expand lending without significantly increasing leverage.

The situation in the Polish economic environment remains uncertain. Average capital adequacy and leverage ratios in the banking sector provide high resilience of banks to shocks, being prerequisites for financial system stability in Poland. Therefore, retention of a significant portion of their profits will help banks to maintain these positive features and to develop further their business in a safe manner.

6. Public measures that could result in significant limitation of banking sector's resilience to threats and in reduction of its capacity to create required capital buffers in the future should be avoided. In particular, it refers to certain proposals of solutions related to the Swiss franc housing loan portfolio and other additional burdens on banks, such as additional forms of taxation.

Stress tests indicate high resilience of banks to macroeconomic, market and liquidity shocks. The existing uncertainty related to developments in Europe and worldwide suggests the necessity of maintaining such a high resilience by banks. The imposition of additional burdens on banks may cause some institutions currently demonstrating profitability lower than average to incur losses by reducing their capital resources. Reducing the capital position of the banking sector will limit the

lending capacity of banks as well as weaken their resilience to shocks emerging in their environment, consequently increasing systemic risk. In response to the increased tax burden, banks will probably strive to increase their revenues, including through raising credit spreads, which would additionally limit lending availability.

7. Economic incentives for banks should be increased to encourage them undertake autonomous measures aimed at reducing their foreign currency housing loan portfolios by means of preparing individual offers for clients.

Economic incentives for banks, such as, for example, higher risk weights or additional capital requirements, should be addressed, in particular, to banks whose portfolio has a significant share of loans with a high current LtV ratio. Banks should consider risk associated with this part of their portfolio in their calculations of credit risk cost and in their capital policy. At the same time, banks should avoid measures that could increase the probability of borrowers' losing their loan repayment capacity.

8. 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 in-

terest 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 income that will help 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.

9. **Banks should continue to reduce funding structure risk by gradually limiting the funding concentration in the counterparty and product dimensions, while ensuring a safe continuity of funding.**

This may, in particular, concern those banks which demonstrate a high-share of counterparty-concentrated liabilities towards non-residents. Banks which decide to maintain their funding model should strive for an extension of its duration. Banks whose liquidity position is sensitive should also in-

crease buffers of liquid assets.

10. **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.

11. **The EU initiatives that serve to contain systemic risk that may be generated by the activities of central counterparties (CCPs), in particular relating to the establishment of *therecovery and resolution* regime for these entities and their appropriate capital levels should be supported¹¹⁶.**

¹¹⁶These issues were analysed in greater detail in Box 3 in "Financial Stability Report. December 2013", NBP, p. 32.

Glossary

Activity monitoring ratio – the ratio of insurer's capital to the statutory capital requirement, which is the value of solvency margin or the guarantee capital (whichever is higher).

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.

Adjusted one-month liquidity gap – the difference between the book value of assets of up to 1 month (adjusted for the value of overdue claims and for the value of Treasury securities earmarked to cover the fund for protection of guaranteed deposits of the Bank Guarantee Fund) and the surplus of deposits from non-financial customers of up to 1 month over the core deposits and other liabilities of up to 1 month.

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.

Capitalisation rate – quotient of net operating income, which may be generated in the market and the property market price (in accordance with Common General Rules of Valuation).

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 – 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).

Deleveraging – reducing exposures in host country entities by foreign investors. Deleveraging may take the form of reducing foreign investors funding to financial institutions (especially their subsidiaries) as well as a reduction of investments in financial instruments of the host country, such as host country Treasury debt securities or shares listed on host country stock exchange.

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.

Developer apartment – an apartment from the primary market constructed by a developer. It is sold both as a contract for its construction and as a newly constructed finished apartment.

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.

Equity capital coverage ratio (TFI) – ratio of the value of TFI equity capital and the value of the minimum capital requirement.

Financial strength rating – a measure of long-term capacity of a financial institution to conduct its business independently, without support of third parties, calculated by Moody's on the basis of fundamental data, franchise value, and the scale of activity diversification as well as the level of development of the financial system in which the institution operates, the quality of supervision, and the strength of the economy.

Forward Rate Agreement – 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 of the period of liability is not determined – amounts payable during a particular reporting period, whether or not the premium has been paid.

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.

Internal Capital Adequacy Assessment Process (ICAAP) – process of estimating the internal capital by bank. The estimated internal capital is the value of capital which is necessary to cover all identified and significant types of risk involved in the bank activity and changes in the economic environment, including the forecasted level of risk.

Insurance provisions – provisions of an insurance company to cover current and future liabilities from written insurance contracts.

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.

Loan spread – difference between banks' interest on loans and market interest rate.

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).

Loss ratio – the ratio of insurance claims and benefits paid, taking into account the changes in the amount of provisions for unpaid claims, to premiums earned – gross or net (after reinsurance).

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 a 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.

Net percentage – a measure aggregating qualitative survey results; in the NBP senior loan officer opinion survey, the net percentage is calculated as the difference between the percentage of asset-weighted banks which eased credit policies (or observed a growth in loan demand) and the percentage of asset-weighted banks which tightened credit policies (or observed a decline in loan demand). Negative values of the net percentage reflect the tightening of credit policy (decline in loan demand) in net terms.

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.

Non-interest margin – non-interest income for a given period to average value of assets in this period.

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

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.

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.

Property Market Database (BARN) – database of prices and features of flats in the primary and secondary market for commercial property developed by Narodowy Bank Polski under the programme of statistical studies of public statistics.

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 and 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 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.

TLTRO – Targeted Longer-Term Refinancing Operations providing liquidity to entities participating in the ECB open market operations. TLTROs are executed in a decentralised manner by national central banks through standard and fixed rate tenders and are aimed at supporting bank lending to households (excluding home loans) and the euro area non-financial private sector.

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.

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

ABS	Asset-backed securities
ABSPP	Asset-Backed Securities Purchase Programme
AC	Auto Casco
AQR	Asset Quality Review
BFG	Bank Guarantee Fund
BGK	Bank Gospodarstwa Krajowego
BGŻ	Bank Gospodarki Żywnościowej
BIK	Credit Information Bureau
BOŚ	Bank Ochrony Środowiska
BPS	Bank Polskiej Spółdzielczości
BRRD	Bank Recovery and Resolution Directive
CBPP3	3 rd Covered Bond Purchase Programme
CCP	Central counterparty
CDS	Credit Default Swap
CIRS	Cross Currency Interest Rate Swap
COR	Combined Operating Ratio
CPI	Consumer Price Index
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
CVA	Credit Valuation Adjustment
C/I	Cost/Income
EAPP	Expanded Asset Purchase Programme
EBA	European Banking Authority
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECB	European Central Bank
EIOPA	European Insurance and Occupational Pensions Authority
EMIR	European Market Infrastructure Regulation
ESA	European System of Accounts

ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
EU	European Union
EURIBOR	Euro Interbank Offered Rate
EURO STOXX 50	Stock index of the 50 biggest companies in the euro area by value of shares in free float
EURO STOXX BANKS	Stock index of the biggest banks in the euro area
Fed	Federal Reserve System
FI	Investment fund
FRA	Forward Rate Agreement
FSB	Financial Stability Board
FUS	Social Insurance Fund
GDP	Gross domestic product
GPW	Warsaw Stock Exchange
GUS	Central Statistical Office
ICAAP	Internal Capital Adequacy Assessment Process
IFRS/IAS	International Financial Reporting Standards / International Accounting Standards
IMF	International Monetary Fund
KDPW	Central Securities Depository of Poland
KNF	Polish Financial Supervision Authority
LCR	Liquidity Coverage Ratio
LFS	Labour Force Survey
LIBOR	London Interbank Offered Rate
LTRO	Longer-term refinancing operations
LtV	Loan-to-value
MdM	“Housing for the Young”
NASDAQ	National Association of Securities Dealers Automated Quotations
NBP	Narodowy Bank Polski
NC	NewConnect
NEG	Negative rating outlook – expected downgrade
NIF	Non-credit financial institution
NIM	Net interest margin
NSFR	Net Stable Funding Requirement
NYSE	New York Stock Exchange
O/N	Overnight
OC	Third party liability insurance
OFE	Open Pension Fund
OIS	Overnight Index Swap

OTC	Over-the-counter
PAS	Polish Accounting Standards
PHM	Primary housing market
PSPP	Public Sector Purchase Programme
PTE	Pension fund management company
ROA	Return on Assets
ROE	Return on Equity
RPP	Monetary Policy Council
S&P	Standard & Poor's
S&P 500	Stock index of 500 companies listed on NYSE or NASDAQ with the highest value of shares in free float
SACP	Stand-Alone Credit Profile
SHM	Secondary housing market
SKOK	Credit unions
SME	Small and medium-sized enterprise
SP	Treasury
STA	Stable rating outlook
TFI	Investment fund management company
TLTRO	Targeted Longer-Term Refinancing Operation
UFK	Insurance investment fund
UKNF	Office of the Polish Financial Supervision Authority
VaR	Value at Risk
WIBOR	Warsaw Interbank Offered Rate
WIG	Main index of the Warsaw Stock Exchange
WIG20	Warsaw Stock Exchange index of 20 largest companies by the value of shares in free float
WIG-Banki	Warsaw Stock Exchange index of banks
ZBP	Polish Bank Association
ZU	Insurance company
ZUS	Social Insurance Institution

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