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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 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. 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 National Bank of Poland 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. One of the necessary conditions for the smooth operation of payment systems is the stable functioning of financial institutions that are integral components 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 2013 (cut-off date). The *Report* was approved by the Management Board of the National Bank of Poland at a meeting on 11 July 2013.



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Chapter 1.

A synthetic assessment of Poland's financial system stability

The "Financial Stability Report" discusses the current situation of Poland's major financial system segments and the results of analysis of main economic risks that institutions operating in the Polish market are exposed to. The *Report* also presents an assessment of the resilience of major financial institutions to the materialisation of these risks.

1.1. Assessment of financial stability and its outlook

In the period analysed in this *Report*¹, the situation of the banking sector remained favourable. Banks' earnings began to reflect the impact of the lower GDP growth rates (from 4.3% in 2011 to 1.9% in 2012 and 0.5% in the first quarter of 2013). In the fourth quarter of 2012 and the first quarter of 2013, the banking sector's earnings remained high, whereas profitability ratios were slightly lower than in the period analysed in the previous edition of the *Report*. Net interest margin continued its downward trend, which began in 2012, which was connected with continued strong competition for deposits of the real sector and a fall of market interest rates. On the other

hand, the ratio of cost of credit risk to assets stabilised in the period analysed at levels similar to those registered in the second and third quarter of 2012.

Banks' loan loss absorption capacity improved in the period analysed in the *Report*. Average capital adequacy ratios of banks increased both on the back of regulatory capital growth at the majority of banks and the reduction in the capital requirements in individual banks that were given permission to use the IRB approach to estimate them. Since the onset of the global crisis in 2008, no bank in Poland has required recapitalisation with public funds. The results of macro stress tests prove that a large portion of domestic commercial banks hold sufficient capital to absorb the effects of a severe economic slowdown and to maintain high capital adequacy levels. It has to be pointed out that these analyses were performed according to very restrictive assumptions. The probability of these assumptions materialising can be assessed as low. However, owing to the expected economic slowdown and continuing uncertainty about future trends in the economy it is advisable for banks to pursue a prudent dividend policy. In particular, banks with large exposures to foreign currency lend-

¹ The analysis in this *Report* is focused on data available in the period from the *cut-off date* of the previous edition, i.e. 31 October 2012.

ing should continue to seek to maintain and, in some cases, to strengthen their capital and liquidity positions. This also applies to situations, where due to changes in ownership (mergers and acquisitions) large portfolios of foreign currency-denominated loans are purchased.

The current financial condition of the sector of cooperative banks can be assessed as stable; a similar assessment is also true of commercial banks. Cooperative banks were characterised by better loan portfolio quality and higher net interest margin. However, as their cost efficiency was significantly lower, their profitability was slightly below that of commercial banks. The value of the capital adequacy ratio of cooperative banks was lower than for commercial banks. An overwhelming majority of cooperative banks have a surplus of deposits over loans, which makes them not exposed to risk associated with the use of market funding.

The situation of insurance companies, investment fund management companies and pension fund management companies posed no major threat to financial stability. In 2012, the technical and financial results of the insurance sector rose compared to 2011. The solvency of insurance companies also improved, which helped strengthen the safety of operation of the sector. After the *cut-off date* of the *Report*, proposals of changes in the system of pension funds were made public and they may result in reducing the scale of activity of open pension funds.

The financial condition of the credit union (SKOK) sector, which has been subject to supervision by the Polish Financial Supervision Authority (KNF) since 27 October 2012, was reviewed by the KNF – on the basis of preliminary financial data – in a report released on 6 June 2013.² According to the opinion presented in the report, the capital position of credit unions

is complex, their regulatory capital should be regarded as inadequate to their operations, despite its over four-fold growth in the years 2006 – 2012, because it does not cover the risk borne by credit unions. Their liquidity risk is at an elevated level as a result of the maturity mismatch of assets and liabilities. As at the KNF study publication date, 44 credit unions were obliged by the KNF to initiate rehabilitation processes. Credit unions have to urgently take restructuring measures, including using the stabilisation fund.

The "Financial Stability Report" presents a detailed analysis of risk related to banks' mutual exposures as well as the interconnectedness between banks and other financial institutions. The analysis indicates that besides the interconnectedness between cooperative banks and associating banks –resulting from the model of operation of cooperative banking – other types of connections pose no substantial risk to financial system stability; in particular, due to a minor scale of interconnectedness between banks and insurance companies, investment fund management companies and pension fund management companies, the impact of these institution on Poland's banking sector is limited, and they generate no systemic risk.³

Outlook for the Polish economic environment, that will affect the operating conditions of Poland's financial system, continued to deteriorate since the publication of the previous edition of the *Report*. Growth forecasts for the world economy, the euro area in particular, for 2013–2014 have been successively revised downward in the period (according to the spring European Commission macroeconomic forecasts, GDP in the euro area is expected to drop by 0.4% in 2013 and to grow by 1.2% in 2013, compared to GDP growth at 0.1% and 1.4% from the autumn 2012 projection.). Euro area's GDP data show the first quarter of 2013 was the sixth successive

² According to the KNF, although external audits were conducted under Article 87 of the 2009 Act on Credit Unions, the condition of credit unions has not been fully assessed, and their financial statements have to be verified with regard to correct asset valuation as well as deferred expenses and revenues (primarily fees and provisions). Source: "Report on the condition of credit unions in 2012", available at the KNF website www.knf.gov.pl.

³ For definition of systemic risk, see *Glossary*.

quarter of GDP fall in the euro area, in quarter on quarter terms.

Despite the bleak economic outlook, persistent fiscal crisis and substantial capital needs of banks in some euro area countries, optimism of financial market participants noted in the previous edition of the *Report* further increased. An expansionary monetary policy of major central banks contributed to calming down the market situation. Taking advantage of improved market conditions, some European banks made early repayments of some of their liabilities resulting from the three-year longer-term refinancing operations (LTROs), conducted by the ECB in December 2011 and February 2012. A substantial rise in the yields on government bonds observed in global markets in the second half of May and the beginning of June resulted from more optimistic market forecasts of United States growth outlook and the related greater expectations of the expansionary monetary policy of the Federal Reserve and other central banks coming to an end.

The July NBP macroeconomic projection indicates that Poland's GDP growth in 2013–2014 will be significantly slower than in 2011. The slowdown will result, inter alia, in a fall in employment and a rise in the unemployment rate. The scale of the slowdown is slightly bigger than in expectations expressed towards the end of 2012, when the previous edition of the *Report* was being prepared. The slowdown should not jeopardise domestic financial system stability, however it will push down profitability of financial institutions (inter alia, through higher credit risk materialisation costs) and may trigger tensions in some weaker financial institutions.

The most likely scenario for global economic climate is a continued gradual acceleration of economic growth, albeit lagged compared to past forecasts. Uncertainty about global economic climate in the upcoming quarters persists, including uncertainty about the scale and length of

the slowdown in countries that remain Poland's main trading partners. Neither a renewed strong GDP decline in these countries nor a prolonged continued slow pace of economic growth would be good for the Polish economy. Such developments cannot be dismissed, although the latter is more likely. Despite the substantial resilience of the domestic financial system to disturbances, the bleak growth outlook and a persistent debt crisis in the euro area make it possible to assess that the risk of materialisation of threats to domestic financial system stability has grown. The potential scenarios of risk materialisation are discussed later in this Chapter.

1.2. Risk factors

Macroeconomic risk and funding risk

Uncertainty about developments in the economy in European Union Member States and other developed countries is the main risk factor. The banking crisis, coupled with the public finance crisis, persists in several euro area countries. These negative developments are accompanied by excessive private sector debt, which is mostly the legacy of the property market boom of the pre-crisis period. The spring European Commission economic forecast shows that the majority of countries in distress will post low, albeit positive GDP growth in 2014. However, the forecasts are highly uncertain. It is difficult to say when these economies will return to the path of sustainable economic growth. Ensuring the long-term solvency of countries with high public debt levels requires an implementation of large-scale fiscal tightening. It should aim at stabilising and, subsequently, reducing the public debt-to-GDP ratio of these countries. However, one factor that hinders the re-balancing of public finances is a pro-cyclical impact of fiscal tightening on economic activity in these countries. What is more,

⁴ See "Growth Forecast Errors and Fiscal Multipliers", Olivier Blanchard and Daniel Leigh, IMF Working Paper WP/13/1, 2013, <http://www.imf.org/external/pubs/ft/wp/2013/wp1301.pdf>.

Table 1.1. Synthetic assessment of domestic financial system stability

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

Notes: ▲▲ – significant improvement, ▲ – improvement, ▶ – no change, ▼ – deterioration, ▼▼ – significant deterioration. Outlook for the Polish economy environment takes account of both most likely developments and a risk of the materialisation of a significantly more unfavourable scenario. In this Table, non-bank financial institutions include institutions discussed in Chapter 4.

Source: NBP expert assessment.

assessments of the scale of reduction in economic activity arising from public deficit cuts have been recently revised upward.⁴

The expansionary monetary policy of major central banks helped to ease tensions in financial markets and boosted optimism of market players. In the euro area, the possibility that the ECB may intervene in the government bond market under the Outright Monetary Transactions programme, the option that has not been used so far, is of great importance. Investor optimism may, however, be dampened if longer-term recession persists in the euro area.

A lasting recovery of investor confidence in fiscally distressed countries is necessary for the euro area as a whole to return to the path of sustainable economic growth. If recession persists for a long time, this would hinder improvement of the public debt-to GDP ratio in euro area peripheral countries and could trigger a resurgence in the yields of their bonds. In this context, a recurrence of a negative feedback could be possible, where the mutually reinforcing concerns regarding the solvency of countries and financial institutions lead to a deeper recession, a decline in financial market liquidity, capital outflow and problems with debt refinancing by financial in-

stitutions. The feedback risk may be reduced if the euro area puts in place effective solutions in the area of supervision of financial institutions (the so-called banking union proposal), deposit guarantees and resolution of these institutions.

Such feedback mechanisms would probably be similar to those during the aftermath of the September 2008 collapse of the Lehman Brothers investment bank. However, it can be expected that the banking sector is now better braced for a potential substantial fall in liquidity in financial markets. This follows from the experience gained during the financial market turmoil of 2008–2009, as well as the fact that there is the pressure of market players and regulatory authorities on banks to strengthen their capital and liquidity positions. If the scenario outlined above were to unfold, this could lead to the materialisation of funding risk and an increase in credit risk cost in the Polish banking sector. A recurrence of turmoil in global financial markets would contribute, via its negative impact on the economic condition of developed countries, to a further slowdown in Poland's economic growth, which would eventually result in a deterioration in loan quality. A significant share of loans with high LtV ratios in banks' loan portfolios is the

factor that may increase the potential impact of economic slowdown on credit losses in the portfolio of housing loans.

Economic slowdown would also have an adverse impact on the condition of public finances and on Poland's perceived credit risk. A relative fall in the attractiveness of yields on domestic government bonds for global investors and, consequently, a potential reduction in demand for the instruments or even their sale by foreign investors in the secondary market would result in a surge of their yields and a parallel depreciation of the zloty.⁵

A rise in risk aversion in global markets could result in zloty depreciation and an increase in zloty exchange rate volatility, and as a result, domestic banks' higher hedging cost against risk associated with FX loan portfolios or in difficulties in renewing swap transactions. The need to cover margin calls due to FX risk hedging transactions would therefore translate into a rise in banks' liquidity needs. In the period analysed, the use of swap transactions by some of the banks increased, as they took advantage of favourable market conditions. The banks replaced some foreign currency funding with domestic funding, thereby reducing their dependence on foreign parent banks but increasing their exposure to the swap market.

A surge in risk aversion would also involve heightened market pressure on the deleveraging of European banks, characterised by a continued rise in the cost of market funding, its reduced availability and shorter maturities. In such an environment, the cost and availability of funding provided by strategic investors to Polish subsidiaries could deteriorate, leading to the so-called deleveraging or reducing credit exposures to residents of the host country.

As the situation of the Polish economy and the

domestic banking system is stable, the potential effects of deleveraging should be smaller in Poland than in other countries of the region. The value of banks' liabilities towards foreign financial institutions has diminished in recent quarters. These changes are not abrupt and do not exert a significant influence on bank lending, and in the case of some banks they are associated with shifts in the funding structure, aimed at increasing the share of deposits of domestic clients. An additional factor that curbs the demand for foreign funding is the decreasing value of the portfolio of foreign currency housing loans, which were funded abroad by some banks. Decreasing the share of liabilities towards foreign financial institutions in the banking sector's funding structure limits the potential negative effects of deleveraging of the parent banks of Polish lenders. The low yields on Polish government bonds indicate that Poland's solvency is rated positively by investors. A global rise in risk aversion in May and June 2013 triggered a partial reversal of previous falls in yields; they, however, remain at lower levels than in the past.

Although the materialisation of the above discussed macroeconomic risk and funding risk should not jeopardise financial stability, they may, however, pose a significant challenge to some financial institutions. The implications of the materialisation of credit risk to the stability of Poland's financial system have been analysed in stress tests. Their results prove that the resilience of the Polish banking sector is sufficient. Given a minor role of credit exposures to foreign counterparts, any rise in the cost of credit risk in Poland's banking sector would stem mainly from the country's economic slowdown.

It is difficult to make the impact assessment of a likely materialisation of funding risk and market turmoil risk on the situation of the banking sector. The scale of this impact depends, inter alia,

⁵ Such phenomena may also occur amid strengthened expectations for an improvement in the condition of major global economies and the ending of an expansionary monetary policy. The response to the phasing out of liquidity providing programmes by major central banks may significantly push up market interest rates in major economies. This would also lead to a relative fall in the attractiveness of domestic government bonds, an increase in their yields and a simultaneous depreciation of the zloty.

on changes in the financial condition of strategic investors of banks operating in Poland as well as on measures taken by economic policymakers in the home countries of these institutions. The Polish financial system has so far demonstrated considerable resilience to market turmoil. The results of the stress tests that examined funding risk indicate that a further gradual reduction of the reliance of some domestic banks on funding from foreign parent entities would be favourable to domestic financial stability. This observation stems from the fact that some Polish banks now do not have sufficient liquidity buffers that could cover a potential outflow of funds in a scenario involving a withdrawal of foreign capital.

The risk of a decline in confidence in banks arising from ownership changes

Some strategic investors of Polish banks, despite the good and stable profitability of operations in Poland, may choose to sell Polish subsidiaries as part of their restructuring programmes. As the financial condition of certain majority shareholders in banks operating in Poland is difficult, the decision whether to sell their shares may also be prompted by the home country regulators (in response to significant capital needs) or (where public funds are involved) by the European Commission. In order to maintain the stability of the Polish financial system, it is essential that such processes take place in an orderly manner, and new bank owners ensure their stable functioning.

The process of potential ownership changes is associated with the risk of a fall in confidence in banks that undergo such a process, especially if the existing strategic investor were financially distressed. The probability of ownership changes in the Polish banking system has not changed significantly since the previous edition of the *Report* and remains elevated.

If necessary, domestic authorities are empowered to apply instruments aimed at reducing the

consequences of the materialisation of this risk. Such instruments are defined, inter alia, in the *Act on the Recapitalisation of Certain Financial Institutions*.⁶ In accordance with the Act, the State Treasury may provide a guarantee to recapitalisation operations to financial institutions or take over such institutions. Domestic businesses can also become involved in the process of ownership changes in the Polish banking sector.

Ownership changes may lead to a rise in concentration in the banking sector. The financial condition the largest banks and the risk they take have to be closely monitored and these institutions should demonstrate an increased capacity to absorb the effects of risk materialisation. In this context, a substantial regulatory change made in the period analysed is the CRD IV directive, adopted by the European Parliament on 16 April 2013, that enables supervisory authorities to impose an additional capital buffer on domestic systemically important institutions.

1.3. Recommendations

In addition to analysis of risks in the financial system, the role of "Financial Stability Report" is to offer solutions aimed at containing such risks. It is one of the activities that the National Bank of Poland performs when fulfilling the mandate to support the stability of the domestic financial system.

Based on its assessment of risk factors set out in this publication, the National Bank of Poland indicates that the following measures would contribute to a further strengthening of the stability of the domestic financial system:

1. **Taking into account the elevated risk persistent in the external environment of banks, it is desirable for the banks – especially those characterised by lower capital adequacy – to**

⁶ The Act of 12 February 2010 on the Recapitalisation of Certain Financial Institutions, Journal of Laws of 2010, No. 40, item 226, as amended

- continue to conduct a prudent dividend policy.** The areas of banks' sensitivity identified in the *Report* indicate that such a need arises particularly in these banks that hold substantial portfolios of foreign currency housing loans so that they have a buffer to cover a potential increase in the cost of credit risk. Strengthened capital adequacy allows banks to safely expand lending. High capital levels may also help banks to obtain funding on their own. The improvement of capital adequacy ratios at some banks, resulting from the application of the IRB approach to calculating the capital requirements should not be the basis for banks to pay out dividend from capital (resulting in a decrease in the value of regulatory capital).
2. **Banks whose liquidity position is particularly sensitive to an intensification of the market turmoil or availability of funding within their group should continue to strengthen this position.** The measures may involve the restructuring of funding supplemented, when necessary, with correcting asset growth plans. Banks should have sufficient liquidity, while banks with a substantial share of foreign currency-denominated financial instruments on their balance sheets should also maintain an additional buffer allowing them to cover liquidity needs arising from transactions hedging their FX position, even in an environment of substantially higher zloty exchange rate volatility.
 3. **It is desirable for banks to diversify their funding sources and extend the maturity of their liabilities.** It is particularly essential to further limit funding concentration. A shortening of the maturity of new housing loans may contribute to limiting the scale of maturity mismatch of assets and liabilities.
 4. **Banks should monitor their portfolios of loans for residential property for their current LtV and take into account – in their capital policy and when calculating the cost of credit risk – the risk arising from a portion of the portfolio characterised by high LtV.** Banks should not apply measures that increase borrower's loan servicing costs, as they would increase the likelihood of the borrower losing his/her loan servicing capacity.
 5. **Taking into account the elevated risk persistent in the external environment, it is desirable for insurance companies and investment fund management companies to continue to strengthen their capital position.** This applies especially to those entities which are characterised by lower capital adequacy.
 6. **Changes in the pension system should be conducted in such a way as to minimise the impact on financial markets.** The final shape of the changes is not yet known, but some aspects of the presented proposals may limit the development of some market segments and contribute to higher market volatility.
- In previous editions of the *Report*, the NBP recommended that foreign currency housing loans should be a niche product, offered exclusively to borrowers who receive regular income in the currency of the loan. The amendment to Recommendation S, adopted by the KNF on 18 June 2013, should help to achieve this goal.
- The condition of public finance is an important macroeconomic risk factor. Consolidation implemented in 2011-2012 led to a decline of this risk in Poland. These measures should continue without additionally contributing to a weakening of the economic growth rate. This relates both to the scale of tightening and the struc-

ture of expenditures, which should be growth-oriented to the extent possible. A credible and sustainable consolidation of public finance will improve Poland's creditworthiness, which will support both sustainable long-term growth and domestic financial stability.

Chapter 2.

Financial institutions' economic environment

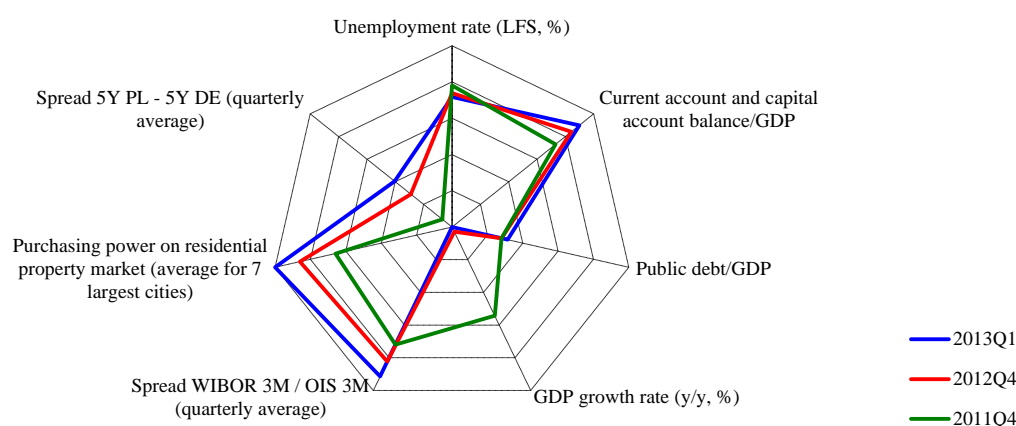
Data from the world economy show that in the period under analysis, economic growth remained low. The Polish economy is at the stage of a downturn, which is reflected by a lower GDP growth rate and worse situation in the labour market. Further development of the economic situation in Poland will depend on the global economic situation, including the pace at which euro area countries will overcome recession, and the scale of economic slowdown in leading developing countries.

Since the publication of the previous Report, the sentiment in the global financial markets has improved, with only temporary periods of increases in risk aversion. Expansive monetary policy of the major central banks was the most important factor behind that. The domestic money market was functioning smoothly and the strong inflow of funds from foreign investors to mature emerging markets had a stabilising effect on the zloty exchange rate against the euro. Between November 2012 and mid-May 2013, yields on domestic government bonds decreased significantly along the entire yield curve, reaching historically low levels. The increase in government bond prices was the result of the expected cuts in NBP interest rates, the inflow of foreign investors to the domestic market for these instruments and the stable situation of public finance in Poland.

The response of market participants to plans of earlier than previously assumed phasing-out of liquidity provision programmes by major central banks may result in a permanent increase in government bond yields in developed markets and their higher volatility. The resulting relative decrease in the attractiveness of domestic government bonds, coupled with the persisting decrease in the rate of economic growth in Poland, may result in reduced interest in these instruments or, in the extreme case, even their massive sales by foreign investors in the secondary market. Materialisation of such an extreme scenario would result in a high increase in bond yields, with a simultaneous depreciation of the zloty, thus leading to an increase in market risk for domestic banks.

In the entire period covered by the Report, the downward trend in flat prices continued, and in the first quarter of 2013 alone there was a slight increase in prices on the primary market. In the near future, prices on the flat market will depend on, inter alia, the developments in lending. Data on new constructions, building permits and a change in the structure of the flats offered by developers show that the current supply surplus on the market is expected to decrease in the long run, which will result in decelerating the price decrease trend.

Figure 2.1. Changes in selected macroeconomic and financial indicators over the last three years



Notes: the chart presents changes in indicators describing the main areas of financial institutions' environment. The analysed variables relate to the macroeconomic situation, financial markets and the property market. The closer to the chart's centre the observation, the less favourable - in terms of financial system stability - the situation in the area described by a given indicator. Data are presented after standardisation against the lowest and highest value from the fourth quarter of 2000 to the first quarter of 2013.

The purchasing power in the property market - the size of a flat which a person with average income for the region (voivodship) and funding the purchase with a loan could afford to buy. The chart shows the average purchasing power in markets included in the chart 2.17. The closer the line to the chart's centre, the fewer square metres of a flat the consumer is able to buy. A low level of this indicator implies that prices in the property market have lost touch with economic fundamentals (in the simulation approximated by average wages and interest on loans), which generates a risk to financial system stability. Value of 60% (the Maastricht criterion and constitutional limit) is presented as the most favourable situation in respect of data on the public debt-to-GDP-ratio.

The spread 5Y PL - 5Y DE - the difference between yields on 5-year PLN Polish bonds and 5-year German bonds. Source: GUS and NBP.

2.1. Macroeconomic developments

In the period analysed by the *Report*, global economic growth remained low. Economic activity was clearly diversified in regional terms, which concerned the economies of both developed and developing countries. Economic growth accelerated in the US and Japan, while recession lingered in the euro area. Although the growth of economic activity accelerated in some developing countries, it was slightly lower in China.

The prospects for economic growth in the Polish economy's environment deteriorated from the time when the previous version of the *Report* was published. The risk factor for the prospects of global revival may be the prolonged recession in the euro area and greater than expected slowdown in leading developing countries, particularly in China. The May projection of the European Commission confirms that in the euro area the recession is expected to last throughout 2013.

In Poland, economic growth decreased in the first quarter of 2013 to 0.5% y/y against 0.7% y/y

in the fourth quarter of 2012. The lower GDP growth was mainly the result of a decrease in domestic demand. The growth of individual consumption staggered, which led to lower growth of remunerations and lower employment, although consumer sentiments improved slightly.

In the period analysed, the number of people who work in the economy decreased further which, apart from a slight increase in labour force participation, resulted in a further increase in the unemployment rate. In the first quarter of 2013, the LFS unemployment rate was 10.6% against 10.3% in the fourth quarter of 2012 (seasonally adjusted data). The nominal growth rate of wages decreased due to lower demand for labour. The influence of the above processes on the quality of the banking sector's claims on households will be discussed in greater detail in Chapter 3.3.2.

In the period analysed, the growth of gross fixed capital formation remained negative and amounted to -2.0% in the first quarter of 2013 against -4.1% in the fourth quarter of 2012. Housing investments decreased, which was the result of the deteriorating economic situation of households, accompanied by lower expected demand for flats due to phasing out of the government programme "First family home" and the high number of flats offered by developers (see: Chapters 2.3 and 3.2).

After two years of increases, the first quarter of 2013 saw a decrease in corporate investments. As shown by economic situation studies by the NBP,⁷ enterprises expect to keep their investments low. Low investment activity results from uncertainty as to future economic situation, particularly in the light of a relatively low level of production capacity use.

In the period analysed, the financial standing of enterprises deteriorated. In the first quarter of 2013, the pace of the deterioration decelerated (net financial result decreased by 25% y/y,

against 44% y/y in the fourth quarter of 2012). The profitability of the enterprise sector deteriorated mainly because of a decrease in the results on financial transactions. This was one of the reasons behind a decrease in the pre-tax profit margin of about 1 percentage point y/y, thus bringing it close to record low levels from 2008/2009 (3.3%). The return on sales has not changed (a decrease by 0.1 pp y/y to 4.3%). Average corporate liquidity ratios have not changed substantially, and remained above historical average levels. The impact of the situation of enterprises on the quality of bank's claims on enterprises will be discussed in greater detail in Chapter 3.1.

The general government deficit (according to ESA 95 standard) decreased from 5.0% of GDP in 2011 to 3.9% of GDP in 2012. Under the "Convergence Programme. 2013 Update", the deficit is to be reduced to 3.5% of GDP in 2013. Yet, due to economic slowdown, the implementation of the *Programme* involves some risk.

Public debt, calculated according to domestic methodology, decreased from 53.5% of GDP in 2011 to 52.7% of GDP in 2012, while according to ESA 95 standard, it decreased from 56.4% of GDP in 2011 to 55.6% of GDP in 2012. The ratio of general government sector to GDP in Poland is lower than the average for European Union and euro area countries.

In the first quarter of 2013, the current account deficit is visibly lower than in the first quarter of 2012, which is the result of a surplus in goods trade stemming from a decrease in imports with a moderate increase in exports. The current and capital account deficits in relation to GDP also declined.

According to the central path of the projection showed in the July "Inflation Report", Poland's real GDP growth will be 1.1%, 2.4% and 3.0% in 2013-2015, respectively. The European Commission forecast of May 2013 indicates that Poland's

⁷ Source: "Information on the condition of the enterprise sector, including the economic climate in 2013 Q1 and forecasts for 2013 Q2, NBP, 2013.

GDP will grow by 1.1% in 2013 and 2.2% in 2014.

The Polish economy is in visible downturn. The economic situation in the coming quarters will largely depend on the economic situation across the world and the pace at which euro area countries will overcome recession. The development of these processes in the future will be the major factor influencing the situation of the Polish financial sector.

2.2. Developments in financial markets

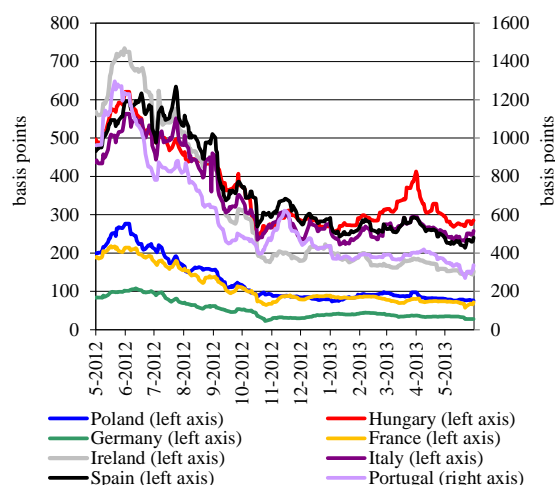
2.2.1. Global markets

In the period under analysis,⁸ there was a marked improvement in sentiment in global financial markets, with only temporary increases in risk aversion. It was demonstrated, *inter alia*, by a decrease in perceived credit risk reflected in CDS premia (see Figure 2.2), and yields on government bonds of almost all euro area countries (see Figure 2.3). There was also an improvement in the liquidity of euro area banks. They also enjoyed facilitated access to financing in the debt instrument market.⁹ The lower risk aversion and lower cost of financing prompted some banks to make early repayment of loans taken in December 2011 and February 2012 under LTROs. By the end of May 2013, they returned EUR 254 billion out of EUR 1,019 billion to the ECB.

Expansive monetary policy of major central banks was the most important factor behind the lower risk aversion. With a view to ensuring proper transmission of monetary policy in the euro area and to mitigate tensions in the debt security markets of euro area peripheral countries, on 6 September 2012 the ECB launched the Outright Monetary Transactions (OMT) programme. To be covered by the programme, a euro area country must first apply for support

from the EFSF/ESM. In the period under analysis, the ECB did not purchase bonds under the OMT, yet the very possibility of an unlimited intervention in the market of these instruments resulted in calming market participants. Also, on 2 May 2013, the ECB reduced the reference rate by 25 basis points, to 0.5% – a historically low level. The deposit rate remained unchanged at 0%. At the same time, the statements of the ECB President suggesting a possible reduction of the deposit rate below zero resulted in the weakening of the euro against major currencies.

Figure 2.2. CDS premia on government bonds of selected euro area countries and 5-year Polish and Hungarian bonds



Source: Thomson Reuters.

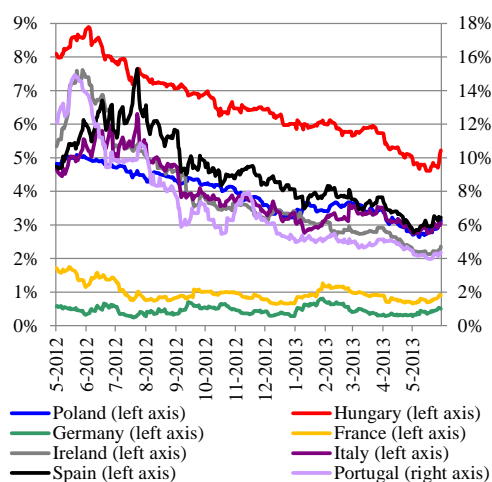
Despite a significantly better economic situation in the United States than in the euro area (GDP growth in the United States was 2.2% in 2012, against a decline by 0.6% in the euro area), in the period under analysis Fed also continued expansive monetary policy. Due to the expiry of the Twist operation at the end of 2012, under which funds obtained from the selling of short-term government bonds in open market operations were used to purchase government bonds with longer maturities, Fed extended the QE3 programme to treasury securities from the beginning of 2013. The purchasing value of these in-

⁸ In this chapter, the term “period under analysis/period analysed” stands for November 2012 – May 2013.

⁹ “The Euro Area Bank Lending Survey, 1st Quarter of 2013”, April 2013, ECB, pp. 13-14.

struments will amount to USD 45 billion a month (next to simultaneous purchasing of MBS worth USD 40 billion a month).

Figure 2.3. Yields on 5-year government bonds of selected euro area countries and of Poland and Hungary



Source: Thomson Reuters.

The Bank of Japan also pursued expansive monetary policy. After increasing the inflation target from 1% to 2% on 22 January 2013, on 4 April 2013 it announced a plan for increasing its assets on a regular basis – their value is to double by the end of 2014. The scale of the planned intervention of the Bank of Japan came as a surprise for market participants, which in consequence brought about a significant increase in expectations on the inflow of Asian investors to foreign markets and, by the same token, a high decrease in yields of debt securities along the entire yield curve in euro area countries and in emerging markets, including Poland.

In spite of negative reports on the difficult situation of public finance of euro area peripheral countries, efforts on the part of the governments and EU authorities aimed at preventing the deepening of the debt crisis were conducive to improving the sentiment of market participants. Opinions were positive about, inter alia, the planned savings programmes, including in particular, the announcements and partial implementation of significant cuts in expenditure

in 2013, inscribed in the budgets of, inter alia, France, Italy and Portugal.

Recapitalisation of Spanish banks by the ESM with close to EUR 39.5 billion (in response to an official request from Spain of 3 December 2012) allowed to reduce the perceived risk of the country's banking sector. Financial aid was not passed in the form initially postulated by Spain, i.e. direct recapitalisation of banks, which would allow to avoid an increase in the country's debt, but via the state-owned Fund for Orderly Bank Restructuring.

The decrease in risk aversion in the euro area was also the result of a consent of the European Council of 13 December 2012 concerning the draft regulation establishing the Single Supervisory Mechanism (SSM), as well as later agreement of the European Commission, European Parliament and the European Council of 19 March 2013 on the issue. In the opinion of some market participants, the establishment of the SSM planned for 2014 brings about hope for overcoming the negative feedback loop between the difficult situation of public finance of euro area countries and the value of debt securities in banks' portfolios.

The situation in the European financial market improved also due to working out an agreement on the stabilisation of Greek debt by the EC, ECB and IMF on 27 November 2012. The agreement provided for postponing the deadline for the repayment of the loans extended by euro area countries (and cutting the interest rate) and the loans from the EFSF by 15 years. It was also decided that the withheld and current tranches of EFSF aid for the total value of EUR 43.7 billion would be paid. A portion of the amount was used in mid-December 2012 to exchange at the price close to market price a portion of Greek government bonds that remained in trade, whose nominal value was EUR 31.9 billion, for EFSF debt securities worth EUR 11.3 billion. The operation allowed to reduce the country's debt by approximately EUR 20 billion. As a result, in the period under analysis two rating agencies in-

Table 2.1. Ratings of selected countries and dates of ratings revisions in the period from 1 November 2012 to 31 May 2013

	MOODY'S	S&P	FITCH
Greece	C	B-	B-
		<i>18 December 2012 (CCC)</i>	<i>14 May 2013 (CCC)</i>
Ireland	Ba1	BBB+	BBB+
Spain	Baa3	BBB-	BBB
Portugal	Ba3	BB	BB+
Italy	Baa2	BBB+	BBB+
			<i>8 March 2013 (A-)</i>
France	Aa1	AA+	AAA
	<i>19 February 2013 (Aaa)</i>		
Great Britain	Aa1	AAA	AA+
	<i>22 February 2013 (Aaa)</i>		<i>19 April 2013 (AAA)</i>
Slovenia	Ba1	A-	A-
	<i>30 April 2013 (Baa2)</i>	<i>12 February 2013 (A)</i>	
Poland	A2	A-	A-
Czech Republic	A1	AA-	A+
Hungary	Ba1	BB	BB+
		<i>23 November 2012 (BB+)</i>	

Note: ratings pertain to long-term debt in foreign currency; revisions dates from 1 November 2012 to 31 May 2013 are marked in italics; previous rating is given in brackets.

Source: Bloomberg.

creased Greece's ratings (Table 2.1).

The factors behind the increase in risk aversion were discussions on the final shape of simultaneous cuts in expenditure and tax reliefs in the United States (fiscal cliff) in the last weeks of 2012 and at the beginning of 2013, as well as political uncertainty in Italy connected with the resignation of the Prime Minister Mario Monti (accepted on 21 December 2012) and the results of the elections of 24 February 2013, where no party managed to gain parliamentary majority (the coalition government was formed only on 28 April 2013). This was reflected by the temporary increase in Italian government bond yields and lowering of Italy's rating by one of the rating agencies (Table 2.1). The poor prospects for economic growth in the EU and the related expected further increase in the debt to GDP ratio in the euro area resulted in lowering of Germany's rating by Egan Jones on 17 April 2013.

The temporary increase in market participants'

uncertainty and in the price volatility of financial instruments in March 2013 was related to, inter alia, the initially declared way in which Cyprus would tackle the banking crisis. The structure of financial aid for the country proposed on 16 March 2013 assumed imposing a one-off levy on all deposits in Cypriot banks, which resulted in a temporary decrease in confidence in the banking system in the EU, as market participants were concerned that a similar scenario could materialise in other euro area countries.

The final financial aid plan, approved on 25 March 2013, provided for the restructuring of two Cypriot banks: Laiki and Bank of Cyprus, with guarantees for deposits up to EUR 100,000. Deposited funds in excess of this the amount were frozen and may be used for the needs of the restructuring in an unlimited way.

The significant increase in government bond yields in global markets in the second half of May 2013 resulted from a more optimistic outlook of

market participants on the prospects of economic growth in the United States and the related intensification of expectations that the expansive monetary policy of Fed and other central banks would come to an end.

The analysis presented in this chapter takes into account the events and data for the period up to 31 May 2013. After that date, there was a significant change in trends in the global financial markets. As a result of statements of the Fed's representatives, suggesting the possibility of an earlier than originally assumed termination of the QE3 programme, the global investors limited their involvement in the emerging markets assets.

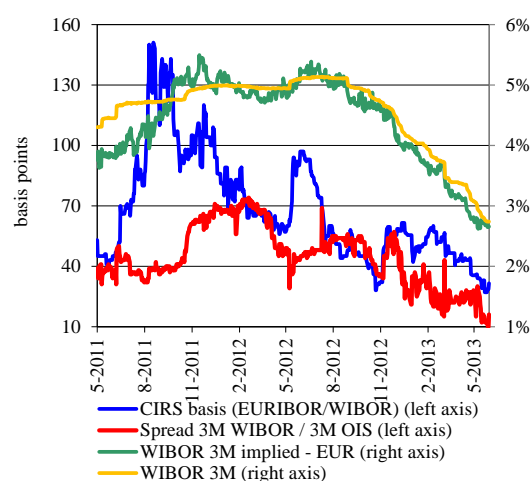
2.2.2. Money market

The situation in the Polish money market was stable from November 2012 to May 2013. In the period analysed, the implied zloty interest rate in fx swap transactions was close to WIBOR reference rates (see Figure 2.4), which may indicate that the arbitrage between individual money market segments in Poland was functioning effectively (see Box 1). The fall in the WIBOR 3M/OIS 3M spread, observed from December 2012, suggests a decrease in the perceived risk in the domestic interbank unsecured deposits market. In addition, due to open market operations carried out by the NBP, including inter alia regular fine-tuning operations in the last days of the reserve requirement periods, the POLONIA rate deviated from the NBP reference rate only slightly (see Figure 2.5).

From October 2012 to April 2013, average daily net turnover in the domestic interbank unsecured deposits market amounted to nearly PLN 6.4 billion and was around 15% higher than in the period May – September 2012 (see Figure 2.6). It was still dominated by one-day transactions, constituting 90% of turnover, however within the category, the share of O/N transactions decreased in favour of T/N and S/N transactions. At the same time, the activity of market

participants in the segment of transactions with maturities of one week and two weeks increased. Due to the persistence of significantly lower than before the global financial crisis credit limits, imposed by domestic banks on each other, transactions with longer maturities were concluded seldom and for relatively low amounts. The only exception was October 2012, when several times more deposits with maturity of at least one month were placed as compared to the previous months.

Figure 2.4. Premia in the CIRS basis 5Y and fx swap market

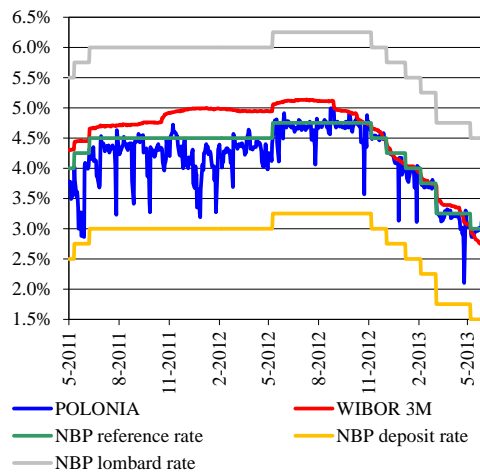


Note: for CIRS basis transactions, the premium is defined as the margin paid above the EURIBOR rate in exchange for the WIBOR rate; implied WIBOR is calculated on the basis of 3M EUR/PLN fx swap rates, taking the EURIBID 3M rate as the interest rate on deposits in euros. Source: NBP calculations based on Thomson Reuters data.

At the beginning of November 2012, due to worse than projected macroeconomic data, market participants expected a significant easing of the monetary policy. It was confirmed by FRA rates, which predicted a decline in NBP interest rates by over 1 percentage point within the next 12 months (see Figure 2.7). In November and December 2012, the Monetary Policy Council reduced NBP interest rates by 25 basis points. More unfavourable macroeconomic data (including the GDP data for the third quarter of 2012, which showed low growth rate of individual consumption) and revisions of Poland's GDP fore-

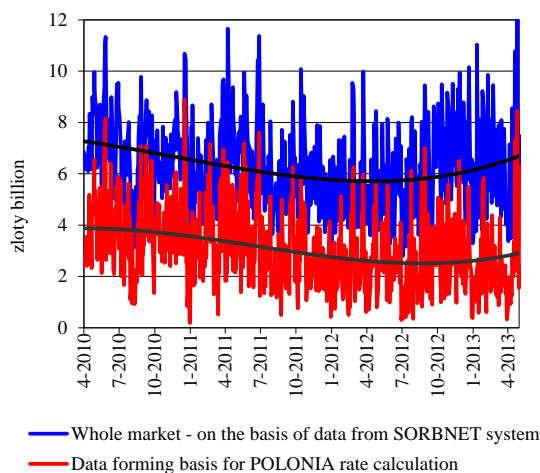
casts for 2013, inter alia, by the European Commission and the IMF, amplified market participants' expectations for the continuation of the monetary policy easing. At the end of 2012, in spite of the mentioned reductions, FRA rates still indicated a possible decrease in NBP interest rates by over 1 percentage point in the following year.

Figure 2.5. Market interest rates against NBP rates



Source: NBP, Thomson Reuters.

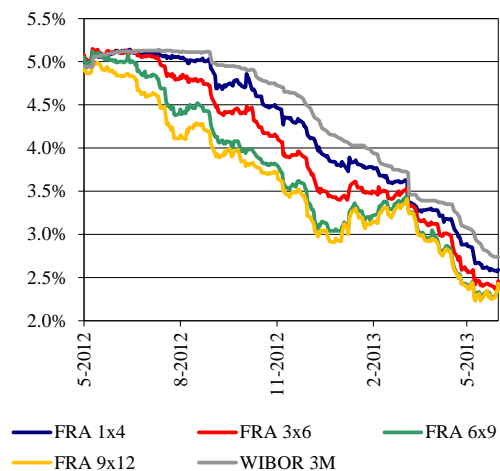
Figure 2.6. Turnover in the interbank unsecured deposits market in Poland



Source: NBP.

MPC press releases and statements of its members after the January and February meetings temporarily weakened the expectations of further easing of the monetary policy in the medium term. The reduction in interest rates in March 2013 by 50 basis points could have, therefore, come as a surprise to some market participants. The March inflation projection and subsequent signs of a greater than expected economic slowdown in Poland and in the euro area again strengthened the expectations of NBP interest rate reduction in 2013. In the face of low economic growth in Poland and the risk of the inflation rate staying well below the inflation target, on the meetings on 8 May 2013, and again on 5 June 2013 the MPC lowered the reference rate by 25 basis points to the historically low level of 2,75%.

Figure 2.7. Current and expected WIBOR rates



Source: Thomson Reuters.

Box 1. Changes in the functioning of WIBOR and WIBID reference rates

WIBOR/WIBID reference rates play a significant role in the functioning of the domestic financial system. They are used as the basis for setting interest on credits, loans, deposits, debt securities and for clearing interest rate derivatives, including those which enable hedging against market risk. The banking sector's assets, whose valuation depends directly on WIBOR rates, amount to over 450 billion zlotys. Banks' exposure to interest rate derivatives, cleared according to these rates, exceeds 1.4 trillion zlotys in nominal value. Transactions in such derivatives are also executed on a large scale in the offshore market, i.e. between non-residents. Moreover, there is over 150 billion worth of WIBOR-indexed government, municipal and corporate bonds traded in the financial markets in Poland. Economic and control mechanisms developed in the money market in Poland reduce banks' propensity to manipulate these rates, ensuring their reliability and credibility. However, changes in banks' participation in reference rate fixing, organising and overseeing, consulted and implemented in the European market, affect also the functioning of WIBOR/WIBID rate fixing procedures.

LIBOR rate manipulation, proven by British and American financial supervision authorities,¹ pointed to the need for an overhaul of the regulatory framework and the reference rate-setting mechanism in the EU. In September 2012, the European Commission published a consultation document on setting benchmarks,² which is the first stage of work on the draft regulation. Considering that the reliability of reference rates of the money market has to be ensured, and taking into account the length of the legislative process in the EU, in January 2013 the European financial supervision authorities (EBA and ESMA) issued recommendations regarding the EURIBOR rate-setting process³ and presented a draft code of good practices with regard to reference rate-setting.⁴ Moreover, in December 2012, the British Parliament adopted an act,⁵ implementing some of the solutions recommended in the so-called Wheatley report⁶ aimed at minimising the risk of manipulating LIBOR rates (inter alia, the oversight over the rate-setting process – to be exercised by a newly established Financial Conduct Authority – has been strengthened considerably).

One of the reasons for LIBOR rate manipulation, identified in the documents mentioned above, was the mechanism of its fixing. Since the nature of LIBOR rates is purely “declarative”, rate submissions sent by individual banks participating in the fixing procedure are not directly related to interest on transactions they conclude. In this context, the fact that fixing procedure participants took significant balance-sheet and off-balance-sheet positions in financial instruments whose direct valuation depended on LIBOR rates created incentives to understate or overstate the rates by providing rate submissions that did not fully reflect the conditions in the unsecured interbank deposits market. Moreover, in accordance with the adopted fixing method, its participants provided information about the estimated interest at which they were able to obtain funding in this market. Therefore, during the financial market turmoil, they were inclined to understate the rate submissions in order to present a better picture of their creditworthiness as well as their ability and costs of obtaining market funding.

The principles for setting WIBOR/WIBID reference rates differ significantly from those described above and positively distinguish themselves from other money market rate-setting mechanisms in the EU.⁷ According to the rules for WIBOR/WIBID rate fixing,⁸ by 11 am of each business

day, its participants are required to provide the Calculation Agent with the interest rate at which they are ready to place (offer) and accept (bid) a deposit with a given maturity. For 15 minutes after the publication of WIBOR and WIBID rates, fixing participants, within the credit limits set by the administrator, which they should have in place, are obliged to conclude transactions at rates not worse than those quoted. This obligation discourages submissions that are not justified by market conditions and prevents banks, inter alia, from deliberately lowering them (credit signalling), as was the case with LIBOR rates. This would entail the risk of concluding a transaction at the declared rate and potentially incurring a loss. Given their transactional character, WIBOR/WIBID rates properly reflect the actual cost of obtaining funding in the unsecured interbank deposits market and respond to the decisions of the Monetary Policy Council regarding NBP interest rate changes.

There are other mechanisms in the domestic money market that also strengthen the resilience of WIBOR/WIBID rates to manipulation. In order to thoroughly monitor the situation in the market for unsecured interbank deposits, towards the end of 2011 the NBP took measures aimed at establishing a transaction data repository. Since April 2012, the NBP has been collecting, via the large-value payment system SORBNET (from 10 June 2013 – SORBNET2), data on individual unsecured deposits placed in the interbank market from both parties to the transaction (their value, maturity, interest and counterparties). This allows the central bank to verify whether submissions for the WIBOR/WIBID reference rate fixing differ from the interest on transactions concluded by the contributing banks. The fact that banks participating in the fixing are aware of the existence of such a tool, together with the transactional character of those reference rates constitute a strong element of protection against rate-setting abuse.

Penalties imposed on banks for LIBOR rates manipulation made them realise the scale of legal liability risk arising from their participation in fixings. In addition, adjusting internal procedures to the above mentioned regulations and recommendation entailed some costs on the side of banks participating in reference rate-setting. This made some European banks withdraw from contributing to reference rates fixings. This process affected also the domestic market. The number of participants in the WIBOR/WIBID rate fixing panel fell from 15 to 10 over the period of 2 January 2012 to 7 January 2013. This unfavourable trend prompted the domestic financial supervisor and the central bank to take, in co-operation with the administrator of WIBOR/WIBID rate fixing – ACI Polska and the domestic banks, measures to prevent a decrease in the representativeness of WIBOR/WIBID rates.

Towards the end of 2012, the NBP and UKNF initiated the work of an interbank market team composed of representatives of ACI Polska, domestic banks, the Polish Bank Association, the UKNF and the NBP. Their aim was to develop solutions that would contribute to improving the functioning of WIBOR/WIBID reference rates and preserving their reliability and representativeness. Conclusions from the team's work have been reflected in the new "Rules for fixing WIBID and WIBOR Reference Rates",⁹ published by ACI Polska on 30 April 2013. In accordance with the Rules, a WIBID/ WIBOR Reference Rates Council will be appointed. It will be independent from the fixing administrator and participants and its primary focus will be to ensure the quality and reliability of the rates. The transactional character of WIBOR/WIBID rates has also been strengthened, inter alia, by raising the minimum required credit limits, imposed by the fixing participants on each other. In addition, while taking into consideration the specific nature of the domestic financial system, the Rules have been adjusted to comply to the maximum possible

extent with EBA and ESMA recommendations related to the EURIBOR-setting process and the guidelines developed by these institutions with regard to calculating market indices. The new Rules also take into account the criteria of EU regulations on capital adequacy requirements relating to incorporating reference rates into the broad market indices. The Rules has come into force on 1 July 2013.

The above mentioned measures taken by EU institutions are mainly aimed at enhancing the information quality of reference rates. However, they do not create economic incentives encouraging banks to participate in the rate-fixing process. Meanwhile, reference rates such as WIBOR/WIBID rates are quasi-public goods and their setting process creates free-rider problem, i.e. entities which do not participate in the fixing and do not share its cost and risk are free to use reference rates. To reduce the disproportion between the costs and benefits relating to the submission of quotes for the fixing and reduce the free-rider problem, in March 2013, the NBP amended the system of Money Market Dealers (MMDs).¹⁰ The powers of MMDs have been extended and they have been ensured exclusive access to fine tuning operations with maturities of up to 7 days carried out by the NBP on an irregular basis during the official reserve maintenance periods. At the same time, the award of the MMD status has been made conditional on the participation of a given entity in the WIBOR/WIBID reference rate fixing process.

After the implementation of the above mentioned changes, in May 2013, one of the banks which had ceased to participate in the fixing in 2012 returned to the panel. However, some entities, which given the scale and nature of their operations in Poland should be panel members, still do not participate in the WIBOR/WIBID reference rate fixing. The central bank carefully analyses the situation in the domestic money market, including data on individual bank activity from the SORBNET system, and does not rule out taking further measures to preserve the reliability of the WIBOR/WIBID reference rates.

¹ In the period from June 2012 to February 2013, these authorities imposed financial penalties on Barclays, UBS and RBS for manipulating LIBOR reference rates. There are reasons to believe that other institutions may have been involved in the dealings, and the irregularities in providing contributions to the fixing were not limited to these reference rates only.

² "Consultation document on the regulation of indices", Brussels 2012, European Commission, http://ec.europa.eu/internal_market/consultations/docs/2012/benchmarks/consultation-document_en.pdf.

³ "EBA Recommendations on supervisory oversight of activities related to banks' participation in the Euribor Panel", London 2013, EBA, http://www.esma.europa.eu/system/files/eba_bs.2013.005.pdf.

⁴ "Consultation Paper – Principles for Benchmarks-Setting Processes in the EU", London 2013, EBA & ESMA, <http://www.esma.europa.eu/system/files/2013-12.pdf>.

⁵ Financial Services Act 2012, http://www.legislation.gov.uk/ukpga/2012/21/pdfs/ukpga.20120021_en.pdf.

⁶ "The Wheatley Review of LIBOR: final report", London 2012, HM Treasury.

⁷ "Consultation document on the regulation of indices", Brussels 2012, European Commission, p. 13, http://ec.europa.eu/internal_market/consultations/docs/2012/benchmarks/consultation-document_en.pdf.

⁸ "Rules for fixing WIBID and WIBOR Reference Rates" of 1 February 2004, ACI Polska, http://www.acipolska.pl/images/stories/Rules_for_fixing_WIBOR_and_WIBID_reference_rates.pdf

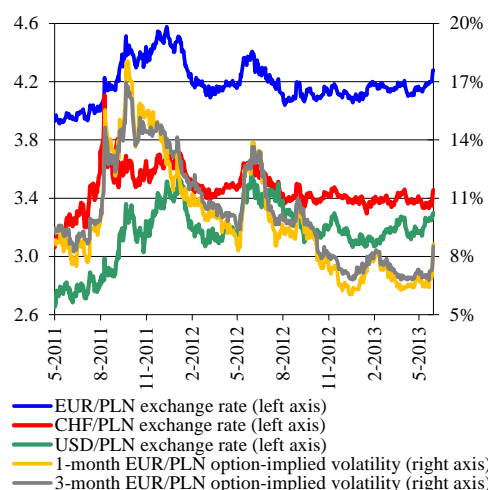
⁹ "Rules for fixing WIBID and WIBOR Reference Rates" of 30 April 2013, ACI Polska, http://www.acipolska.pl/images/stories/Rules_for_Fixing_WIBID_and_WIBOR_Reference_Rates_EN.pdf

¹⁰ The NBP announcement of 14 March 2013, available at: http://nbp.pl/home.aspx?f=/aktualnosci/wiadomosci_2013/drp14032013.html

2.2.3. Foreign exchange market

In the period analysed, the zloty exchange rate against the euro and the US dollar was mainly affected by external factors. The aforementioned improvement in the sentiments of market participants and low interest rates in money markets of developed countries supported the inflow of foreign capital to mature emerging markets. With high demand for the zloty from non-residents, between November 2012 and February 2013 the costs of obtaining the zloty in short-term fx swaps were high enough to render the strategy of financing investments in the government bond market by renewing zloty loans in these transactions unprofitable. It made foreign entities investing in the domestic market acquire the zloty in spot transactions. These operations were a factor supporting the zloty. Between November and May 2013, the zloty exchange rate against the euro fluctuated within the narrow band of 4.05–4.28 zloty per euro (see Figure 2.8).

Figure 2.8. Zloty exchange rate and its volatility



Source: Thomson Reuters.

Contrary to December 2011, at the end of 2012 there was no increased volatility in the zloty spot market. One of the factors contributing to this might have been the adoption by the Polish Sejm

on 12 December and signing by the President of the Republic of Poland on 28 December 2012 of the amendment to the Act *on public finance*, which changed the method of assessing whether public debt had exceeded the statutory prudential thresholds¹⁰ in a given budget year (starting from 2012). On 18 January 2013, the IMF prolonged Poland's access to the Flexible Credit Line for two more years, increasing its value from approximately USD 30 billion to approximately USD 33.8 billion. In times of disturbances in global financial markets, the access to this instrument may have a stabilising effect on the zloty exchange rate.

A considerable number of domestic banks used long-term EUR/PLN and CHF/PLN CIRS basis transactions, instead of fx swap transactions, to partly alleviate the mismatch in the currency structure of their assets and liabilities. Such strategy of hedging against currency risk allows to minimise the risk inherent in rolling-over short-term transactions in times of disturbances in the fx swap market. However, in case of higher risk aversion, it may result in additional demand for liquidity, stemming from the margining requirement, as the value of margin is based on the current valuation of the CIRS basis transaction.

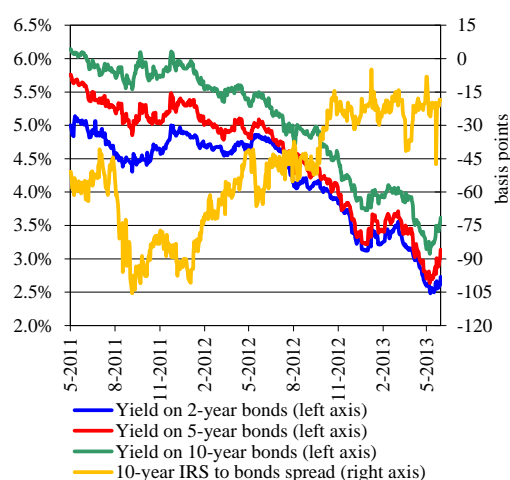
At the beginning of November 2012, CIRS basis premia increased considerably – from close to 30 to over 50 basis points (see Figure 2.4). From February 2013, they started to decrease gradually, reaching a value close to that from November 2012 by the end of May 2013. The impact of such temporary fluctuation on the costs of hedging against currency risk incurred by domestic banks was however limited, as banks were able to conclude forward-starting CIRS transactions. By using these instruments, they enjoyed certain flexibility as to the time and terms of the transactions, which allowed them to minimise the risk of unfavourable changes in premia.

¹⁰ The prudential thresholds and the rules of conduct in case they are exceeded are regulated by Article 86 of the Act of 27 August 2009 *on public finance* (Journal of Laws of 2009, No 157, item 1240).

2.2.4. Bond market

Between November 2012 and the end of May 2013, the Polish government bond yields were lower along the entire yield curve by approximately 100 basis points. At the beginning of May, they reached historically low levels, for example the yield on 10-year bonds was around 3% (see Figure 2.9). In spite of a weaker economic situation in the entire period under analysis, there was an increase in Poland's perceived creditworthiness, reflected, *inter alia*, in CDS premia for government bonds (see Figure 2.2), and in increasing Poland's rating from A- to A by Japan Credit Rating Agency on 1 March 2013. Also Fitch issued a positive announcement on Poland's rating: on 22 February 2013, it increased Poland's outlook from stable to positive.

Figure 2.9. Yields on Polish government bonds and IRS to Polish government bonds spread



Source: Thomson Reuters.

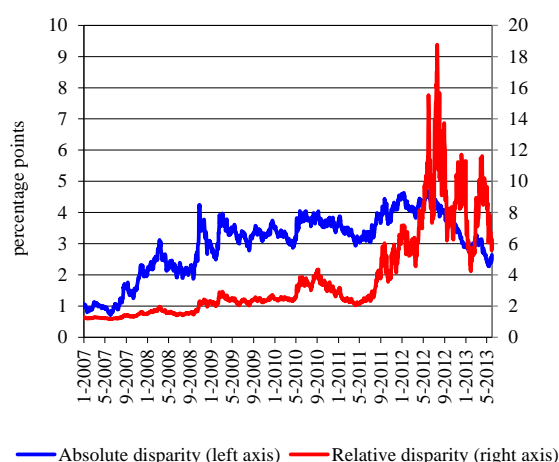
The increase in government bond prices was the result of the expected reduction of NBP interest rates, the inflow of foreign investors to the domestic market for these instruments and the stable situation of public finance in Poland. The easing of the NBP monetary policy resulted in a higher decline in yield at the short end of the yield curve. In the period under analysis, the NBP reference rate was reduced by 175 basis points to 3.0% at the end of May 2013.

In the context of expansionary policy of developed countries' central banks, the reductions in NBP interest rates influenced the decrease of the disparity between the yield on Poland's and developed countries' government bonds at the long end of the yield curve to a lesser extent than would normally result from their scale. The disparity remained high, especially in relative terms (see Figure 2.10). The accompanying limited supply of investment-grade government securities was conducive to arousing interest in Polish government bonds of foreign investors looking for investments that would yield higher rates of return (search for yield). They invested their funds in the market for these instruments due to their attractive yield in relation to Poland's credit risk, the relatively stable zloty exchange rate and high liquidity of the secondary market for these instruments (between 1 November 2012 and 30 April 2013, the average daily value of outright transactions amounted to around PLN 13.8 billion). The perception of the domestic bond market was also significantly influenced by the scale of fiscal consolidation over the years 2010-2012 and effective management of Treasury debt. With high interest from foreign investors, including Asian investors (most probably also central banks), in the Polish government bond market, the decision of the Bank of Japan of 4 April 2013 concerning the plan to increase its assets on a regular basis had a significant one-off influence on lowering the yield curve of these instruments.

As a result, the value of domestic government bonds held by foreign investors was PLN 209.5 billion at the end of April 2013 (which represented 37.4% of debt on these instruments) and was by PLN 23.2 billion higher than at the end of October 2012 (see Figure 2.11). Non-residents' demand was concentrated on the largest and most liquid bond series of short and medium-term maturity. The average maturity of the non-residents' portfolio was slightly higher than in the previous period and amounted to approximately 4.2 years. The modified duration of the non-residents' portfolio for wholesale domes-

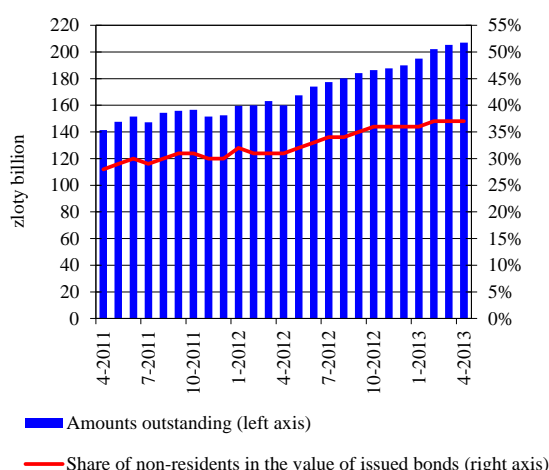
tic bonds with a fixed interest rate increased to about 3.5 at the end of April 2013.

Figure 2.10. The difference in yield of 5-year Polish and German government bonds (absolute disparity) and their quotient (relative disparity)



Note: the quotient of government bond yield stands for the relative attractiveness of investment in these instruments.
Source: Thomson Reuters.

Figure 2.11. The value of Polish government bonds held by non-residents

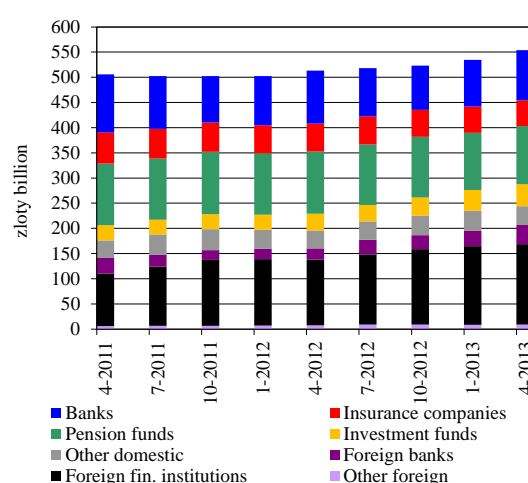


Source: Ministry of Finance.

The largest group of investors in the domestic market for government bonds were foreign non-banking financial institutions which increased their holding of these securities by PLN 9.7 billion between the beginning of November 2012

and the end of April 2013. At the end of April 2013, they held Polish government bonds whose value was PLN 159.9 billion (see Figure 2.12). The holding of foreign banks, whose investments are highly volatile and may be short-term, amounted to PLN 38.4 billion and was higher by PLN 11.0 billion than at the end of October 2012.

Figure 2.12. Structure of investors in the Polish government bond market



Source: Ministry of Finance.

In the same period, the exposure of domestic banks in the local market for government bonds increased considerably. According to the Ministry of Finance data, the value of their portfolio increased by PLN 11.8 billion and stood at PLN 99.5 billion at the end of April 2013. At the same time, the average maturity of government bonds in the portfolio of domestic banks increased, which might have been the result of longer maturities of these securities offered in the primary market and of increasing balance sheet exposure to market risk by these institutions due to expectations of further NBP interest rate cuts. The portfolio of the largest group of domestic investors in the market, i.e. of pension funds, decreased by close to PLN 5.5 billion between October 2012 and April 2013.

The relatively stable condition of public finance in Poland, including inter alia the decline in the public debt to GDP ratio in 2012, stimulated an

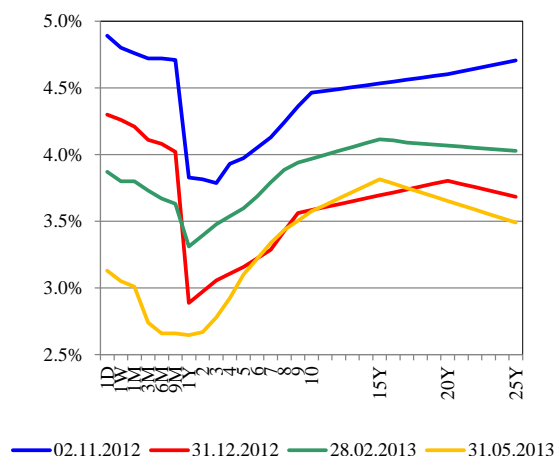
increase in prices of domestic government bonds. With the above-mentioned high demand from foreign investors, the decline in government bond yields was the result of high financing of the state budget's borrowing needs in the first half of 2013 (it was 80% at the end of May), which allowed the Ministry of Finance to more flexibly adjust the supply of debt securities. This resulted in a decline in the financing costs in the primary market, which was reflected in good results of auctions in the domestic market and a number of supplementary auctions.

The temporary increase in yield on debt securities between the end of January and the beginning of March 2013 (see Figure 2.13) was related to a change in market participants' expectations as to the level of future NBP interest rates – a pause in the cycle of reductions was expected. The increase in government bond yields in the second half of May 2013 was the result of an increase in the likelihood of early termination of QE3 programme by Fed, as perceived by market participants, and the related increase in government bond yields in developed markets. Fed's President, Ben Bernanke's, statement in favour of this belief of 19 June 2013, i.e. after the end of the period analysed in this chapter, contributed to a significant and rapid decline in bond prices in the domestic market.

The response of market participants to plans of earlier than previously assumed phasing-out of liquidity provision programmes by major central banks may result in a permanent increase in government bond yields in developed markets and their higher volatility. The resulting relative decrease in the attractiveness of domestic government bonds, coupled with the persisting decrease in the rate of economic growth in Poland, may result in reduced interest in these instruments or, in the extreme case, even their massive sales by foreign investors in the secondary market. Materialisation of such an extreme scenario would result in a high increase in bond yields, with a simultaneous depreciation of the zloty, thus leading to an increase in market risk for domestic

banks.

Figure 2.13. Yield curve in the domestic unsecured interbank deposits and Polish government bonds market



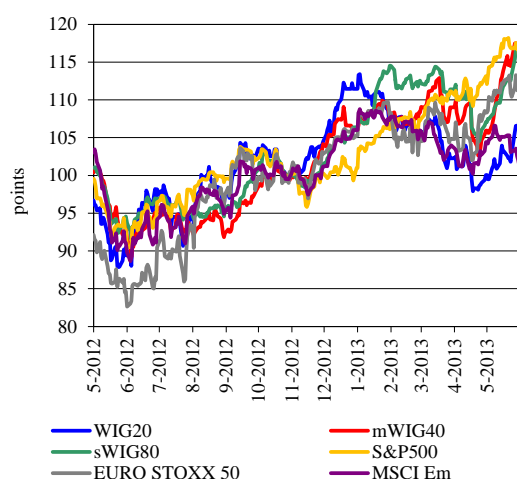
Source: Bloomberg.

2.2.5. Equity market

Between November 2012 and May 2013, equity market indices (S&P500 and DJIA) in the United States reached historical levels. It was primarily the result of expectations of this country's faster recovery compared to EU Member States, supported by the publication of better projections of financial results of US companies. It remained in contrast with the situation in the domestic equity market. After high increases in the share prices by the end of 2012, related primarily to an improvement in sentiment in global financial markets, between January and April 2013 the index of the major WSE listed companies exhibited a downward trend (see Figure 2.14). It was the result of limited interest of foreign investors in equities of companies from Central and Eastern Europe, as well as local factors. The deteriorating financial standing of enterprises in major European economies, which are major trade partners of many companies listed on stock exchanges in the region, was not conducive to investment in their equities. The balance of non-resident's transactions in the domestic equity market between November 2012

and March 2013 was close to nil. At the end of the first quarter of 2013, they held 44.4% of equity traded in organised markets, against 44.9% at the end of October 2012.

Figure 2.14. Selected stock market indices



Note: data normalised to 100 as of 31 October 2012.
Source: Thomson Reuters.

Among domestic factors, the changes in stock indices were primarily influenced by economic slowdown and financial results of enterprises. The decrease in interest in equity (mainly large companies covered by WIG20) may have also resulted from uncertainty related to the planned review of regulations on open pension funds due to the significant share of these investors in the capitalisation of domestic companies (18.1% at the end of 2012). In addition, the considerable decline in the equity prices of one enterprise from the telecommunications sector (by over 43% in February), following the publication of worse than expected financial results for the fourth quarter of 2012, resulted in a lower increase in WIG20 as compared to the indices of small and medium-sized companies.

The decreasing trend of equity prices on the

WSE reversed in May 2013 due to, inter alia, optimistic sentiment on foreign stock exchanges and high inflow of capital to domestic equity investment funds. The reasons behind the inflow were record low yields on government bonds and interest rates on bank deposits. Therefore, between November 2012 and May 2013 WIG and WIG20 increased by 10.6% and 7.3%, respectively.

In the second half of June 2013, i.e. after the end of the period analysed in this chapter, there was a sharp decline in stock prices of companies listed on the WSE. It was mainly influenced by the announcement of, earlier than originally assumed, QE3 program ending and the announcement of the Ministry of Finance and Ministry of Labour and Social Policy proposals for changes in the pension system and the operation of open pension funds.

2.3. Property market

In the period covered by the *Report*, the prices of flats decreased again in the majority of large cities. The decline in transaction prices in the largest markets¹¹ was 0.6% in the primary market and 6.0% in the secondary market. The estimated cumulative decline in prices from mid-2008 was ca. 16%. Recently, the pace of the decline in prices of the primary market was lower (see Figure 2.15), and in the first quarter of 2013 the prices on the market increased (3.7% q/q).

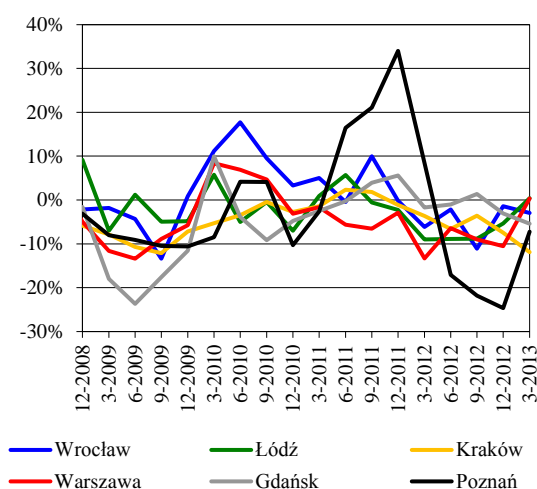
The decrease in the prices of flats in the period analysed was due to high supply of flats offered by developers, i.e. finished flats and flats at earlier construction stages. At the end of the first quarter of 2013, the supply of flats was 1.5-2 times higher than annual sales in the largest flat markets.¹² Prices were affected by the significant

¹¹ Decline in average prices weighted by the size of the market resource of flats. The largest residential markets include Gdańsk, Gdynia, Łódź, Kraków, Poznań, Warsaw and Wrocław. The information of the average flat prices stand for an average for these markets.

¹² Estimates of the number of transactions and the size of developers' offer in the largest cities in: "Residential Market in Poland Q1 2013", REAS, 2013. It is assumed that in equilibrium, the supply of flats should not be higher than annual sales – more on equilibrium on the property market in: "Information on home prices and the situation in the residential and commercial real estate market in Poland in 2012 Q2", 2012, NBP.

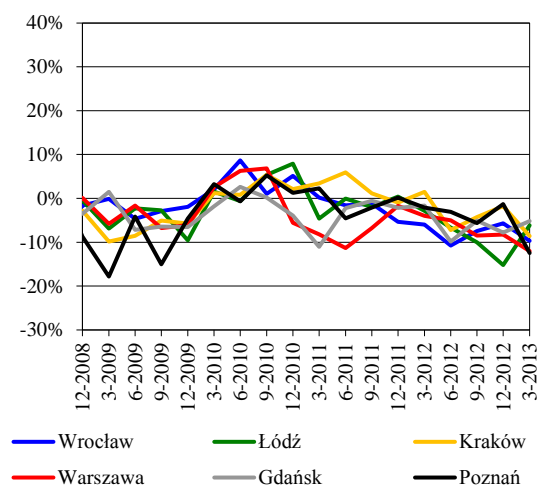
increase in the number of finished unsold flats (increase from 12,700 to 15,500 between the end of September 2012 and the end of March 2013). Demand, in turn, was affected primarily by the lower growth rate of residential loans (see Chapter 3.2).

Figure 2.15. Growth in residential property transaction prices in the primary market, in selected cities (y/y)



Source: NBP.

Figure 2.16. Growth in residential property transaction prices in the secondary market, in selected cities (y/y)



Source: NBP.

¹³ See "Information on home prices and the situation in the residential and commercial real estate market in Poland in 2013 Q1", 2013, NBP.

¹⁴ The size of a flat which can be bought for a loan denominated in PLN by a household with average income in a given voivodship.

The symptoms of deceleration of the decreasing trend for prices in the primary market could be related to an increase in the share of flats purchased for cash, mainly more expensive ones – with a higher standard and in valued locations.¹³ In addition, since 2013 the government has been phasing out of the programme "First family home" under which flats with prices lower than average market prices were acquired (due to restrictions on the maximum price for 1 m² of flats purchased under the programme).

Outlook

The high number of flats offered by developers and the offer's structure (high share of finished flats) will result in a decline in property prices in the next quarters. Also the high number of flats to be finished in 2013 shows that the largest markets will face supply pressure in a short time. Demand for property will, in turn, be limited by the expected lower growth rate of residential loans (see Chapter 3.2).

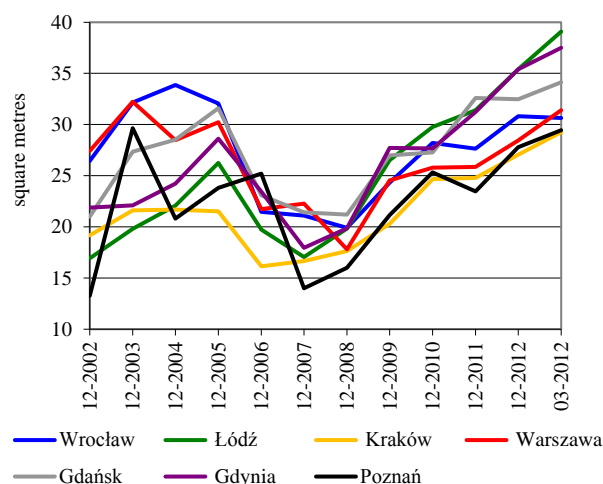
On the other hand, the decline in interest rates on loans denominated in PLN and decreases in flat prices brought about the increase in the availability of flats in the fourth quarter of 2012 and in the first quarter of 2013,¹⁴ thus exceeding the 2004 levels (see Figure 2.17). If the trend persists, it could become one of the elements conducive to gradual increase in interest in acquiring flats.

In addition, according to GUS data, in 2012 and in the first four months of 2013, the number of flats in new housing projects of developers and housing cooperatives, as well as the number of flats which were granted a construction permit, declined (see Figures 2.18 and 2.19). Similar conclusions can be drawn from the analysis of REAS data, according to which almost 2/3 of the current offer of developers in the largest cities are finished unsold flats or flats that will be finished

in the current year¹⁵ (for comparison, at the end of the first quarter of 2011 it was about 48%). Only 2% of the offer are flats that will be finished beyond 2014.

The above GUS data and REAS estimates show that in the long run, the imbalance in the primary market will gradually decrease, which is expected to result in decelerating the flat price downward trend. The low number of new flats in the developers' offer will most probably result in a continuation of the decline in the size of developers' offer, observed for several quarters, thus gradually reducing the supply pressure on the market.

Figure 2.17. Simulation of availability of flats in selected residential property markets



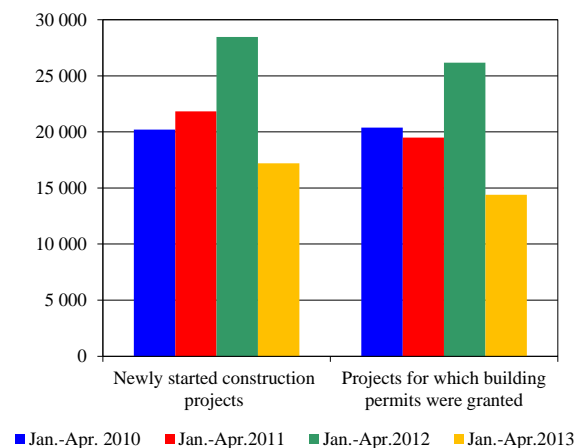
Note: the simulation shows the size of a flat (in square metres), which a person with average income for the region (voivodship), funding its purchase with a loan, could afford to buy in the primary market (ask prices). Assumptions for the calculation: borrower's downpayment 20%; borrower is a one-person household; borrower's income equals the average gross salary in the enterprise sector for a given voivodship, the maximum amount spent for loan instalment repayment does not exceed 50% of net income; monthly funds left to cover expenses after the loan instalment has been repaid are minimum PLN 1,000; loan maturity of 25 years; loan repaid in decreasing instalments. Source: NBP calculations based on PONT Info Nieruchomości and GUS data.

Figure 2.18. Number of flats in new housing projects and in projects which were granted a permit



Note: the data include projects by developers and housing cooperatives. Source: GUS.

Figure 2.19. Number of flats in new housing projects and in projects which were granted a permit in the first four months of 2010-2013



Note: the data include projects by developers and housing cooperatives. Source: GUS.

¹⁵ See "Housing market in Poland. 2013 Q1", 2013, REAS.

Chapter 3.

Banking sector stability

The condition of the banking sector in the period analysed was good, which is evidenced by, inter alia, high earnings, elevated levels of capital, sound liquidity position and a continued albeit diminishing lending growth. However, a slower economic growth generated some negative effects that may build in the forthcoming quarters.

The quality of the portfolio of loans to the non-financial sector deteriorated, however to a lesser extent than in the period analysed in the previous Report. Impaired loans' growth concerned mainly loans to small and medium-sized enterprises and housing loans.

The majority of banks continued to reduce foreign funding and, at the same time, developed their domestic deposit base. It contributed to the reduction in the funding gap, which is advantageous for bank funding stability. On the other hand, costs related to development of bank customer base were pushed up, which, together with falling interest profits, contributed to the decrease of average profitability indicators of the banking sector.

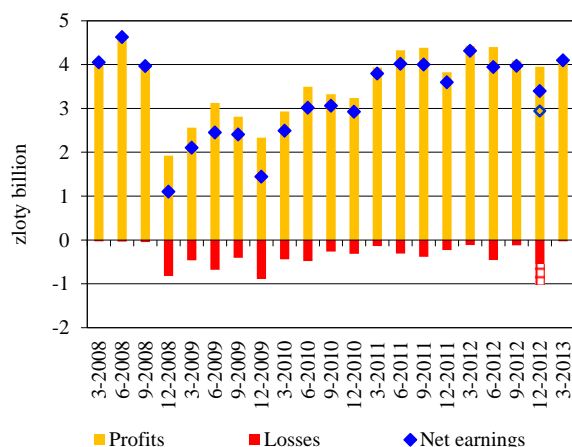
Current and expected economic slowdown may contribute to the rise in credit risk materialisation costs. Competition for stable funding sources and low interest rates may lead to a further drop in net interest margin. Consequently, a further fall in profitability of banking activity, measured as the relation of net earnings to assets, may be expected, which however should not have a significant adverse impact on the stability of the sector.

The capacity of banks to absorb losses has improved somewhat since September 2012, as the banking sector's capital has grown. Since the beginning of the crisis in global financial markets no bank in Poland has required recapitalisation with public funds. The good capital position of banks is confirmed by the results of stress tests, which indicate that a large portion of domestic commercial banks hold sufficient capital to absorb the effects of a severe economic slowdown. However, global and Poland's growth prospects deteriorated and uncertainty over future economic trends remains elevated. Consequently, it is advisable for banks to maintain high capital buffers and particularly to pursue a prudent dividend policy.

3.1. Earnings

The earnings and profitability ratios (ROA, ROE) of Poland's banking sector decreased in the period analysed¹⁶ (see Table 3.1). The banking sector's net earnings amounted to 3.4 billion zlotys in the fourth quarter of 2012. The fall of a combined value of profits and the rise in a combined value of losses in this quarter (see Figure 3.1) can be partially attributed to seasonality observed in the profit and loss accounts of banks, but deterioration of earnings was stronger than it would result from the seasonality alone. Due to a considerable fall of losses and a rise in profits in the first quarter of 2013, profits stood at 4.1 billion zlotys, down by 5% on the figure from the corresponding period of 2012.

Figure 3.1. Quarterly net earnings of the banking sector

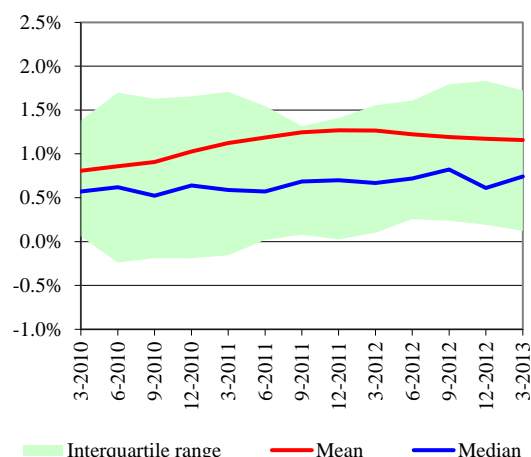


Note: an empty marker and hatched bar area are used to mark estimated net earnings and the sum of losses of the banking sector adjusted for the net earnings of banks that ceased their operations in the fourth quarter of 2012 or carried them on in a modified form.
Source: NBP.

Banks' discrepancy, in terms of return on assets, remained at a level similar as in the period analysed in the previous edition of the *Report*, and the operations of large banks were still, on average, more profitable than of smaller institu-

tions (see Figure 3.2).

Figure 3.2. Return on assets



Notes: annualised data. Regarding data on flows (e.g. profit and loss account data), the annualisation method employed consists in taking into account flows from 12 preceding months. When calculating the indicators that compare annualised flows with data on stocks (e.g. ROA) balance-sheet data are averaged for the period of 12 preceding months.
Unless otherwise indicated, dispersion plots in Chapter 3 relate to domestic commercial banks and branches of credit institutions.
Source: NBP.

The number of institutions with negative profitability ratios increased to 21 (from 20 in September 2012), and their share in the banking sector's assets rose to 5.1% (from 2.2%, respectively). The higher share of banks with negative profitability ratios was mainly the result of one-off events towards the end of 2012 – earlier and later those banks posted profits. Negative profitability ratios were reported by 4 commercial banks, 7 cooperative banks and 10 branches of credit institutions.

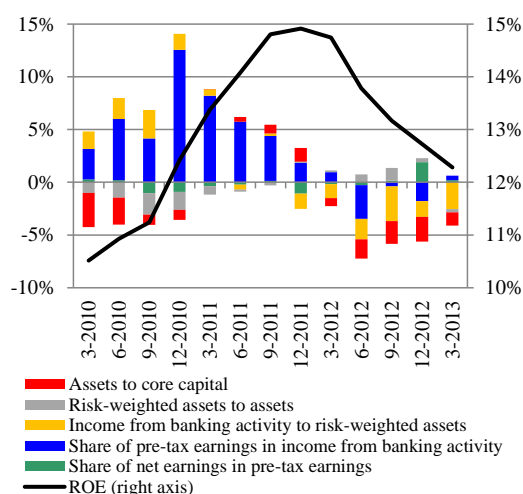
Return on equity of the domestic banking sector declined from 13.2% at the end of the third quarter of 2012 to 12.3% at the end of the first quarter of 2013. It follows from decomposition of changes of ROE (see Figure 3.3) that its decrease

¹⁶ In this chapter, the "period analysed" covers the period from September 2012 to April 2013, and its point of reference is the period considered in the previous edition (March – September 2012). Most data from the profit and loss account are available only in quarterly periods.

was primarily driven by¹⁷:

- a decreasing margin on risk-weighted assets (measured by the relation of net income from banking activity to risk-weighted assets). In the period analysed, mainly net interest income fell, although net non-interest income also recorded a decrease (see Figure 3.4) – despite the fact that some of the banks raised charges for keeping accounts and carrying out settlement services.¹⁸
- a further decline in banks' leverage, primarily related to the rise in their regulatory capital (see Chapter 3.7).

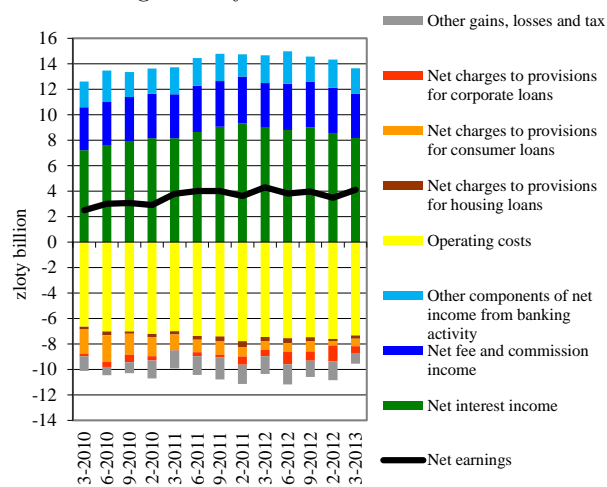
Figure 3.3. ROE of the domestic banking sector and decomposition of changes



Notes: annualised data, decomposition components – changes quarter on quarter.
The share of pre-tax earnings in net income from banking activity may be interpreted as a part of net income from banking activity that was not used to cover operating costs and costs of credit risk materialisation.
Source: NBP.

Decreasing market interest rates affected interest on loans to a greater extent than interest on deposits, which led to a fall in net interest income. The banks' ability to lower interest on deposits was constrained by continued competition for funding sources (see Chapter 3.4). In addition, the interest on a considerable portion of funds deposited on current account is close to nil, irrespective of the level of market interest rates, which – when they had fallen – translated into a fall of banks' deposit margin. At the same time, weakening demand for loans (see Chapter 3.2) and the fall of the upper limit on interest on consumer loans (which – by law – is linked with the NBP Lombard rate) limited the possibilities of increasing credit spread.

Figure 3.4. Sources and allocation of net income from banking activity



Note: quarterly data.
Source: NBP.

¹⁷ Formula of decomposition of ROE shown in Figure 3.3:

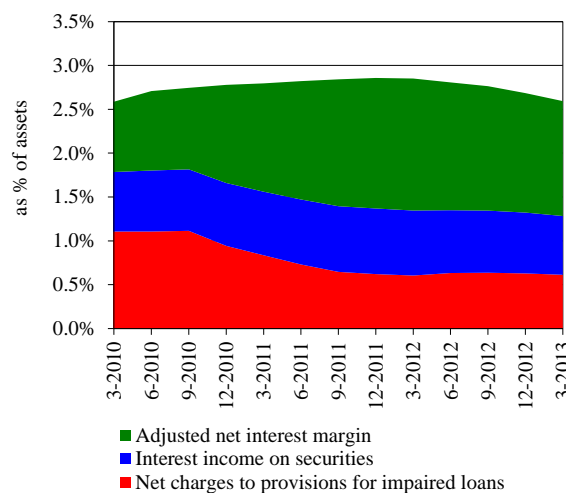
$$ROE = \frac{\text{net earning}}{\text{risk-weighted assets}} = \frac{\text{net earnings}}{\text{assets}} = \frac{\text{net earnings}}{\text{pre-tax earnings}} * \frac{\text{pre-tax earnings}}{\text{net income from banking activity}} * \frac{\text{net income from banking activity}}{\text{risk-weighted assets}} * \frac{\text{assets}}{\text{core capital}}$$

¹⁸ In the second half of 2012, an average monthly charge for keeping a standard bank account rose by 7%. See "Porównanie wysokości prowizji i opłat związanych z rozliczeniami pieniężnymi w złotych w polskim sektorze bankowym w okresie czerwiec–grudzień 2012 r." [Comparison of fees and charges related to cash settlement in the złoty in the Polish banking sector in the period from June to December 2012], 2013, NBP.

Intermediation between savers and borrowers remained the main source of net income from banking activity. The profitability of this activity, measured by an adjusted net interest margin, declined despite a certain decrease of charges to loan impairment provisions (see Figure 3.5). The profitability of most loan portfolios was declining, however to a varying degree (see Figure 3.6–3.9).

The profitability of consumer loans remained high. Moreover, as the burden of credit risk materialisation costs on this portfolio was gradually diminishing, it was almost entirely profitable in the period analysed (see Figure 3.7). The profitability of housing loans stabilised at a low level – still about 1/4 of this portfolio was characterised by negative estimated profitability. Regarding loans to enterprises, estimated profitability declined and this decline was particularly strong for loans to large enterprises¹⁹, on the back of a considerable increase in charges to loan impairment provisions (see Chapter 3.3).

Figure 3.5. Net interest margin



Notes: annualised data.

The upper edge of area in this Figure corresponds to net interest margin (NIM). It is in part composed of interest income on debt securities (not classified into “Loans and other receivables”), issued primarily by the government. The remaining part of interest margin, after deduction of charges to provisions for impaired loans, is an adjusted net interest margin that measures the net profitability of intermediation between savers and borrowers.

Source: NBP.

¹⁹ Unless otherwise indicated, in Chapter 3 large enterprises are defined as employing at least 250 persons, and SMEs – fewer than 250 persons.

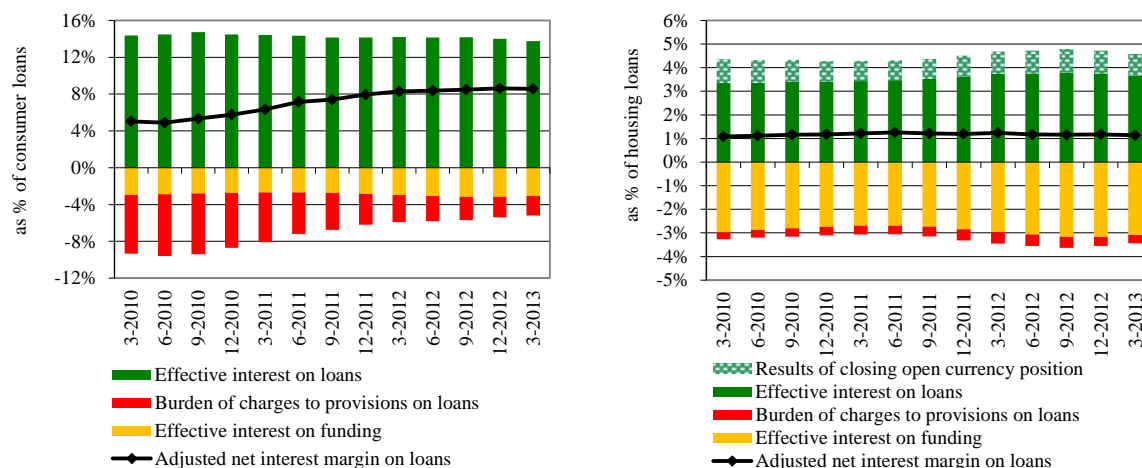
Table 3.1. Selected operating indicators and items of profit and loss account of the banking sector

	2011	2012				2013
	Q4	Q1	Q2	Q3	Q4	Q1
As % of average assets ¹						
Net interest income	2.86	2.85	2.81	2.76	2.68	2.59
Net non-interest income	1.83	1.79	1.79	1.75	1.76	1.73
Net income from banking activity	4.68	4.64	4.59	4.51	4.45	4.32
Operating costs ²	2.40	2.38	2.34	2.32	2.29	2.26
Net charges to provisions for impaired loans	0.60	0.59	0.62	0.64	0.63	0.61
Pre-tax earnings	1.58	1.59	1.54	1.52	1.46	1.42
Net earnings	1.25	1.26	1.22	1.20	1.17	1.14
As % of net income from banking activity ¹						
Net interest income	61.0	61.4	61.1	61.3	60.3	60.0
Net non-interest income	39.0	38.6	38.9	38.7	39.7	40.0
Net income from banking activity	100.0	100.0	100.0	100.0	100.0	100.0
Operating costs ²	51.3	51.2	51.0	51.4	51.6	52.3
Net charges to provisions for impaired loans	12.9	12.8	13.5	14.3	14.1	14.2
Pre-tax earnings	33.7	34.3	33.6	33.6	32.7	32.8
Net earnings	26.7	27.2	26.6	26.6	26.4	26.5
As % of average core capital ^{1,3}						
Pre-tax earnings ⁴	18.8	18.6	17.4	16.6	15.8	15.2
Net earnings ⁴ (ROE)	14.9	14.7	13.8	13.2	12.7	12.3
Amounts ⁵ (zloty billion)						
Net interest income	35.2	9.0	17.8	26.8	35.4	8.2
Net non-interest income	22.5	5.7	11.9	17.4	23.3	5.5
Net income from banking activity	57.7	14.7	29.7	44.2	58.7	13.7
Operating costs ²	29.6	7.5	15.0	22.5	30.3	7.3
Net charges to provisions for impaired loans	7.4	1.8	4.2	6.3	8.3	1.7
Pre-tax earnings	19.4	5.4	10.1	15.0	19.2	5.1
Net earnings	15.4	4.3	8.1	12.1	15.5	4.1

¹ Annualised data.² Operating costs = general expense and depreciation.³ Core 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.⁵ Data, cumulatively, from the start of the year.

Source: NBP.

Figure 3.6. Estimated profitability of consumer loan (left-hand panel) and housing loans (right-hand panel)



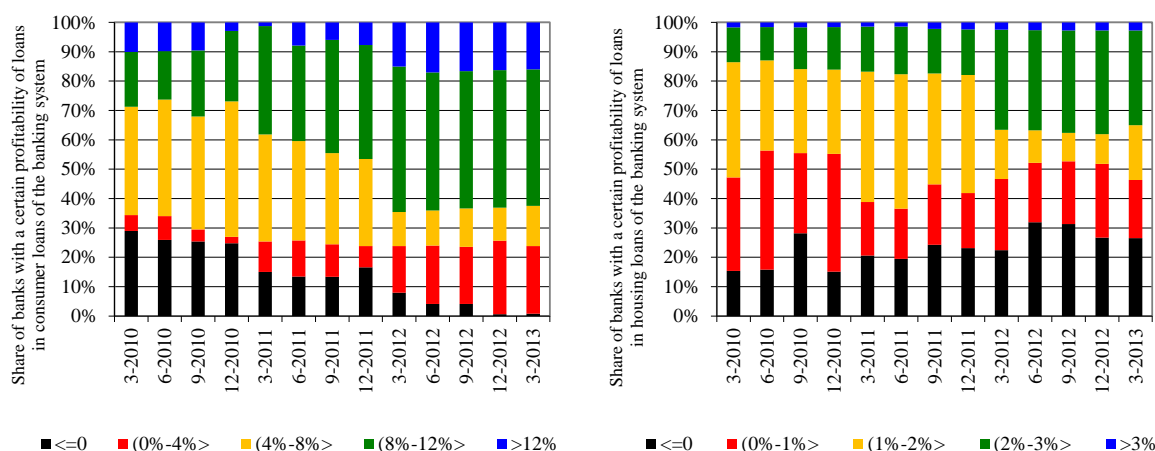
Notes: annualised data.

Values of the adjusted net interest margin presented in this Figure should only be regarded 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 or costs of capital needed to cover the capital requirements. This estimate takes also no account of fees and commissions income (except for those included into 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 open currency position” for housing loans is the estimated net gains/losses on closing an open on-balance-sheet FX position by banks (related to the origination of Swiss franc-denominated housing loans), assuming the use of rolled over 3-month CHF/USD and USD/PLN FX swaps. 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 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 swaps. Such estimate may be overstated, as it takes no account of counterparty risk margin paid by Polish banks.

Source: NBP.

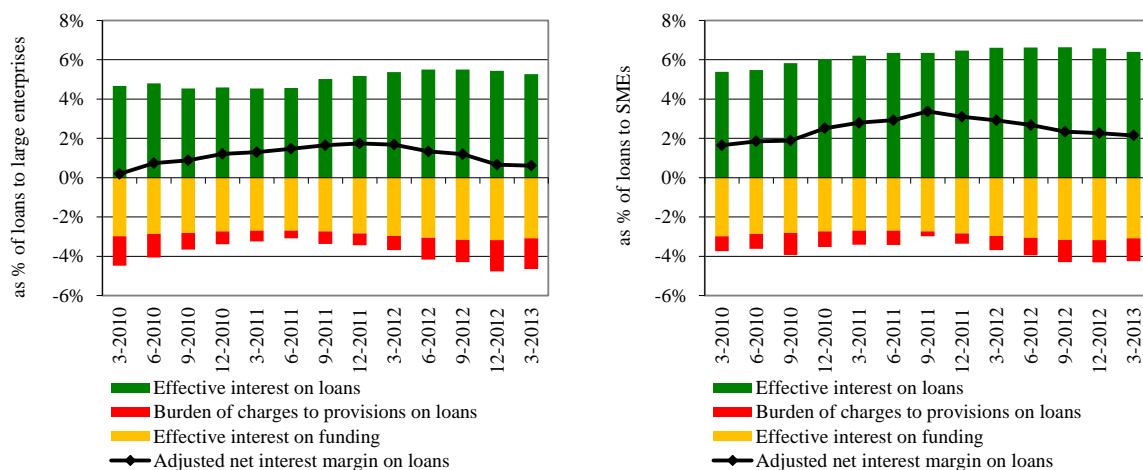
Figure 3.7. The share of banks with a specified estimated profitability of loans in consumer loans (left-hand panel) and housing loans (right-hand panel) extended by the banking system



Note: for a description of estimated profitability measurement, see Notes to Figure 3.6.

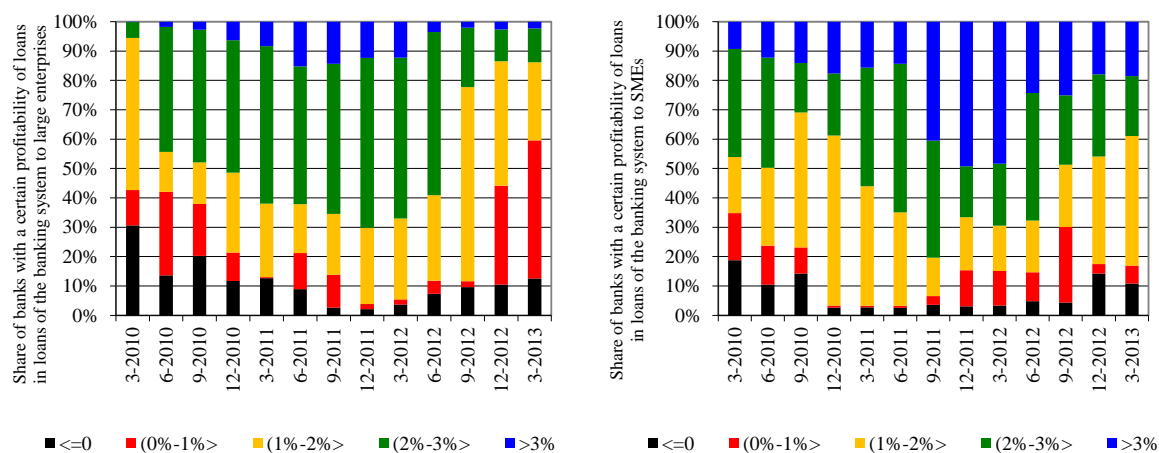
Source: NBP.

Figure 3.8. Estimated profitability of loans to large enterprises (left-hand panel) and loans to small and medium-sized enterprises (right-hand panel)



Note: for a description of estimated profitability measurement, see Notes to Figure 3.6.
Source: NBP.

Figure 3.9. The share of banks with a specified estimated profitability of loans in loans to large enterprises (left-hand panel) and to small and medium-sized enterprises (right-hand panel) extended by the banking system



Note: for a description of estimated profitability measurement, see Notes to Figure 3.6.
Source: NBP.

Outlook

A further fall of the profitability of banking business, measured by ROA and ROE, can be expected in the upcoming quarters. The following factors will primarily impact such a development.

- **A continued fall of interest margin.** In an environment of a further weakening of loan demand and a continued competition for stable funding sources, a decline in WIBOR rates expected by financial market participants (see Chapter 2.7.2) will continue to have a stronger impact on lowering the interest on loans than deposits, thus increasing further hitherto declines of net interest income.

A potential pick-up in the segment of high interest-bearing consumer loans, fuelled by changes in supervisory recommendations, may mitigate a fall of interest margin. On the other hand, this effect may be reduced by a potential further decrease in the limit on interest on consumer loans, which is – by law – linked with the Lombard rate.

- **An increase in the burden of credit risk materialisation costs on earnings,** caused by the current and expected eco-

nomic slowdown and related to the deteriorating quality of loans both to households and to enterprises (see Chapter 3.3).

- **A fall of non-interest margin,** resulting, inter alia, from the expected low pace of economic activity growth and from the forecast reduction of interchange fee.²⁰
- **Limited opportunities of improving cost effectiveness.** The level of cost-to-income ratio is currently below the EU average, which suggests that the possibilities of decreasing it are limited.
- **A possible increase in fees paid by banks to BFG** following the proposal to set up a resolution fund and a stabilisation fund.²¹

The expected scale of a fall in profitability seems to not have a significant negative impact on financial stability outlook, although it will limit the possibilities of increasing capital via profit retention. The banking sector, as a whole, and most bank institutions (including systemically important banks) will remain profitable. Engagement in riskier or less transparent financial products in order to improve earnings (or cut their falls) should be considered with due caution by the banks' managements.

Box 2. The impact of an interest rate decrease on banks' earnings

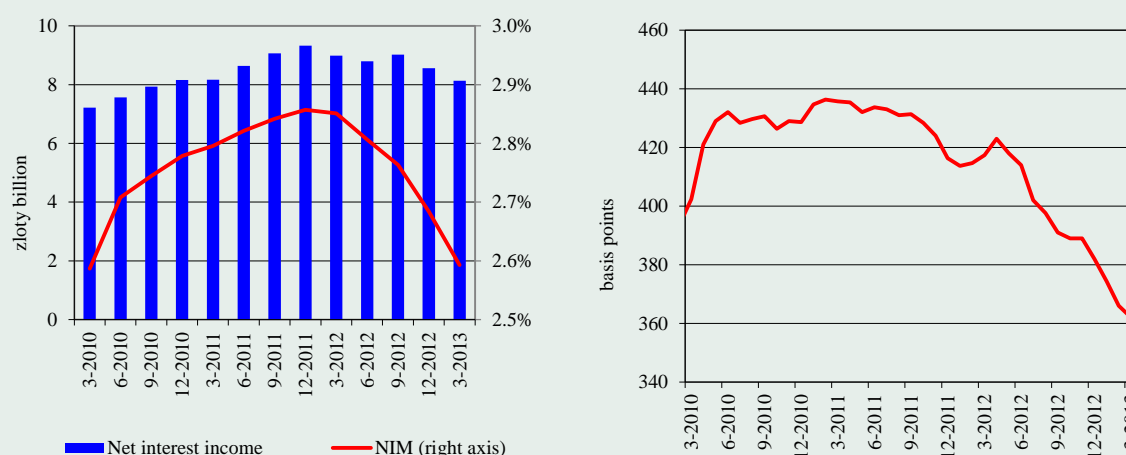
The monetary policy easing cycle was started by the Monetary Policy Council (RPP) in November 2012. By the end of June 2013, the benchmark rate was cut by a total of 200 basis points, to 2.75%, which translated into a decrease in market interest rates. This Box examines the impact of interest rate cuts on banks' earnings.

²⁰ The fee may be reduced on a voluntary basis by entities active in this market, and as a result of regulatory action as work on the matter is underway. See „Komunikat Narodowego Banku Polskiego dotyczący kompromisu w sprawie obniżek opłat interchange” [A press release of the National Bank of Poland on the compromise regarding a reduction of interchange fees] of 17 July 2012, www.nbp.pl, and draft laws *on Amending the Act on Payment Services*, parliamentary prints Nos 966, 1013, 1212, 1213, 1214 and 1290, available at the website of the Sejm of the Republic of Poland.

²¹ See the draft law of 23 April 2013 *on the Bank Guarantee Fund, Bank Resolution and Certain Other Acts* available in the Public Information Bulletin of the Government Legislation Centre.

Net interest income and net interest margin (NIM) of the banking sector decreased from the end of September 2012 (see Figure 1 – left-hand panel). The banking sector's net interest income fell by 8% y/y in the fourth quarter of 2012 and by 9 % y/y in the first quarter of 2013. Interest on loans decreased to a greater extent than interest on deposits (see Figure 1 – right-hand panel)¹ on the back of banks' competition for client deposits (see Chapter 3.4). The fall in net interest income was also driven by a decrease in the yield on debt securities in banks' portfolios,² composed mostly of government bonds and NBP bills (see Chapter 3.5).

Figure 1. Net interest income of the banking sector (left-hand panel) and spread between the interest on zloty loans and deposits of the non-financial sector (right-hand panel)



Notes: left-hand panel: quarterly data for the banking sector; right-hand panel: 3-month moving averages, data based on a sample of 18 banks that report interest rate information to the NBP.
Source: NBP.

Weaker net interest income was the major reason for a fall in net earnings of the banking sector (see Chapter 3.1). In the fourth quarter of 2012 and in the first quarter of 2013, the sector's earnings dropped by 5%. The decrease had, however, no strong negative impact on the financial position of the majority of banks. Lower net interest income also did not result in an increase in the number of loss-making banks.

Analysis of the sensitivity of banks' earnings to changes in interest rates

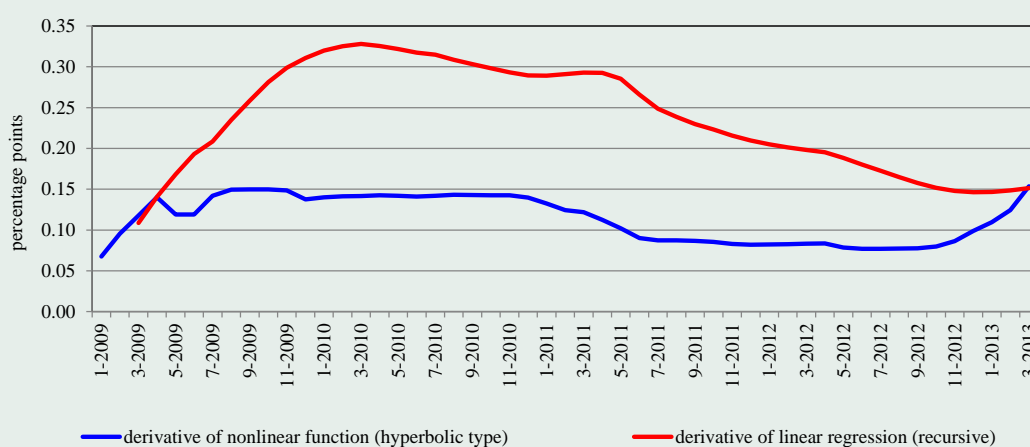
In order to estimate the sensitivity of banks' earnings to changes in market zloty interest rates, two separate analyses were performed: an econometric analysis of the sensitivity of net interest margin of the banking sector and an analysis of the sensitivity of effective interest of portfolios of claims and liabilities of individual banks. As the latest available bank data are those for the first quarter of 2013, only changes in market interest rates taking place by the end of March 2013 were taken into account.

Decreasing interest rates may have also had impact on other items of banks' profit and loss account than net interest income, including the cost of credit risk and changes in the valuation of financial instruments. It is difficult to assess a quantitative impact. However, it can be assumed that the impact of interest rate changes (on the observed scale) on loan quality was substantially smaller than of changes in the economic climate and labour market developments

(see Chapter 3.3). As regards valuation of financial instruments, it has to be noted that an open interest rate position of the banking sector is relatively low (see Chapter 3.5). However, some banks benefited from the rise in the value of debt securities in portfolios priced at fair value.

It follows from the regression analysis that the strength of statistical dependence between the WIBOR 1M³ and NIM was markedly greater in the periods of low interest rates (2009-2010, 2013). In the fourth quarter of 2012 and first quarter of 2013, the sensitivity of NIM to changes in the WIBOR rate increased, and at the end of March 2013 a 1 percentage point fall of WIBOR generated a 0.15 percentage point decrease in NIM.

Figure 2. Impact of unit change of the WIBOR 1M rate on a change in NIM



Source: estimates based on NBP data.

In the other method, the sensitivity of effective interest⁴ to changes in the quarterly average WIBOR 1M rate from September 2012 to March 2013 was calculated for the particular portfolios of assets and liabilities of individual banks⁵. For banks' zloty claims on the non-financial sectors, average sensitivity was 82%, and for zloty liabilities from the sector – 37%. This implies that the impact of a fall in interest rates on banks' claims was more than twice higher than on liabilities from the sector.

The estimated sensitivities were used for simulations of the impact of a potential further interest rate decrease on the financial condition of banks. FRA rates showed that at the end of May 2013 market participants had expected market interest rates to decrease further, by 25-50 basis points (see Chapter 2.1). When compared to the end of March 2013, when recent bank data were available, this would imply a fall of the WIBOR rate by about 100 bps. The impact of such an interest rate decrease was estimated under two scenarios : using the pre-calculated sensitivities⁶ and, additionally, assuming that the sensitivity of interest on banks' liabilities to interest rate changes would be further reduced (e.g. as a result of strong competition for client deposits). The simulation was performed for all commercial and cooperative banks⁷, assuming no changes in the balance-sheet and non-net interest income items of profit and loss account.

The results of the simulation indicated that, should the sensitivity of interest on liabilities to market interest rate changes remain at historical levels, a 100 bp fall of interest rates (compared to the end of March 2013) poses no significant threat to the financial condition of banks. Such

a fall would, *ceteris paribus*, lead to an approximately 2.5 billion zloty decrease in net interest income of the banking sector. Given such a fall of net interest income (with other items of profit and loss account unchanged), the share of loss-making institutions in the sector's assets would rise from 5.4% to 7.1%. However, losses made by these banks would not result in their capital adequacy ratios calculated on the basis of core capital falling below 9%.⁸

A potential weakening of the sensitivity of interest on liabilities (by 50%) to interest rate changes would contribute to a stronger fall of net interest income to about 4.4 billion zlotys, and a rise of the share of banks with a negative pre-tax profit to 9.1%. At the same time, this would bring the core capital of one small cooperative bank below 9%.

Table 1. The results of the interest rate decrease simulation

	Historical data as of 3-2013	Decrease of 100 basis points in WIBOR 1M ¹	
		Historical sensitivity	Sensitivity of liabilities decreased by 50%
Change in interest income (zloty billion)	-	-2.5	-4.4
Change in interest income (in %)	-	-7.7	-13.6
Share of banks with negative pre-tax earnings in banking sector's assets (in %)	5.4	7.1	9.1
Share of banks with deficit of core capital in banking sector's assets ² (in %)	2.74	2.74	2.74

¹ Compared to the end of March 2013.

² The minimum capital adequacy ratio calculated on the basis of core capital was set at 9%.

Source: NBP.

¹ It should be noted that the stock of zloty deposits of the non-financial sector was higher by about 117 billion zlotys than that of loans. As a result, changes in interest on zloty loans and deposits from the non-financial sector had an additional, asymmetrical influence on banks' net interest income.

² The bulk of these debt securities in banks' portfolio was classified as "available for sale", "held to maturity" and "loans and other receivables". Banks report interest income on debt instruments held in the portfolios. On the other hand, approximately 20% of the instruments were in the portfolios valued at fair value through profit and loss account (including debt instruments "held for trading"). For such instruments, interest income is not reported separately -- only a total valuation result is given.

³ WIBOR 1M exhibits the strongest correlation relationship with net interest margin among rates with various maturities in the interbank market.

⁴ Effective interest is the ratio of interest income/expense from a specified portfolio of assets/liabilities to an average value of the portfolio in a given period. In order to better capture the impact of interest rate changes on effective interest, effective interest was calculated using quarterly data, which were then annualised by multiplying by 4.

⁵ Data availability limits the density of breakdowns of assets and liabilities, which may be used for effective interest analysis. Interest assets are broken down into claims on the financial sector, the non-financial sector and the general government and into debt securities broken down accordingly. A division into three sectors was also applied to liabilities. As regards claims on and liabilities from the non-financial sector, the sensitivity of the zloty portfolio was analysed only, assuming that changes in WIBOR rates had no impact on interest on FX claims and liabilities.

⁶ In the case of the portfolio of debt securities issued by the financial sector, in which NBP bills prevail, the sensitivity to interest rate changes was assumed to be 1.

⁷ BGK and branches of credit institutions that commenced their business activity after September 2012 were excluded from the simulation

⁸ The criterion adopted for the value of capital adequacy ratio is more restrictive than statutory regulations now in force. It is, however, compliant with the standard set by EBA stress testing, and also complies with one of the conditions listed by the Polish Financial Supervision Authority in its recommendations on banks' dividend policy. Such criterion is also used in stress tests of the domestic banking sector (see Chapter 3.8.2).

3.2. Lending

The growth rate of lending to the non-financial sector declined from September 2012 and amounted to 2.2% y/y at the end of April 2013.²² Low loan demand, going hand-in-hand with a cyclical slowdown in economic growth, and tightened lending standards maintained by banks (see Figure 3.10) were the main reasons behind the decrease.

The growth rate of lending to enterprises declined most, and it stood at 1.0% y/y at the end of April 2013 (see Figure 3.11). The decline of changes in investment loans was particularly strong, and in the breakdown by borrower – in loans to SMEs. In previous quarters, these loan categories contributed the most to a relatively high growth rate of corporate loans.

The annual growth rate of consumer loans has been negative for two years and it amounted to -3.4% y/y at the end of April 2012. It should be noted, however, that in March and April monthly changes in the value of consumer loans (in nominal terms) were positive and amounted to 35 million and 205 million zlotys, respectively. The data may be evidence of a reversal of the downward trend in consumer loans. Lending in this segment may have been affected by the eased requirements of the Recommendation T *on good practices with regard to risk management of retail credit exposures*, which entered into force in

February 2013.

The 2010 tightening of Recommendation T requirements, due to unfavourable changes in the quality of banks' portfolios driven by too lenient lending policy, led to the shift of some loans, primarily instalment and low-value loans, to para-banking institutions.²³ It is difficult to assess the scale of these developments on account of a strong fragmentation of the loan market, absence of data covering the whole market and the resulting need to adopt a number of assumptions for the estimates made.

Based on the survey of household budgets in "Social Diagnosis 2011"²⁴ and GUS data on credit intermediation firms, it can be estimated that at the end of 2011, loans extended by non-bank institutions amounted to about 3.5 billion zlotys (the average of estimates).

In the period analysed, the growth rate of housing loans declined to a relatively small degree and amounted to 4.5% y/y in April 2013. Besides a gradual tightening of banks' lending policy standards regarding housing loans, lending was constrained by the phasing out of the government-subsidised "First family home" programme at the end of 2012, and before that date – amendments to the programme²⁵, which – from autumn 2011 – made it more difficult for residents in most large cities to meet the programme requirements. Throughout 2012, banks entered

²² Changes in loan values referred to in Chapter 3.2 apply to data after excluding the impact of foreign exchange rate changes.

²³ BIK data show that the number of agreements for consumer loans has been decreasing noticeably, whereas the value of extended consumer loans has not changed significantly for three years (data for banks and credit unions that report relevant information to BIK). For more information, see "Kredyt Trendy. Raport Biura Informacji Kredytowej. Marzec 2013" [Credit Trends. Credit Information Bureau Report. March 2013], 2013, BIK.

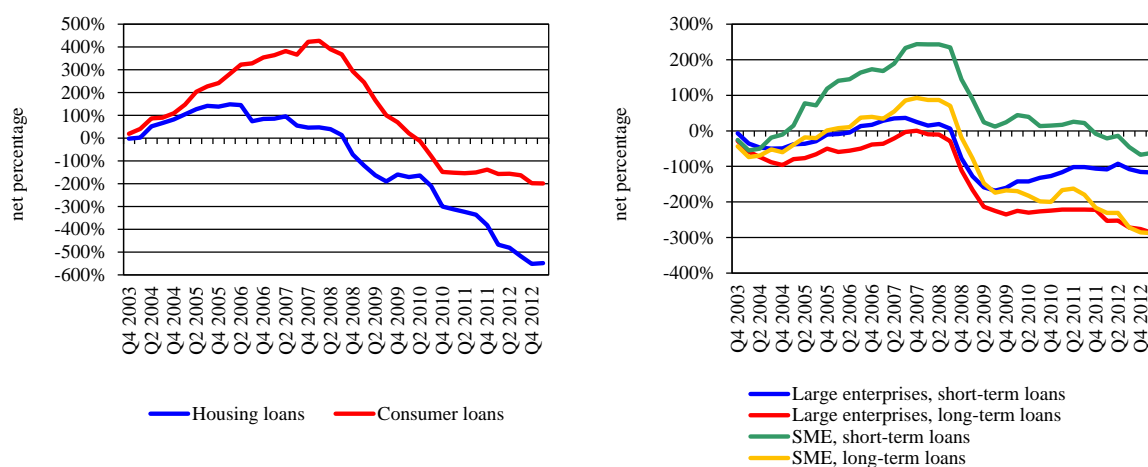
²⁴ "Social Diagnosis 2011. Objective and Subjective Quality of Life in Poland" by J. Czapiński and T. Panek, September 2011, Rada Monitoringu Społecznego.

²⁵ See the Act of 15 July 2011 *on Amending the Act on Financial Support to Families to Acquire their Own Accommodation, and Certain Other Acts*, Journal of Laws of 2011, No 168, Item 1006.

into 15% fewer agreements for housing loans than in the past two years, what in terms of the value meant about 20% less loans.²⁶ In the first quarter of 2013, lending continued to slow down – the number of new loan agreements fell by 21% y/y and their combined value – by 15% y/y.

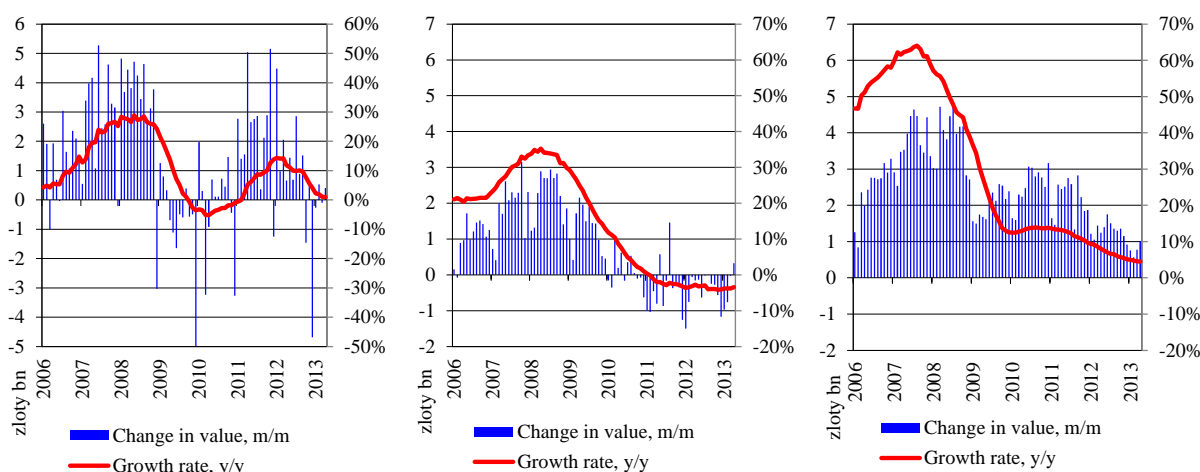
The increasing age of the portfolio of housing loans is an additional factor behind its growth rate decline. Due to a significant share of fixed instalment loans, the principal of loans extended in the past is repaid faster.

Figure 3.10. Accumulated index of changes in banks' lending policy standards – loans to households (left-hand panel) and loans to enterprises (right-hand panel)



Note: a positive slope of the curve indicates that lending standards were eased in a given period, and a negative slope indicates that the standards were tightened.
Source: NBP.

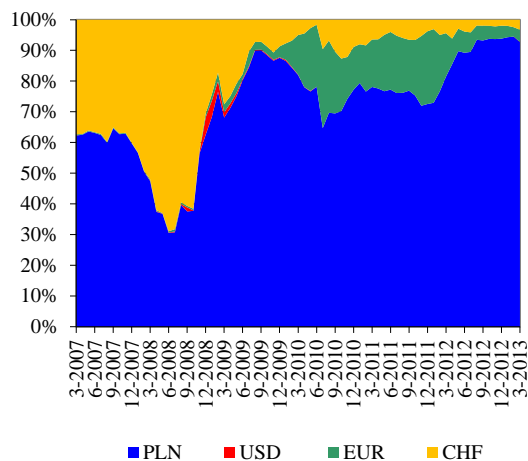
Figure 3.11. Changes in the value (m/m) and growth rate (y/y) of loans to enterprises (left-hand panel), consumer loans (central panel) and housing loans to households (right-hand panel)



Note: data after excluding the impact of foreign exchange rate changes.
Source: NBP.

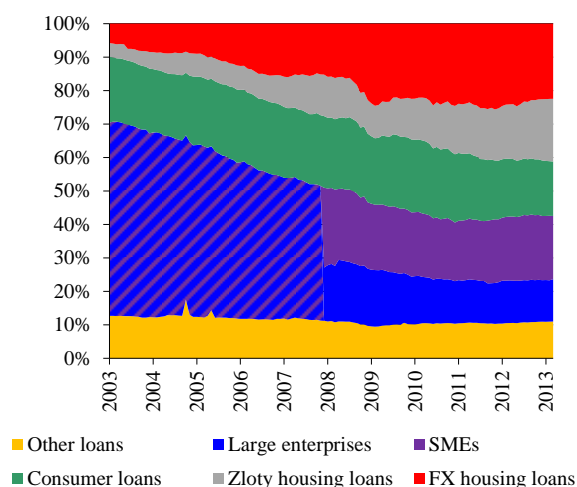
²⁶ Based on "Raport AMRON-SARFIN 1/2013. Ogólnopolski raport o kredytach mieszkaniowych i cenach transakcyjnych nieruchomości" [AMRON-SARFIN Report on Housing Loans and Property Transaction Prices], May 2013, ZBP.

Figure 3.12. Currency structure of new housing loans to households



Notes: the data based on a sample of 18 banks that report to the NBP information on interest rates and value of new loans agreements, i.e. all agreements concluded in a given period, renegotiated and annexed agreements for which price conditions or value of agreements were modified. At the end of March 2013, the share of these banks in the whole portfolio of zloty-denominated housing loans of the banking sector amounted to about 77%, and of foreign currency-denominated loans – about 72%. Since June 2010, loans denominated in the US dollar have not been included in interest rate statistics.
Source: NBP.

Figure 3.13. Structure of loans to the non-financial sector



Note: striped area indicates a share of loans for the whole enterprise sector in a period when data broken down by loans to large enterprises and to SMEs were not available.
Source: NBP.

The share of zloty-denominated loans in the currency structure of new housing loans remained high, and this development was favourable from the point of view of financial system stability (see Figure 3.12). However, foreign currency-denominated loans continued to prevail in the currency structure of the loan portfolio (about 54.5%, of which most were denominated in the Swiss franc), although this share has been steadily diminishing. The loans make banks exposed to credit risk arising from households' vulnerability to zloty depreciation and the risk of the reduced possibility of recovering the loan through liquidation of collateral if the debtor goes bankrupt (the influence of the weakening of the zloty on the LtV is discussed in Chapter 3.3.2.).

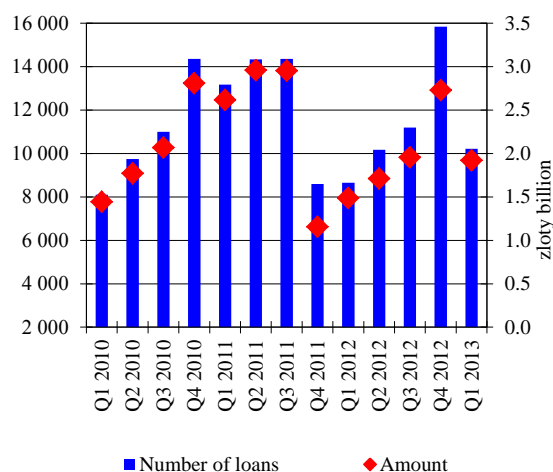
Outlook

Economic forecasts for 2013–2014 show that the outlook for lending growth is again worse than in the period analysed in the previous *Report*. The growth rate of total value of loans may be expected to decrease further in the coming quarters, although it is possible that individual products will record stronger increases than in the past six months (e.g. working capital loans for SMEs). A weakening of loan growth will have a negative impact on banks' earnings in 2013, but this should not put financial stability of the banking sector at risk. It cannot be also ruled out that the growth rate of loans to the non-financial sector may temporarily move into negative territory, which would have a pro-cyclical impact on the economic growth. It seems however this is rather unlikely. The condition of the banking sector does not point to a possibility of a stronger pro-cyclical credit supply reduction i.e. a credit crunch.

The consumer loan outlook has improved as a result of the countercyclical easing of the requirements of the Recommendation T, the possibility to grant loans using the simplified rules for customer creditworthiness assessment, in particular. On the other hand, consumers' low optimism lev-

els, reflected in consumer sentiment indicators, will not be conducive to strong lending growth. It may be expected that the liberalisation of consumer loan grating rules by banks may contribute to an outflow of clients of non-bank lending firms to banks. In the current economic circumstances, the mitigation of the requirements of the Recommendation T will, therefore, support lending in the segment of consumer loans, although it may have no major significance for consumer demand growth.

Figure 3.14. Loans extended under the *First family home* programme



Source: BGK.

Demand for housing loans will be lower following the January 2013 discontinuance of the government “First family home” scheme, which will limit the creditworthiness of some of prospective borrowers. Loans extended under this programme in 2010–2012 accounted, on average, for about 40% of zloty-denominated housing loan growth. The size of this phenomenon may point to a possibly noticeable impact of the phas-

ing out of the programme on the level of lending.²⁷ Some of the potential borrowers may also hold back decisions to buy a dwelling until the launch of the new government scheme to support home purchase by selected borrower groups – the “Home for the Young” (MmM), which starts, probably in 2014.²⁸

On June 18, 2013 the Polish Financial Supervision Authority (KNF) amended Recommendation S *on good practices with regard to management of credit exposures that finance property and are mortgage-secured*, most provisions of which enter into force on January 1, 2014. The Recommendation S modified supervisory guidelines on banks’ lending policy regarding housing loans by, inter alia, setting maximum maturity at 35 years, with recommended maximum maturity of 25 years, and the requirement to grant a loan in the currency of the borrower’s income. The Recommendation changed also guidelines on maximum level of the LtV ratio – in 2014 the LtV ratio of newly granted loans should not exceed 95%, in 2015 – 90%, in 2016 – 85% and finally, since 2017 – 80%. For loans, which part exceeding 80% is adequately collateralized, the maximum level of the LtV ratio is set at 90% – since 2016. As far as the DtI ratio is concerned, the Recommendation S introduced more flexibility – the maximum accepted level of the ratio would be set by banks themselves being a part of their risk management strategy. Banks should pay special attention to cases when the DtI ratio exceeds 40% – for borrowers whose income does not exceed the average wage in a region they live or 50% – for the other borrowers.

Uncertainty about economic outlook and the low demand reported by enterprises in the domes-

²⁷ Loans extended in the first quarter of 2013 did not fully reflect the effects of the phasing out, because they included loan origination under preliminary agreements entered into in the fourth quarter of 2012, when demand for loans under the programme was elevated.

²⁸ The programme was approved by the Council of Ministers on 14 May 2013. It provides for granting State subsidies to loans for first home purchase, taken by persons under 35. The subsidies are to be relatively high: 10% of the replacement value of a home, where the borrower is a single person or childless family, and 15% for a single child family; additionally 5% after the birth of a third or subsequent child. The terms and conditions of the programme can be found on the website of the Ministry of Transport, Construction and Maritime Economy: <http://www.transport.gov.pl/2-482be1a920074-1795650-p.1.htm>.

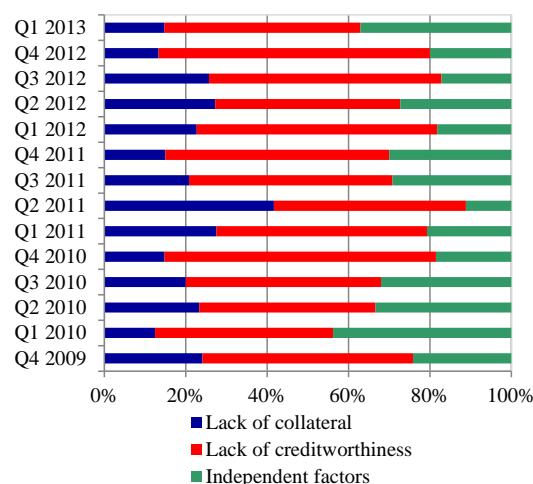
tic market will contribute towards a further decline in the growth rate of corporate loans, most notably investment loans. A half of the NBP-surveyed enterprises said in the first quarter of 2013 that the level of investment would be low in the whole year or that they had no plans to start new investment projects. The percentage of enterprises planning to start new projects in the coming quarter remains below the long-term average.²⁹

Growth of working capital loans to SMEs will be supported by the government programme of *De Minimis* portfolio guarantee facility activated in March 2013. Under the programme, micro businesses and SMEs may seek guarantees for loans of up to 3.5 million zlotys, for the period of up to 27 months. The design of the programme creates incentives boosting loan demand (inter alia, simplified procedures for enterprises, no cost of guarantees in the first year of validity of the guarantee and the low commission of 0.5% of the guarantee amount for the second and third year, possibility of getting the financing with no own collateral), as well as encouraging banks to increase supply (inter alia, a take-over of risk by the State Treasury up to 60% of the loan value, a short period of guarantee payout – 15 working days, no burden on bank capital up to the guarantee amount).³⁰ It seems that the programme may help to overcome one of the significant reasons for rejecting loan applications of SMEs. According to survey data, about 20% of loan applications filed by SMEs in the last three years were rejected because of the absence of required collateral (see Figure 3.15).

By mid-May 2013, 16 banks signed 9.7 billion zloty worth of agreements with BGK for the provision of guarantees, which will allow them to grant loans of up to 16.2 billion zlotys. The scale of potential lending to be activated under the programme is big – it amounts to about 25%

of the value of the present portfolio of working capital loans to the SMEs (and about 10% of the whole portfolio of SMEs loans). At the end of May 2013, i.e. two month and a half after a first commercial bank signed an agreement with BGK, the amount of guarantees was about 820 million zlotys, and agreements with banks for a total of 1.3 billion zlotys were made by 4,100 micro businesses and SMEs. Provided the guarantee programme succeeds, it should be continued, especially during economic downturn when it counter cyclically boost loans supply. The programme phasing out in the future should be carried on gradually in order not to abruptly decrease loan supply.

Figure 3.15. Distribution of reasons for declining loan applications filed by SMEs



Source: “Information on the condition of the enterprise sector, including the economic climate in 2013 Q1 and forecasts 2013 Q4”, 2013, NBP.

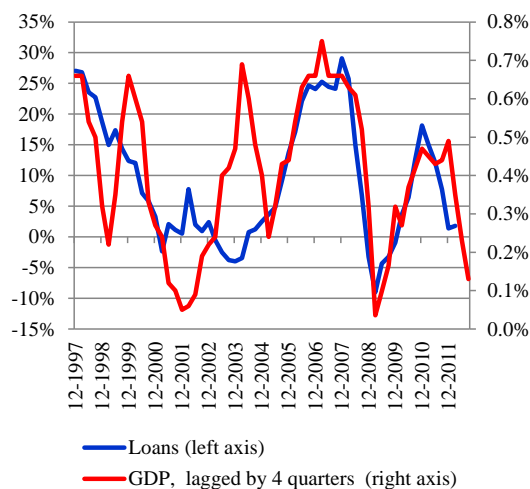
When the growth rate of corporate loans is compared with the growth rate of economic growth, it can be said that from the end of 2004, corporate demand for financing through bank loans grows, on average, after four quarters following an improvement in the economic climate (see Figure 3.16). The recent macroeconomic projection of the NBP indicates that economic

²⁹ For detailed information on corporate climate, including investment plans and changes in bank debt see “Information on the condition of the enterprise sector, including the economic climate in 2013 Q1 and forecasts for 2013 Q2”, 2013, NBP.

³⁰ More information on *De Minimis* guarantee can be found on the website www.deminimis.gov.pl.

growth should accelerate in the second half of 2013. Therefore, it seems that acceleration of the growth rate of loans to the enterprise sector can be expected about mid-2014, at the earliest.

Figure 3.16. Annual growth rate of corporate loans against changes in real GDP



Source: GUS, NBP.

3.3. Credit risk

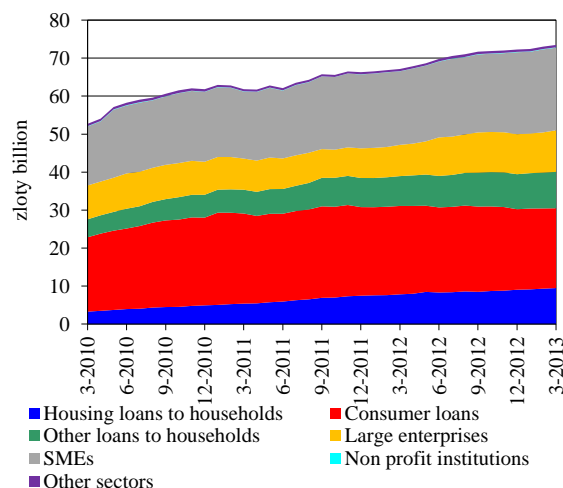
Credit risk taken by Polish banks is almost entirely concentrated in the non-financial sector. At the end of March 2013, the sector's share in impaired loans exceeded 99% (see Figure 3.17). The non-financial sector is, on the other hand, dominated by households and enterprises, as the share of non-commercial institutions providing services to households in total loans and in impaired loans is marginal (0.6% and 0.1%, respectively, at the end of March 2013).

The quality of loans to the non-financial sector has deteriorated since September 2012, albeit to a lesser extent than in the period covered by the previous edition of the *Report* (see Figure 3.18). At the end of March 2013, the impaired loan ratio for this sector rose by 0.2 percentage points to

³¹ The values of net charges to provisions for impaired loans presented in this section also include charges to provisions for impaired exposures towards the non-financial sector other than loans and other receivables (inter alia, securities issued by entities from other sectors). Their share in the total value of net charges to provisions for impaired loans is, however, marginal (on average, about 0.3% in the last three years).

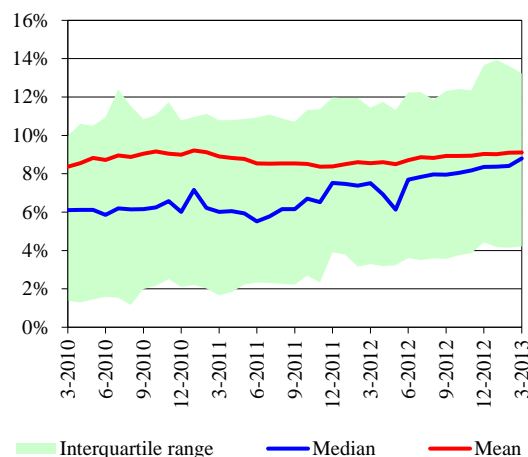
8.9%. The deterioration in credit quality mainly concerned corporate loans.

Figure 3.17. The value of impaired loans for individual sectors



Note: "other sectors" include the financial sector and the general government sector.
Source: NBP.

Figure 3.18. Impaired loan ratio for the non-financial sector



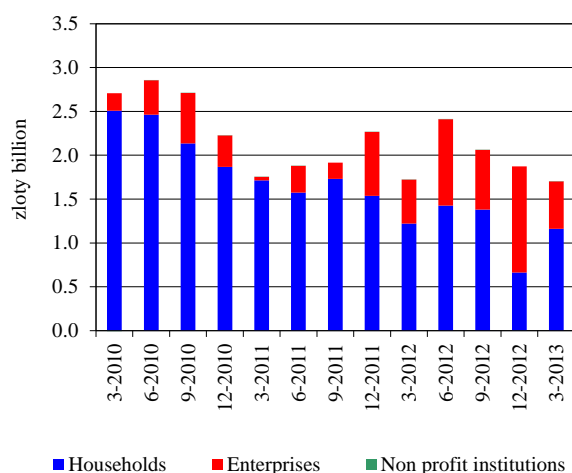
Source: NBP.

Despite the fall of the economic growth rate, credit losses on loans to the non-financial sector (net charges to provisions for impaired loans³¹)

declined when compared to the period covered by the previous edition of the *Report* (see Figure 3.19). This decline was mainly driven by a lower level of provisions in loans to households. However, it should be noted that this, in part, resulted from the influence of one-off factors³² (see Chapter 3.3.2). Whereas charges to provisions for impaired corporate loans were higher than in the period covered by the previous edition of the *Report*.

The coverage of impaired loans by provisions can be assessed as relatively high (see Box 3).

Figure 3.19. Quarterly net charges to provisions for impaired loans to the non-financial sector



Note: net charges to provisions for impaired loans – for definition, see *Glossary*.
Source: NBP.

3.3.1. Credit risk of corporate loans

Enterprises' debt servicing capacity

In the period covered by the *Report*, the financial condition of enterprises deteriorated. In the whole 2012, net financial result of the enterprise

sector decreased by 21%, in nominal terms, to levels lower than in 2007. There were stronger falls in profits among enterprises which had so far been the most profitable ones, especially in the mining and energy industries and in the group of largest enterprises (with workforce over 2,000).³³ In the period analysed, the return on sales recorded its all-time low since 2004.

However, signs of a halt to negative trends could be seen towards the end of 2012. In the fourth quarter of 2012 and the first quarter of 2013, a year-on-year fall in net gains/losses on sales was increasingly smaller. The slower decrease of the result on core business was possible due to cuts in costs of products, goods and materials (on the back of falls in commodity and energy markets prices and enterprises' restrictive wage policy).

After a period of falls in liquidity ratios in the first three quarters of 2012 to levels close to the 2009 level, they stabilised in the period analysed in the *Report*, and in the case of cash liquidity – a slight improvement was observed. The stabilisation of liquidity ratios is, inter alia, the result of a reduction of enterprises' liabilities, including liabilities towards the banking sector. The ratio of liabilities to total assets has been declining since mid-2012. Despite the steady decrease of leverage, there was a rise in interest burden on the financial result of enterprises due to worsening performance (see Figure 3.20).³⁴

Reducing leverage and cutting costs by enterprises contributed to a fall in the share of enterprises with a negative pre-tax profit margin in the second half of 2012 (see Figure 3.21). However, the profitability of indebted enterprises deteriorated again in the first quarter of 2013, which may be the evidence of bleak prospects for improvement of debt servicing capacity in the

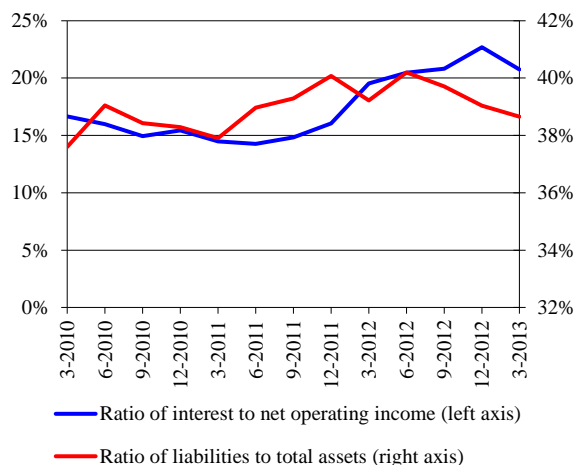
³² In one of the banks, an extraordinary and one-off structural change occurred in the presentation of earnings for the whole 2012, as a result of which earnings from part of activities in the reporting period (and components in the profit and loss account) were not incorporated into earnings from the whole reporting year (they were settled as capital). On the other hand, another bank changed the loan impairment estimation method.

³³ See "The financial condition of the enterprise sector in 2012 Q4", 2013, NBP.

³⁴ This was reflected in enterprises' survey responses (the so-called NBP Quick Monitoring). Enterprises reported a worsening of their loan debt servicing capacity in the first quarter of 2013.

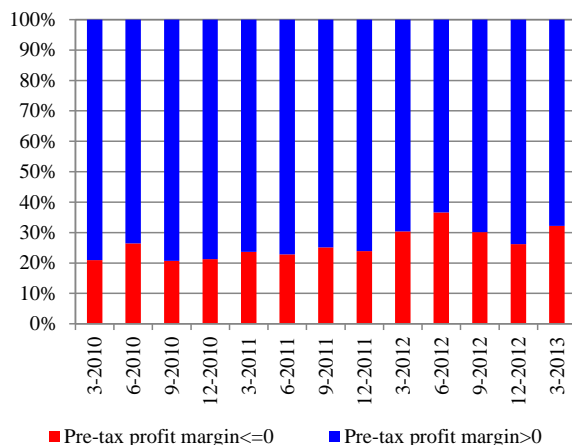
quarters to come.

Figure 3.20. Corporate burden related to liabilities



Note: the data cover enterprises with employment of 50 and over.
Source: NBP calculations based on GUS data.

Figure 3.21. Distribution of corporate debt by pre-tax profit margin



Notes: the data cover enterprises with employment of 50 and over; until the end of 2011, data without advances and loans from associated entities.
Source: NBP calculations based on GUS data.

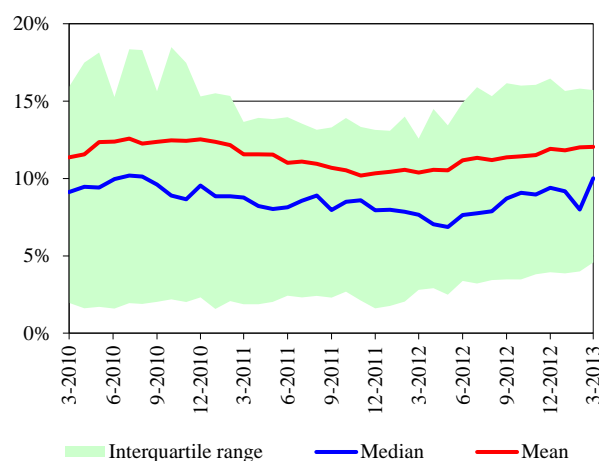
Corporate loan quality

The quality of corporate loans has deteriorated since the end of September 2012 – however, to a lesser extent than in the previous six months.

³⁵ Changes in the value of impaired loans, referred to in Chapter 3.3, apply to data after excluding the impact of foreign exchange rate changes.

The impaired loan ratio rose by 0.6 percentage points to 11.9% at the end of March 2013 (see Figure 3.22).

Figure 3.22. Impaired loan ratio for enterprises



Source: NBP.

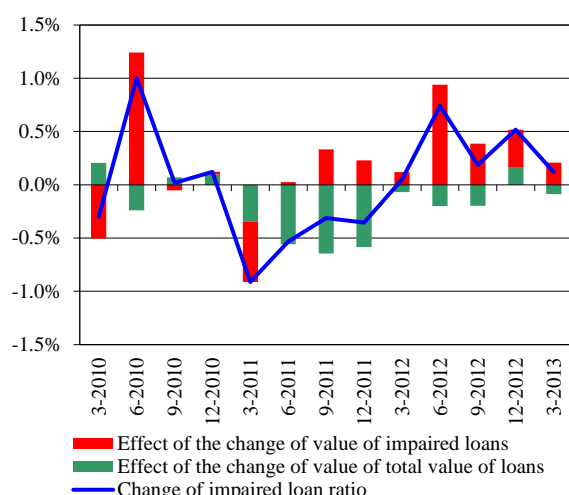
The change in the ratio was primarily the result of a 5% rise in impaired loan growth³⁵ and a slight decrease in corporate loans in the period (see Figure 3.23). The impaired loan growth rate in the enterprise sector declined.

Unlike in previous quarters, loans to SMEs accounted for most impaired loan growth (see Figure 3.24). The difference between the impaired loan ratios for large enterprises and SMEs amounted to 3.4 percentage points at the end of March 2013 (see Figure 3.25).

In the fourth quarter of 2012, banks made largest ever net charges to provisions for impaired loans to the enterprise sector (see Figure 3.26). Although the increase in impaired loans mainly concerned loans to SMEs, the values of loan provisions for the SME sector and for large enterprises from, inter alia, the sections of *construction* and *real estate activities*, were close. This may prove that charges to provisions are made with delay. A relatively high value of charges to provisions also stemmed largely from verification of collateral, carried out at one of the largest

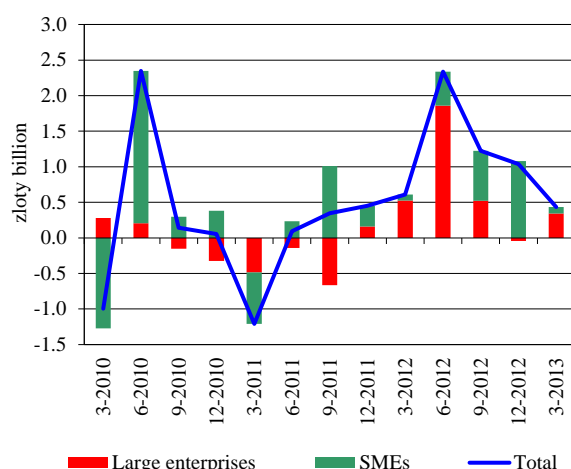
banks. This change exerted a negative influence on the average profitability of the portfolio of loans to large enterprises of the whole sector (see Figures 3.8 and 3.9).

Figure 3.23. Decomposition of change (q/q) of the impaired loan ratio for enterprises



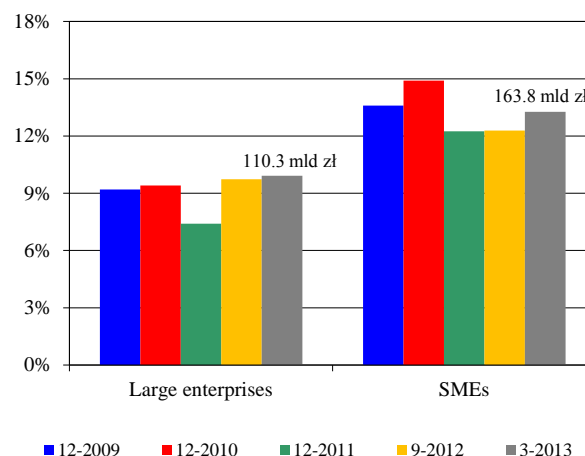
Note: decomposition with the use of a derivatives calculus: a partial derivative of the ratio at the point was calculated in relation to a given variable comprising the impaired loan ratio (impaired loans or total loans) and multiplied by a value of change of a variable in a quarter. The sum of the products of partial derivatives and changes in the value of variables is approximately equal to the change of the impaired loan ratio.
Source: NBP.

Figure 3.24. Quarterly (q/q) changes in the value of impaired loans to enterprises



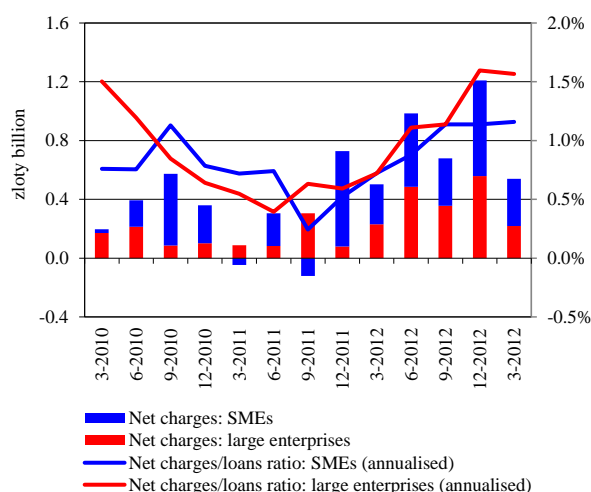
Notes: data after excluding the impact of foreign exchange rate changes.
Source: NBP.

Figure 3.25. Impaired loan ratios for enterprises



Note: values above the bars denote the value of all claims on a given sector of enterprises as at the end of March 2013.
Source: NBP.

Figure 3.26. Quarterly net charges to provisions for impaired corporate loans and their ratio to net value of loans



Source: NBP.

Loan quality by sector of the national economy

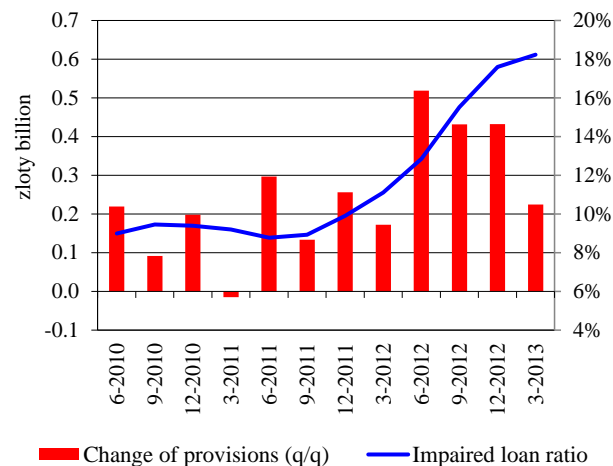
Changes, which were taking place in the industry structure of bank claims since 2012, were slow, and resulted in reductions of banks' exposures to the sections of the economy which exhibited high (or rising) impaired loan ratios and, at the same time, towards which bank exposures were high

(see Table 3.2). This applied primarily to enterprises from the *construction* and *real estate activities* sections, although for a successive quarter there was also a decline of the share of claims of entities from sections with the largest share in the loan portfolio of banks, i.e. *manufacturing*, whose quality was better than average for enterprises. The share of claims on enterprises that carry on financial and insurance business³⁶ and enterprises that produce and supply electricity, gas and steam continued to grow. Impaired loan ratios in these industries were very low and were below 1%. It seems that the relationship between industry-specific risk and banks' readiness to finance these industries is becoming increasingly obvious.

The quality of loans in construction continued to deteriorate (the impaired loan ratio increased by 2.7 percentage points to 18.2% from September), however, the value of charges to provisions for impaired loans for this section markedly decreased (see Figure 3.27). As some of loan impairment costs are recognized in bank's accounting books with delay, it is possible that the value of the charges will go up.

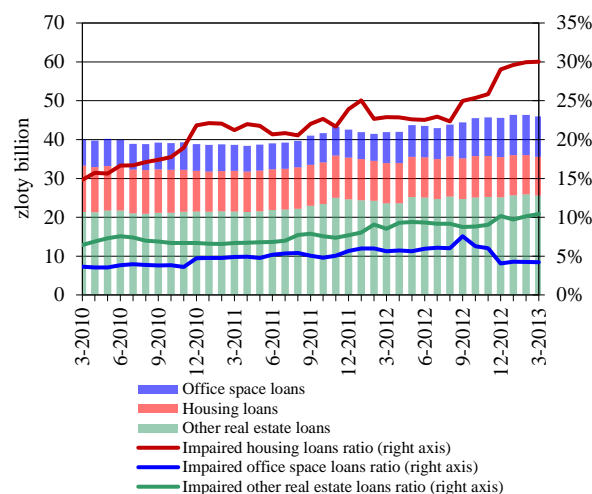
Since the last edition of the *Report*, the impaired loan ratio for housing loans taken out by enterprises (mainly by developers) has risen by 5 percentage points to 30%.³⁷ The low quality of the housing loan portfolio poses no risk to banking sector stability. The value of the portfolio of housing loans of enterprises in the whole banking sector is small, while the ratio's increase was only supported by few banks, where the share of these loans in the whole portfolio does not exceed 4%.³⁸

Figure 3.27. Impaired loan ratio and changes in provisions for claims on *construction*



Note: calculations for the so-called large exposures.
Source: NBP.

Figure 3.28. Structure and quality of real estate loans for enterprises



Note: data excluding BGK.
Source: NBP.

³⁶ Data do not include claims on the NBP, commercial and cooperative banks and on branches of credit institutions.

³⁷ The value of the ratio after excluding Bank Gospodarstwa Krajowego. BGK, as a state-owned bank, was not included due to its specific activities that include, inter alia, extending subsidised loans for residential construction under the state-provided funds.

³⁸ The specific nature of the organisation of developer's projects has some impact on the value of the impaired loan ratio for housing loans. In order to complete individual investment projects, and sometimes also investment stages, developers usually set up separate subsidiaries. If investment fails, the loan granted to the subsidiary is classified as an impaired loan, and the classification of impaired loans taken out for the remaining projects does not have to be downgraded, which would be a regulatory requirement, if projects were carried out by a single enterprise.

Table 3.2. Quality of large exposures by sections of the economy at the end of March 2013 (%)

Section	Structure of total loans by section	Structure of impaired loans by section	Impaired loan ratio
A – Agriculture	1.5 (1.5)	1.7 (1.5)	8.6 (7.8)
B – Mining	1.3 (0.9)	1.5 (1.4)	8.7 (11.2)
C – Manufacturing	21.6 (21.9)	20.4 (22.3)	7.3 (7.6)
- Food processing	3.7 (4.0)	4.1 (4.8)	8.5 (9.0)
- Manufacture of coke and refined petroleum products	2.3 (2.4)	0.1 (0.1)	0.5 (0.4)
- Manufacture of rubber and plastic products	1.4 (1.3)	1.4 (1.2)	7.5 (6.5)
- Manufacture of other non-metallic products	1.6 (1.4)	1.8 (1.8)	8.5 (9.5)
- Manufacture of metal products (excluding machinery and equipment)	2.0 (2.0)	2.2 (2.2)	8.6 (8.3)
D – Electricity, gas and steam supply	5.0 (4.2)	0.5 (0.4)	0.8 (0.7)
E – Water supply, sewerage, waste management	1.1 (0.9)	0.3 (0.3)	2.1 (2.2)
F – Construction	11.2 (11.6)	26.3 (24.4)	18.2 (15.5)
G – Retail trade and repairs	16.0 (16.1)	15.4 (15.3)	7.5 (7.0)
H – Transportation and storage	2.3 (2.1)	2.6 (2.8)	8.8 (9.8)
I – Hotels and restaurants	1.8 (1.7)	4.7 (4.5)	20.5 (19.6)
J – Information and communication	2.7 (2.3)	0.6 (0.6)	1.8 (2.0)
K – Financial and insurance activities	7.6 (7.5)	1.1 (1.3)	1.1 (1.2)
L – Real estate activities	9.5 (9.9)	15.8 (16.2)	12.9 (12.1)
M – Professional, scientific and technical activities	2.5 (2.4)	5.8 (5.9)	18.1 (18.0)
N – Administrative activities	2.5 (2.5)	0.6 (0.6)	2.0 (1.9)
O – Public administration	11.6 (12.6)	1.2 (0.9)	0.8 (0.6)
P – Education	0.3 (0.3)	0.3 (0.3)	8.2 (7.9)
Q – Health care	1.0 (1.0)	0.7 (0.5)	5.7 (4.2)
R – Arts, entertainment and recreation	0.3 (0.3)	0.3 (0.5)	8.8 (10.9)
S – Other services	0.2 (0.2)	0.3 (0.3)	11.6 (11.0)
Total (zloty billion)	534.9 (521.6)	–	41.6 (38.6)

Notes:

In brackets – data at the end of September 2012.

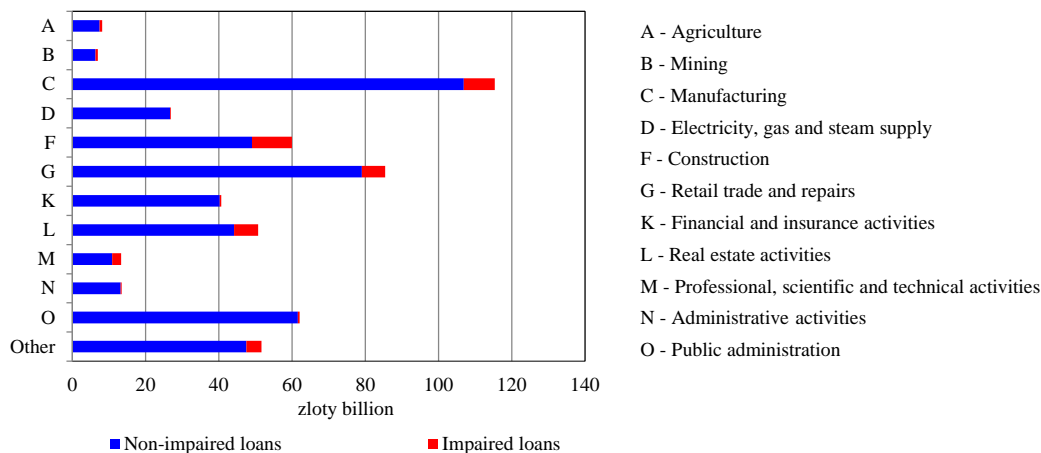
Claims include advances and loans, debt purchased, cheques and bills of exchange, guarantees realised, other similar claims and off-balance-sheet debt and financial guarantees.

Large exposures – for a bank that is a joint stock company, state-run bank and a non-associated cooperative bank – mean exposures towards one enterprise in excess of 500,000 zlotys, and for an associated cooperative bank – exposure towards one client in excess of 100,000 zlotys.

The values referred to in section K do not include banks' claims on the NBP, commercial and cooperative banks and on branches of credit institutions.

Manufacturing data on 5 subsections with the largest share in total claims are presented in Section C.

Source: NBP.

Figure 3.29. Quality of large exposures towards selected sections of the economy at the end of March 2013

Notes: large exposures – for a bank that is a joint stock company, state-run bank and a non-associated cooperative bank – mean exposures towards one enterprise in excess of 500,000 zlotys, and for an associated cooperative banks – exposures towards one client in excess of 100,000 zlotys; the value referred to in section K do not include banks' claims on the NBP, commercial and cooperative banks and on branches of credit institutions.
Source: NBP.

Outlook

Economic growth forecasts for Poland and its main trading partners for the coming quarters (see Chapter 2.1) are unfavourable from the point of view of credit risk of the enterprise sector. They are also confirmed by the results of surveys conducted among enterprises³⁹ – they indicate that forecasts of demand and orders are poor, and that the scale of investments will

be small. Therefore, credit risk materialisation costs are expected to remain at an elevated level.

In the longer term, a gradual albeit, by nature, slow rebalancing of the industry structure of banks' portfolio of exposures may help limit the financial effects of credit risk. A potentially faster deleveraging by enterprises showing poorer earnings should be reflected in lower costs of credit risk provisions at banks.

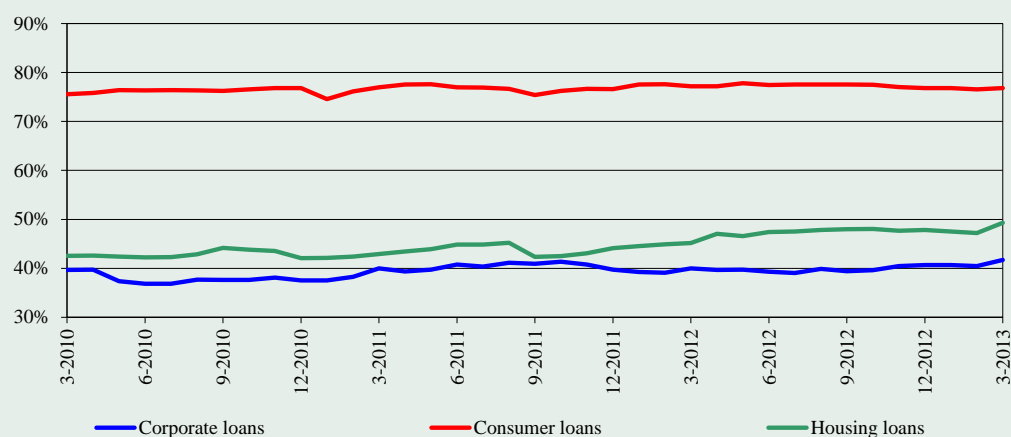
Box 3. Coverage of impaired loans by provisions

The majority of banks operating in Poland apply the International Accounting Standards (IAS).¹ As regards impaired loans, these banks create impairment provisions whose value depends on the value of expected cash flows arising from loans. These flows include mainly expected loan repayment and amounts recovered from collateral, and they decrease the value of impairment provisions. The remaining banks apply the Polish Accounting Standards (PAS) and specific provisions are written down to financial result.²

The average coverage of impaired loans by provisions at banks applying IAS and PAS in the non-financial sector amounted to about 55% at the end of March 2013, with the coverage differing substantially for particular credit categories (see Figure 1). The differences result mainly from the extent to which the loans are collateralised.

³⁹ See "Information on the condition of the enterprise sector, including the economic climate in 2013 Q1 and forecasts for 2013 Q2", 2013, NBP.

Figure 1. Impaired loans coverage ratio (loan loss provisions divided by gross non-performing loans) in main categories of loans to the non-financial sector



Source: NBP.

The highest impaired loans coverage by provisions (77%) is exhibited by consumer loans that – excluding car loans – tend to be poorly collateralised. Prices in the sale of loan debt, usually between 10 and 20 per cent of the value of exposure, show that banks can recover a significant portion of the amount not covered with provisions.

Housing loans are mostly collateralised by mortgage. At the same time, they exhibit a relatively high level of impaired loans coverage by provisions (49%). This is due to a substantial percentage of loans with high LtVs, the risk of obtaining a lower-than-market price in enforced debt collection on property and to costs arising from loan recovery by enforced debt collection on property.³

At the same time, the ratio of collateral value to net value of impaired loans (a portion of loans not covered with provisions) may be assessed as high. Assuming that the only amounts of loans that can be recovered are the proceeds from the sale of property at the price equal to two thirds of current market price, the bailiff's fee of 15%⁴ and an additional 10% discount⁵, the average impaired loans coverage with provisions according to end-of-2012 value would correspond to a recovery from the sale of the property used as collateral of a loan with the LtV of about 100%. However, the average level of the ratio as the end of 2012 was substantially lower and amounted to about 80%.

In the case of corporate loans, the ratio of collateral value to net value of impaired loans for banks applying IAS can be assessed to be at least 77%.⁶ Given that available sources make it possible to assess only a minimum value of the ratio, it may be said that the actual level of coverage of net loans with collateral is high.⁷

Given the information presented above, it can be said that the level of coverage of impaired loans by provisions in Poland's banking sector is safe.

¹ At the end of March 2013, these banks had an approximately 90% share in loans to the non-financial sector.

² Specific provisions are equivalent to charges to provisions for impaired loans in IAS. The value of specific provisions is determined depending on which of five loan classes a loan is classified to (satisfactory, special mention, substandard, doubtful, loss loans). The main criteria for classifying loans to these classes are: arrears in loan

repayment and deterioration in debtor's financial condition. The basis for creating specific provisions may be decreased by the value of collateral. The details of classification and creating provisions can be found in the Regulation of the Minister of Finance of 16 December 2008 regarding the principles for creating provisions for the risk of banking activity.

³ More information about the risk of obtaining a price lower than market price in enforced debt collection and costs related to loan recovery by enforced debt collection on property can be found in Box 3 in "Financial Stability Report. July 2012", 2012, NBP.

⁴ These assumptions were discussed in detail in Box 4 of the previous edition of the *Report* and in Box 3 of the July 2012 edition of the *Report*.

⁵ Discount is used to take into account the value of money over time, which is essential in the case of recovery arising from the sale of property, in particular. Procedures associated with the sale of property may be time consuming. In accordance with the IAS, cash flows arising from a loan are discounted by its effective interest rate.

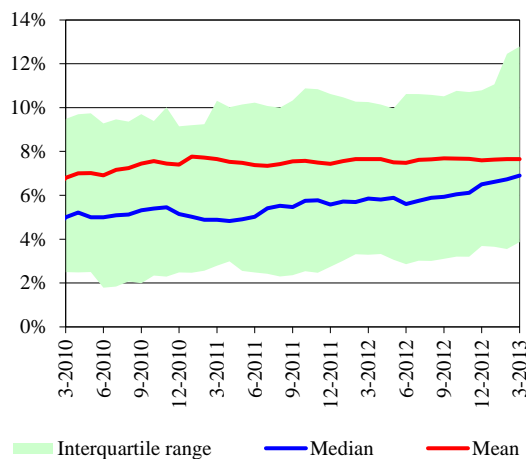
⁶ When estimating this ratio, one of the banks was excluded; the value of collateral at the bank was very high, which would have a substantial impact on the value of the ratio in the whole banking system.

⁷ Some banks estimate collateral value only for loans, where impairment is assessed on an individual basis. However, such loans represent a vast majority of impaired corporate loans – their share in the value of charges to provisions for impaired loans amounted to about 88% at the end of March 2013.

3.3.2. Credit risk of loans to households

From September 2012, the impaired loan ratio for households remained unchanged and amounted to 7.5% at the end of March 2013 (see Figure 3.30). The value of impaired loans increased, while the value of impaired consumer loans decreased (see Figure 3.31).

Figure 3.30. Impaired loan ratio for households



Source: NBP.

Net charges to provisions for impaired loans to households (see Figure 3.32) were lower than in the period covered by the previous edition of

the *Report*. This decrease was mainly driven by lower credit losses on consumer loans.

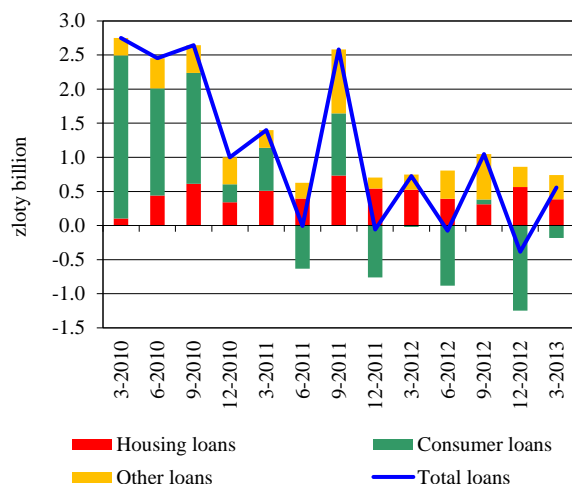
Housing loans

The quality of housing loans was deteriorating (see Figure 3.33), and the growth in value of impaired loans was somewhat higher than in the period covered by the previous edition of the *Report* (see Figure 3.31). However, some of the data point to certain positive developments: the value of loans in arrears with shorter past due periods dropped somewhat (see Figure 3.34).

In the period analysed, net charges to provisions for impaired loans decreased (see Figures 3.32 and 3.35), although it should be pointed out that the decrease was largely influenced by above-mentioned one-off factors at two banks (see Footnote 32).

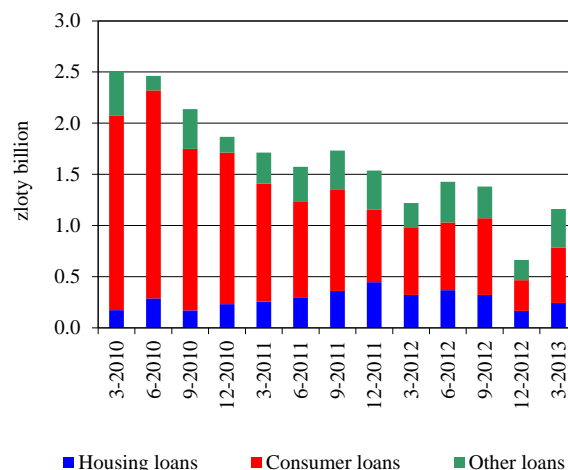
Proportions of loans in arrears in the individual vintage years of housing loans grow, as a rule, at an equal pace over time from their origination date (see Figure 3.36). The quality of the 2008 portfolio is deteriorating most rapidly. Loans from that portfolio are mostly Swiss franc-denominated loans (an 80% share in end-of-2008 debt), extended at a time of a lenient lending policy, a strong złoty and high property prices.

Figure 3.31. Quarterly changes in the value of impaired loans to households



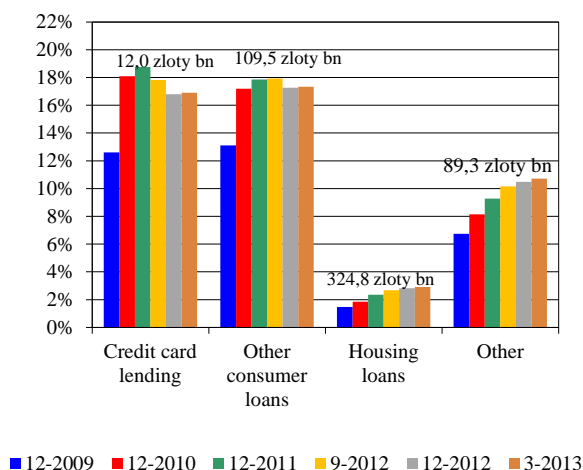
Notes: data after excluding the impact of foreign exchange rate changes. Category *Other loans* includes, inter alia, (non-housing) loans to entrepreneurs and individual farmers.
Source: NBP.

Figure 3.32. Quarterly net charges to provisions for impaired loans to households



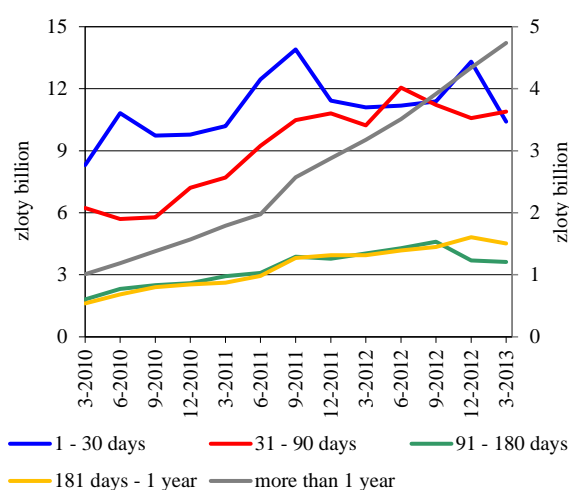
Source: NBP.

Figure 3.33. Impaired loans ratios for main types of loans to households

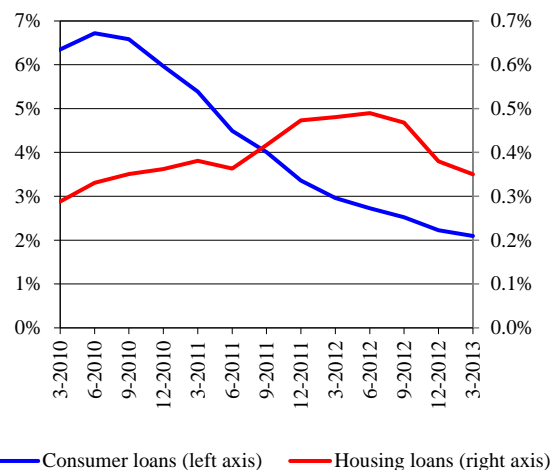


Note: values above the bars denote a total value of each loan type at the end of March 2013.
Source: NBP.

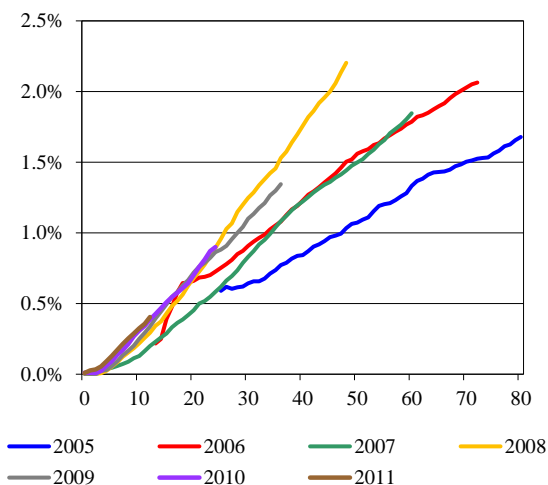
Figure 3.34. Value of housing loans in arrears in particular past due categories



Source: NBP.

Figure 3.35. Ratio of net charges to provisions for impaired loans to net value of loans

Note: data annualised.
Source: NBP.

Figure 3.36. Number of housing loans in arrears of more than 90 days in relation to total number of loans extended in a given year

Note: *vintage* lines for loans extended in consecutive years at the end of consecutive months from loan origination.
Source: BIK.

A considerable depreciation of the zloty against the Swiss franc has a negative impact on the servicing costs of Swiss franc-denominated loans and the extent to which the loans are property collateralised. In line with simulations, the rise in instalments of Swiss franc-denominated loans against the loan origination date can, however, be assessed as moderate, which is supported by low market interest rates in the Swiss currency.⁴⁰ They are much lower than on the origination date of most of loans in the Swiss franc. An estimated average increase in instalments of Swiss franc-denominated loans extended in the successive months of 2005–2010 currently stands at about 17%, and a maximum increase – at 27%

(see Figure 3.37). The factor that has a positive influence on the borrower's (who kept his/her job) capacity to service Swiss franc-denominated loans is also an average wage increase that has taken place since the time when most loans were extended.⁴¹

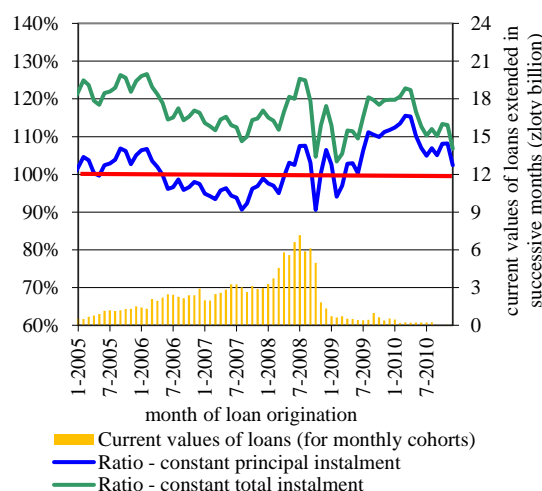
High Loan-to-Value ratio loans, with Swiss franc-denominated loans prevailing, have a big share in banks' loan portfolios. At the end of 2012, the share of housing loans with LtV ratios exceeding 100% and 80% could be estimated at slightly over 1/4 and 1/2 of the portfolio, respectively.⁴² The highest increase in the LtV ratio from the loan origination date applies to loans extended in 2007–2008 (see Figure 3.38).

⁴⁰ Almost all Swiss franc-denominated housing loans carry a variable interest rate, calculated typically as the LIBOR CHF rate increased by a fixed spread.

⁴¹ About 90% (as at end-of-2012 debt) of Swiss franc-denominated loans were granted in 2005–2008 (the estimates include loans extended since early 2005.) Average real wage increase from that period to the fourth quarter of 2012 was about 15%, and average nominal wage increase – about 40%. If wage increase is weighted by the value of loans contracted in individual periods, the increases would respectively amount to 12% and 34% (in this case, slightly lower increases result from the fact that the largest portion of the loans was extended towards the end of the period, i.e. in 2008).

⁴² Source: "Report on the condition of banks in 2012", 2013, UKNF. It can be presumed that the actual number of loans with LtV ratios is higher, as probably banks did not fully take into account the recent property price decreases.

Figure 3.37. The ratio of loan instalment to instalment at loan origination against current values of Swiss franc-denominated housing loans

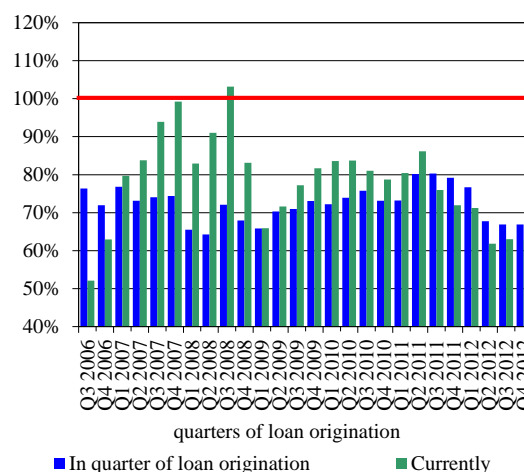


Assumptions: a Swiss franc-denominated housing loan with maturity of 25 years, repaid in constant total instalment or in constant principal instalments, current instalments calculated on the basis of the Swiss franc exchange rate and the LIBOR 3M rate of 30 April 2013 and average spread on Swiss franc-denominated loans at loan origination. Points on the horizontal axis mark a month of loan origination.

Note: bars present the *current* value in the zloty of the Swiss franc-denominated housing loans taken out in a given months marked on the horizontal axis.

Source: NBP, BIK.

Figure 3.38. Average values of LtV of Swiss franc-denominated housing loans extended in a given quarter



Assumptions: current average LtV value estimates made on the basis of average Swiss franc exchange rates, average LtV on the loan origination date, average maturity of loans taken out in specific quarters of the period considered and changes in average transactions prices of dwellings in the period under consideration. The value of a loan translated into the zloty at the Swiss franc exchange rate as at 30 April 2013.

Source: NBP estimates based on survey data.

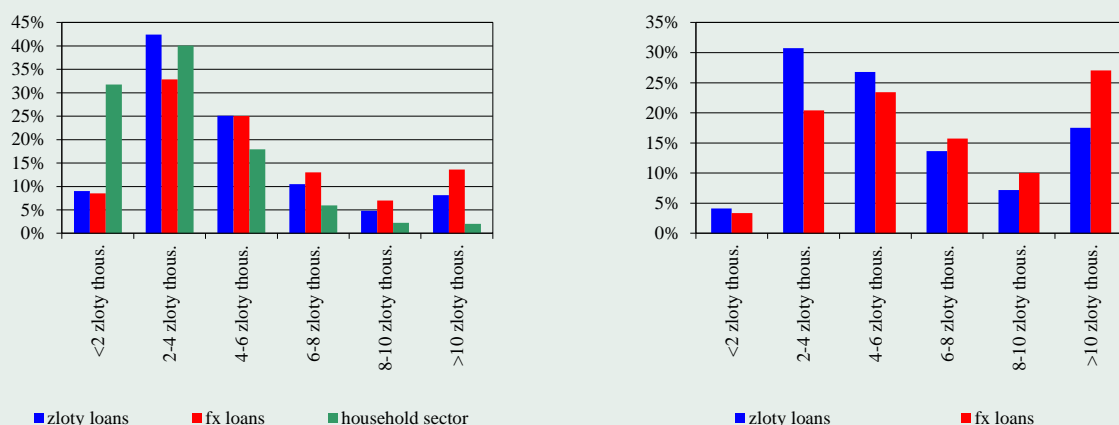
Box 4. The quality of foreign currency and zloty housing loans and financial condition of borrowers who repay these loans

Income of borrowers who repay foreign currency and zloty housing loans

The average income of borrowers who repay foreign currency housing loans is substantially higher than the income of borrowers who repay zloty loans and higher than average household income in Poland (see Figure 1). The average income of borrowers who repay foreign currency housing loans¹ is by around 15–18% higher than the average income of borrowers who repay zloty loans and by around 65–77% higher than the average household income in 2011.² Most of foreign currency housing loans (around 59% in terms of number of loans terms and 76% in terms of value of loans) were extended to borrowers with income above the 4 thousand zloty threshold, the income being considerably higher than the average income of Polish households in 2011 (3.3 thousand zlotys).

The results of NBP surveys also show that households repaying foreign currency housing loans have higher income. The average per capita income in a household of new borrowers who contracted foreign currency housing loans from the second quarter of 2006 to the fourth quarter of 2012 was by 15% higher than for households who took out zloty loans (see Figure 2). At the same time, it should be noted that the gap widened substantially after the third quarter of 2008.

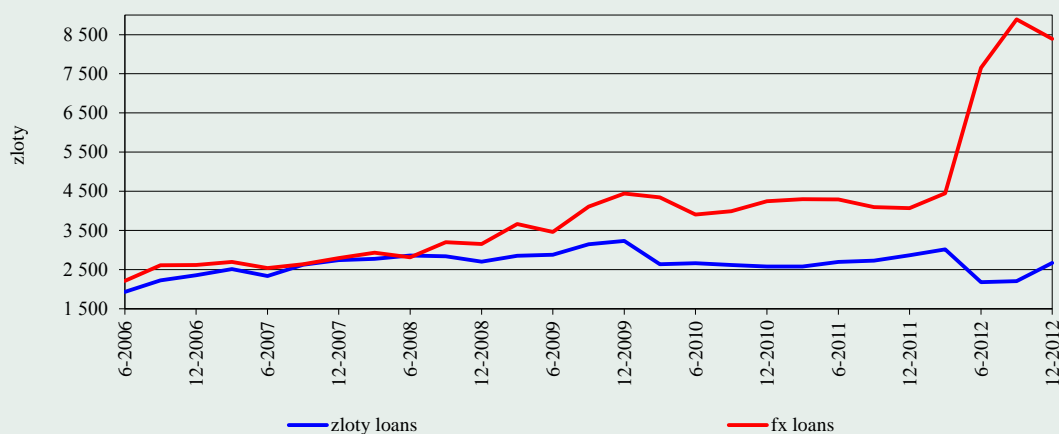
Figure 1. Distribution (in terms of number of loans – left-hand panel and value of loans – right-hand panel) of foreign currency and zloty housing loans, broken down by income bracket of borrowers' households. Cf. in left-hand panel a respective distribution for the whole household sector.



Note: end of 2012 data on borrowers.

Source: UKNF survey data, NBP estimates based on the result of the GUS household budget survey for 2011.

Figure 2. Average income per capita in a household of borrowers taking out foreign currency and zloty loans in individual quarters of the years 2006–2012



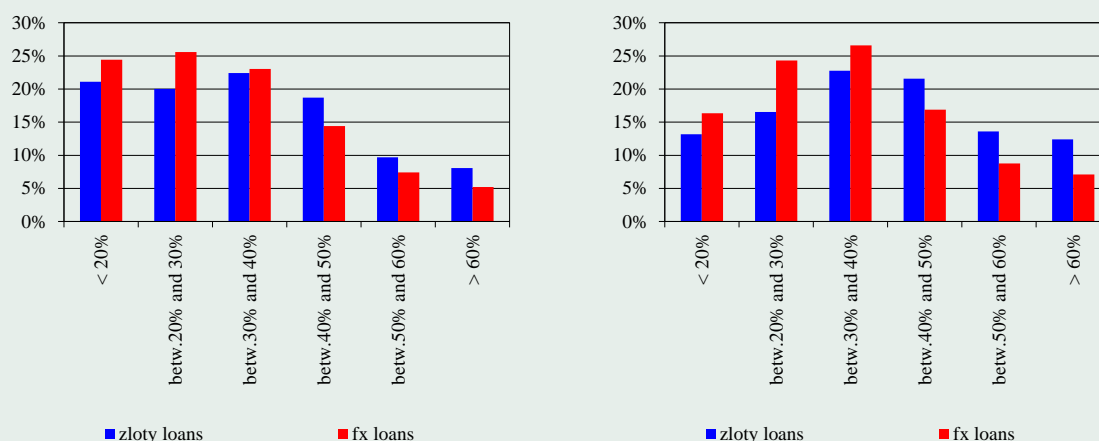
Source: NBP, senior loan officer opinion survey on bank lending practices and credit conditions.

The financial condition of borrowers who repay foreign currency and zloty housing loans

At the end of 2012, the percentage of foreign currency housing loans extended to households with high Debt-to-Income (DtI) ratios was lower than in the case of zloty loans (see Figure 3). According to UKNF data, at the end of 2012 the percentage (by number) of loans extended to households whose DtI ratios were in excess of 40% and 50%³ amounted to: 36% and 18%, respectively, for zloty loans and 27% and 13%, respectively, for foreign currency loans. The

average DtI ratio (estimate based on the distribution of DtI) for households repaying foreign currency housing loans amounted to approximately 31%, and for households repaying zloty loans – 34%.

Figure 3. The distribution (in terms of number of loans – left-hand panel and value of loans – right-hand panel) of foreign currency and zloty housing loans, broken down by the range of DtI value of borrowers at the end of 2012



Source: UKNF.

The lower average value of DtI for households repaying foreign currency housing loans is evidence of a better financial condition of borrowers repaying foreign currency loans at the end of 2012, particularly as these borrowers' income was higher on average (and therefore lower share of basic living costs in income).

However, it should be pointed out that a strong decline in interest rates of zloty-denominated loans in 2013 following the NBP interest rate cuts should bring about a fall of the DtI ratio and improve the condition of borrowers repaying zloty housing loans relative to borrowers repaying foreign currency loans.

The quality of foreign currency and zloty housing loans

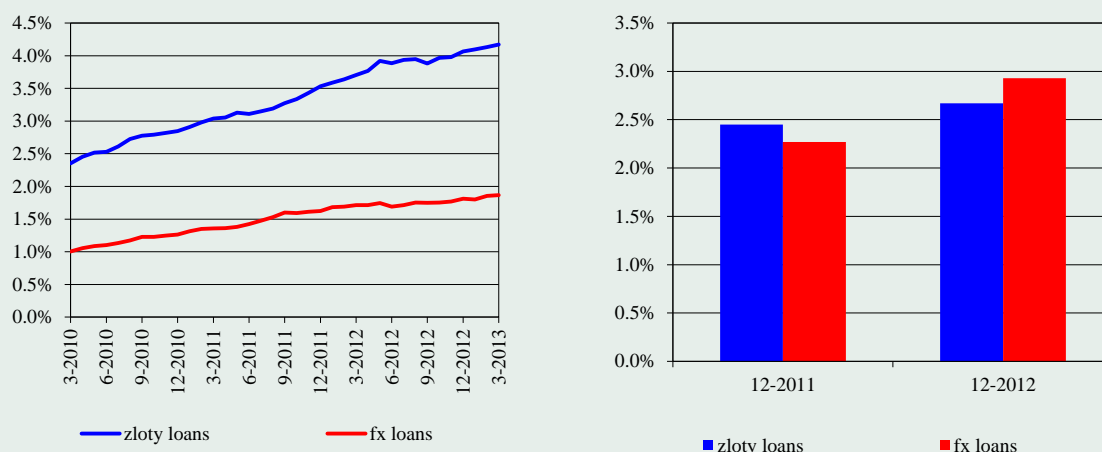
The quality of foreign currency housing loans, measured by the impaired loan ratio, is substantially better than the quality of zloty housing loans (see left-hand panel in Figure 4). However, this largely stems from the forced conversion by banks of foreign currency loans into zloty loans after evidences of substantial loan impairment arise.

In accordance with UKNF estimates, after excluding the impact of currency conversion, impaired loan ratios for foreign currency housing loans are at a similar level as for zloty housing loans (see right-hand panel in Figure 4).⁴ In 2012, the impaired loan ratio for foreign currency loans increased to a greater extent, but it was a statistical effect related to higher zloty loan growth (a rise of the denominator of the impaired loan ratio). After excluding this factor and the currency conversion effect, the quality of foreign currency housing loans at the end of 2012 would be slightly better than that of zloty housing loans.

In connection with the substantially higher growth rate of zloty housing loans after 2009, the

average age of the zloty loan portfolio is lower than the of foreign currency loan portfolio. At the end of 2012, estimated average age (the so called bank's commitment period – time elapsed from loan origination) for zloty loans was 3.2 years and for foreign currency loans – 5.3 years⁵ (at the end of 2011, the difference between the estimated average age of the portfolios of foreign currency loans and zloty loans was 1 year). The higher average age of the portfolio of foreign currency housing loans⁶ and slight differences between the adjusted quality of zloty and foreign currency loans point to a slower pace at which the quality of foreign currency loans deteriorates after loan origination and a relatively (relative to portfolio value) lower level of credit losses on foreign currency loans. The data are consistent with end-of 2012 UKNF data that show a better financial condition of households that repay foreign currency loans (a lower percentage of high DtI loans at higher average income).

Figure 4. Impaired loan ratios for foreign currency and zloty housing loans (left-hand panel) and impaired loan ratios after excluding the impact of currency conversion (right-hand panel)



Source: NBP (left-hand panel), UKNF survey data (right-hand panel).

Irrespective of the assessment of quality of the existing portfolio of foreign currency housing loans, it should be emphasized that the loans are not only the source of credit risk arising from foreign exchange rate movements, but are also a source of a number of various types of risks to financial and macroeconomic stability. Therefore, the regulatory limits on foreign currency loan origination are consistent with the NBP recommendations included in previous *Reports*.

¹ This estimate is based on the distribution of the number of loans in the borrower's particular income bracket. The values of the estimate may differ depending on the assumptions adopted for average income in open income brackets in Figure 1 (below 2 thousand zlotys and above 10 thousand zlotys), therefore a range of estimate value is given. It has been assumed that the average income of borrowers with income from particular closed brackets in Figure 1 is equal to the average of the lower and upper end of the bracket (e.g. for the income range of 6–8 thousand zlotys, the average income of 7 thousand zlotys is adopted). Data source: UKNF survey.

² Estimate based on a GUS household budget survey.

³ According to the amended Recommendation S, loans extended to households with DtI over 40% (for customers with wages below the average) and 50% (for other customers) are regarded as riskier loans.

⁴ See "Raport o sytuacji banków w 2012 r.", p. 106, Warsaw, KNF, 2013, available at http://www.knf.gov.pl/opracowania/sektor_bankowy/raporty_i_opracowania/publikacje_sektora_bankowego/index.html

⁵ Averages weighted by the value of loans at the end-of-2012, estimated on the basis of data of banking statistics. The estimates are consistent with BIK data, according to which the estimated average bank's commitment period

for loans extended in 2005–2012, weighted by end-of-2012 debt, amounted to 2.8 for zloty loans and 4.6 for foreign currency loans (respective averages are slightly lower than estimates based on banking statistics, which may result from excluding loans extended prior to 2005.).

⁶ Older portfolios of housing loans are, as a rule, characterised by worse quality. This is because the quality of the housing loans portfolio is very good shortly after their origination (on account of a fairly thorough creditworthiness assessment of these loans) and is gradually deteriorating over time due to events that lead to a deterioration in household loan servicing capacity (lower income, job loss, deterioration of health, divorce etc.).

Consumer loans

The value of impaired consumer loans and the impaired loan ratio declined in the period analysed (see Figures 3.33 i 3.31). The declines were the result of large debt sale transactions, however at the same time net charges to provisions for impaired loans also decreased significantly (see Figure 3.32).

Figure 3.39. Percentage of consumer loans in arrears of more than 30 days after 6 months from loan origination by month of loan origination



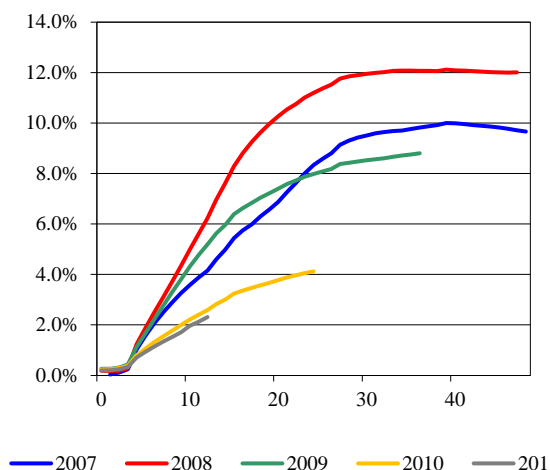
Note: points on the horizontal line mark a month of loan origination.
Source: BIK.

The main reason for the decline in credit losses on consumer loans is an increasingly better quality of successive vintages of loans since 2009 and the materialisation - in earlier periods - of a vast

majority of losses arising on loans contracted at a time when lending policy was lenient (this is reflected by a considerable decline of the angle of *vintage* lines after 25–30 months from loan origination in Figure 3.40). A relatively good quality of new consumer loans results, first and foremost, from a strong tightening of the policy in 2008–2010. Loans extended in the period since 2010 (see Figures 3.40 and 3.39) exhibit top quality.

Due to large credit losses in 2009–2011, a difference between the quality of consumer loans in banks that specialise in providing loans to households and in other banks remains substantial⁴³ (see Figure 3.41).

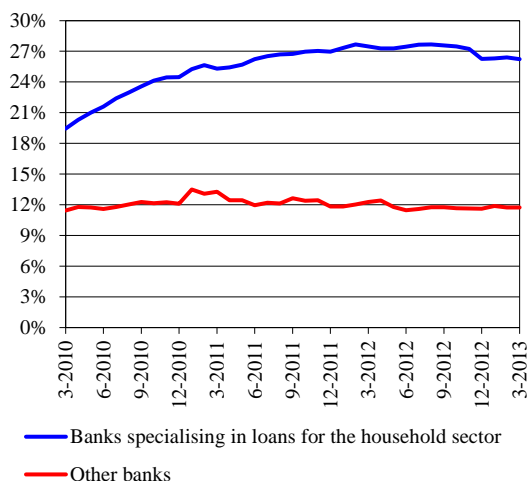
Figure 3.40. Number of consumer loans in arrears of more than 90 days in relation to total number of loans extended in a given year



Note: *vintage* lines for loans extended in successive years at the end of consecutive months from loan origination.
Source: BIK.

⁴³ Banks that specialise in providing loans to households were defined as domestic commercial banks and branches of credit institutions with an over 80% share of loans to households in the portfolio of loans to the non-financial sector. This group of banks comprises mainly small and medium-sized banks that rapidly increased lending to households in 2005–2008 and in early 2009 (at a much faster pace than other banks). These banks have a particularly high share in consumer loans (40% at the end of March 2013.). Other banks are usually large universal banks.

Figure 3.41. Impaired consumer loan ratios at banks that specialise in providing loans to households and at other banks



Note: data for domestic commercial banks and branches of credit institutions.
Source: NBP.

Outlook

Macroeconomic developments projected for the coming quarters (see Chapter 2.1) will be unfavourable from the household sector's credit risk point of view. Despite the forecast faster GDP growth, the situation in the labour market is expected to deteriorate further. In addition, unlike in previous periods the number of the unemployed will rise and the workforce will shrink at the same time.

A deteriorating situation in the labour market will exert an adverse impact on loan quality and the value of credit losses. An increase in credit losses on household loan portfolio should apply to both housing and consumer loans.

As regards housing loans, the impact of unemployment growth on the pace at which their quality is deteriorating and on the value of credit

losses may be lagged as some of the households use other non-income (inter alia, savings) sources of loan repayment and prioritise housing loan servicing should financial problems occur.⁴⁴

A significant share of loans with high LtV ratios may contribute to increasing credit losses on housing loans. This observation mainly applies to foreign currency-denominated loans at a time when the zloty was strong and property prices - high. High LtV ratios translate into a lower estimated level of recovery in comparison to loan value should the impairment occur.

The fall of loan repayment burden arising from interest rate decreases should have a positive influence on the quality of zloty-denominated loans. This factor will be of importance mainly for zloty-denominated housing loans given their interest calculation method (as a rule, WIBOR rate + fixed margin) and higher volatility of total loan instalment in response to interest rate changes than for other loans.⁴⁵

As regards consumer loans, a rise in credit loss burden may also be expected. The decreasing charges to provisions for loans extended in a period of lenient lending policy has so far been the factor influencing a fall in credit losses. However, as *vintage* charts indicate, almost all charges to provisions for these loans may have already been made already, the pace at which the quality of new cohorts of loans extended in a period of restrictive lending is deteriorating will now be the factor with the highest impact on the value of future credit losses. As the labour market outlook has deteriorated, the scale of credit losses on these loans is likely to steadily grow in the coming quarters, although they should be significantly lower than in 2009-2010.

Recommendation T modification will have an

⁴⁴ According to the results of a survey conducted by the Warsaw School of Economics, the percentage of households who said they would, firstly and secondly, stop repaying housing loans or (collateralised) car loans in case of financial problems amounted to 2.7% and 0.7%, respectively. The two values were the lowest among all types of households' liabilities listed in the survey. In the case of a uncollateralised loans, they were over 3 times higher, and amounted to 8.8% and 4.6%. Source: "Raport KPF-IRG SGH: Sytuacja na rynku *consumer finance*. I kwartał 2010 "

⁴⁵ Higher volatility of the total housing loan instalment in response to interest changes arises from a long maturity of housing loans (a relatively large share of interest payment in the total instalment) and from relatively lower interest (a decrease in interest by the same amount results in a higher percentage decrease in the amount of interest payment).

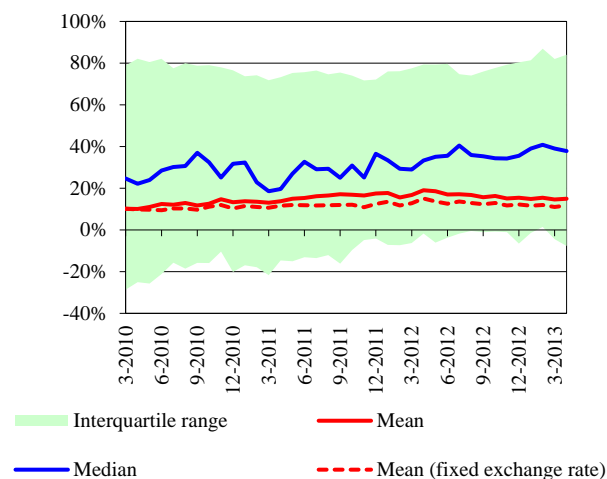
impact on the quality of new loans. It is difficult to assess the scale of this impact. On the one hand, given the high profitability of these loans, some banks may loosen their lending standards to the extent resulting in an increase in future credit losses. However, when making decisions to change their lending policy, banks will take into account the present unfavourable labour market outlook and high credit losses they incur in 2009-2011 on consumer loans extended in the period of relaxed lending policy. For these reasons, in the case of some of the banks an easing of the recommendation's requirements does not presently have to lead to lending policy being relaxed to the extent that would result in a substantial increase in credit losses. Also, potential losses should not put at risk the profitability of the loan of consumer loans due to high margins achieved in this segment.

3.4. Liquidity risk

In the period analysed, banks continued to increase the share of the local deposit base in their funding structure. The average funding gap in the sector of commercial banks decreased slightly (see Figure 3.42). The gap decreased for the majority of domestic commercial banks. At the same time it widened mostly for branches of credit institutions.⁴⁶

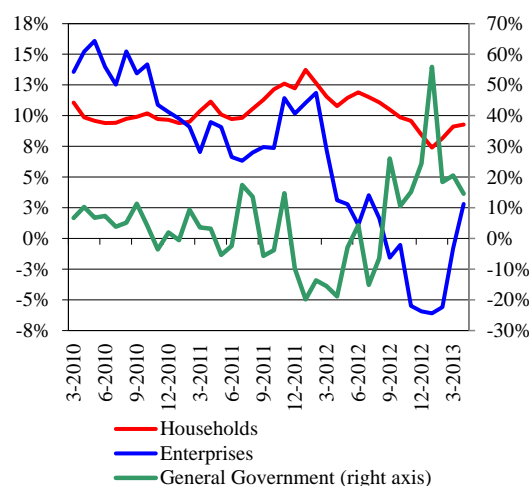
Deposits of the non-financial sector and the general government sector grew by about 19 billion zlotys. The rise related, to a considerably greater extent, to household deposits (30.8 billion zlotys) than enterprises (5.7 billion zlotys). On the other hand, deposits of the general government sector fell by 22.2 billion zlotys and were substantially volatile and concentrated in a few largest banks (see Figure 3.43).⁴⁷

Figure 3.42. Funding gap



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

Figure 3.43. Growth rate (y/y) of deposits of the non-financial sector and general government sector

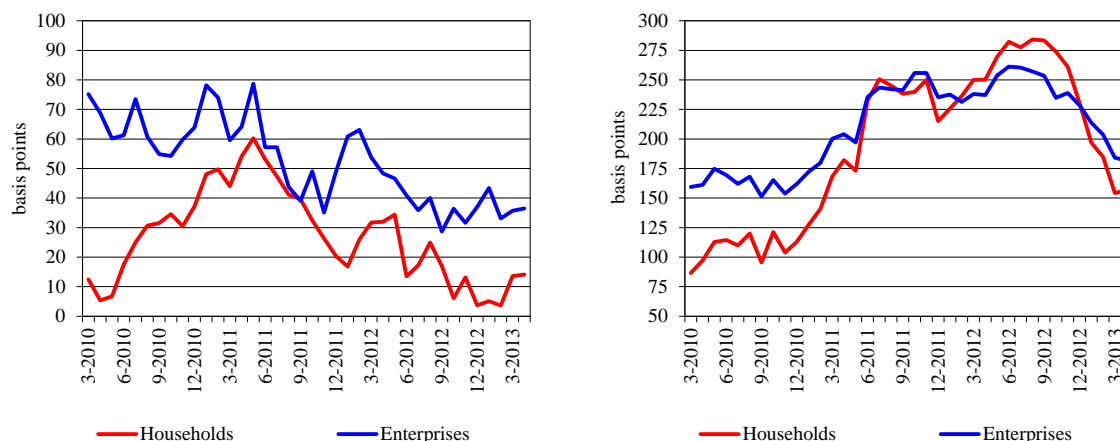


Notes: data after excluding the impact of foreign exchange rate changes.
Source: NBP.

⁴⁶ As these entities predominantly do not have a strong deposit base, they hold a high funding gap, which is also characterised by a relatively high volatility.

⁴⁷ Changes in value, referred to in Chapter 3.4, apply to data after excluding the impact of foreign exchange rate changes.

Figure 3.44. Spread between the average WIBOR rate and interest rate of new zloty term deposits (left-hand panel) and interest on the portfolio of current deposits (right-hand panel)



Notes: data based on a sample of 18 banks that report interest rate information to the NBP; for new term deposits the average 3-month WIBOR rate was calculated as a monthly average of WIBOR 1M, 3M, 6M, 1Y rates weighted by the shares of deposits with respective maturities in new deposits in a given month; for current deposits, the average monthly WIBOR O/N rate was used.

Source: NBP.

Strong competition for deposits continued in the period analysed. As a result, a significant fall in market interest rates did not translate into an equally strong decrease in the interest rates offered by banks on deposits. The average spread between WIBOR rates and the interest rate of new term deposits declined markedly. The same effect was also noticeable in the case of the whole portfolio of current deposits⁴⁸ (see Figure 3.44). The fall of the spread achieved by banks on clients' deposits was particularly visible in the case of household deposits.

Competition for household deposits concerned primarily funds accumulated on savings accounts. In the period analysed, the share of current deposits in household deposits total rose from 46% to 49%. The absence or relatively low costs of moving funds from savings accounts between banks could have forced them to offer competitive interest rates. This observation is also confirmed by clearly smaller discrepancy in interest rates between banks participating in the NBP statistics of interest rates. The other fac-

tor that had an influence on a fall of spread on current accounts is the fact that the interest rate on checking accounts was close to zero already before the decrease in market rates and banks found it impossible to lower them further.

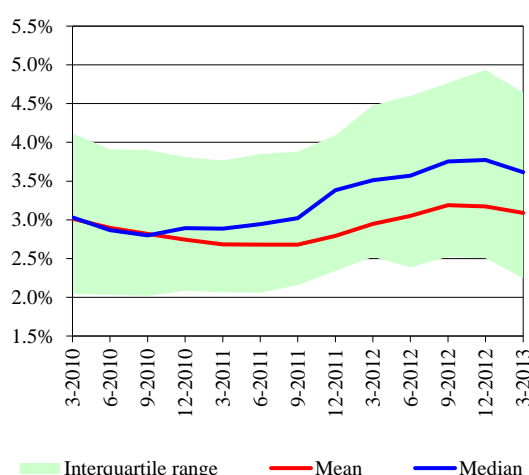
The rise in the costs of attracting new zloty term deposits of the real sector had significantly impacted the costs of financing of the whole portfolio of banks' (zloty and foreign currency) liabilities (see Figure 3.45). The decrease in interest rates translated to a lesser extent into a fall of effective interest on liabilities than on claims (see Box 2). This added to a reduction of net interest income and, consequently, to a fall in banks' profitability ratios (see Chapter 3.1.).

Deposit base growth was accompanied by a fall of foreign funding (by around 5.8 billion zlotys), which is largely composed of deposits and loans from foreign parent entities (see Figure 3.46). A reduction in foreign funding may be tied with a gradual decrease in the value of foreign currency-denominated housing loans, which reduced demand for foreign currency funding. For some

⁴⁸ In bank reporting, the category "current deposits" includes all deposits, under which funds are withdrawn/paid out on demand, i.e. both checking and saving accounts.

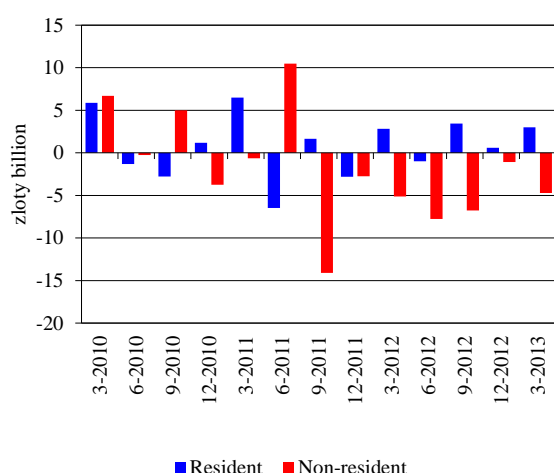
banks, this development may have also been connected with changes in ownership, strategy switches and policies pursued by foreign parent entities. In NBP's view, the reduction of foreign funding had no decisive impact on the recent fall of lending growth (see Box 5).

Figure 3.45. 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.

Figure 3.46. Quarterly change in loans and deposits from banks and branches of credit institutions



Notes: data after excluding the impact of foreign exchange rate changes.
Source: NBP.

⁴⁹ Excluding bonds issued by Bank Gospodarstwa Krajowego.

A larger fall in the value of foreign funding than the decrease of the portfolio of foreign currency-denominated loans could have resulted from a shift in banks' FX position management strategy. Favourable market conditions were conducive to hedging the FX position with fx swaps i CIRs (see Chapter 2.2.2).

The reduction of liabilities towards foreign parent entities contributed to a further decrease in the share of banks that follow a foreign funding strategy. At the end of March 2013, their share in the sector's assets was 11% (against 17% a year earlier). The share of banks that follow a mixed strategy rose (from 24% to 28%), so did the share of banks using a deposit strategy (from 59% to 61%). At the same time, no significant changes in the funding structure of banks following particular strategies were observed in the period analysed.

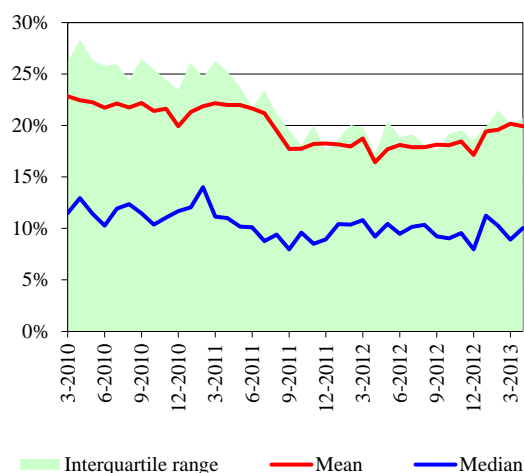
Despite the reduction of Polish banking sector's liabilities towards foreign banks, there is still a group of banks that are substantially dependent on such funding. In order to estimate potential risk related to foreign funding, a simulation was performed as part of stress tests. The shock scenario of this simulation assumes, inter alia, an outflow of a portion of foreign liabilities, depreciation of the zloty and a fall in the value of the buffer of liquid assets. The results of this simulation performed according to such restrictive assumptions showed that for nearly 11% of banks a liquidity shock related to foreign funding outflow would pose a serious threat to their stable operation due to the lack of sufficient buffers of liquid assets (see Chapter 3.8.2).

The use of debt instrument issues as a funding source has recently grown. Banks took advantage of favourable market conditions to issue bonds on both domestic and foreign markets. The share of issues in banks' funding structure remains, however, low, standing at about 2% of their balance-sheet total at the end of March 2013.⁴⁹ However, this share would have been twice larger, if Eurobonds issues had been taken

into account. Due to the specific method of their issuance they are not presented in bank statistics as debt issue.⁵⁰

The short-term liquidity position of banks did not change significantly and was favourable. The portfolio of liquid assets increased (see Figure 3.47) and fully covered an adjusted short-term liquidity gap for over 95% of commercial banks. At the same time, the structure of liquid assets changed - the share of Treasury securities dropped, and the share of NBP bills grew. This may be related to the falling yields on government bonds and the strategy of extending the maturities of bonds issued by the Ministry of Finance.⁵¹ Money bills and government bonds are concentrated in the largest banks.

Figure 3.47. Share of NBP bills and Treasury securities in banks' assets



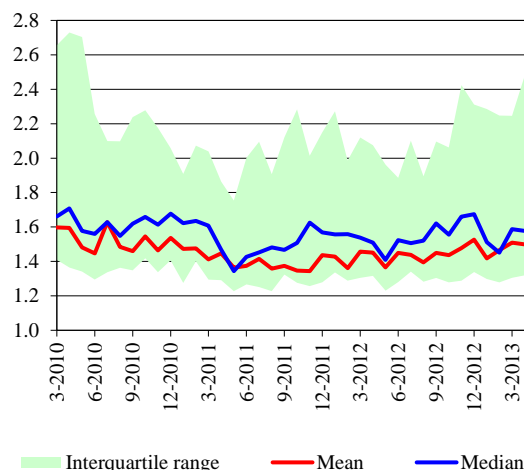
Source: NBP.

The supervisory liquidity ratios that domestic banks are required to meet⁵² also indicate that the liquidity position of banks was good.

As regards short-term liquidity, commercial banks are bound to meet M1 i M2 liquidity ratios, i.e. to maintain liquidity reserve above the level of unstable external funds. In the period

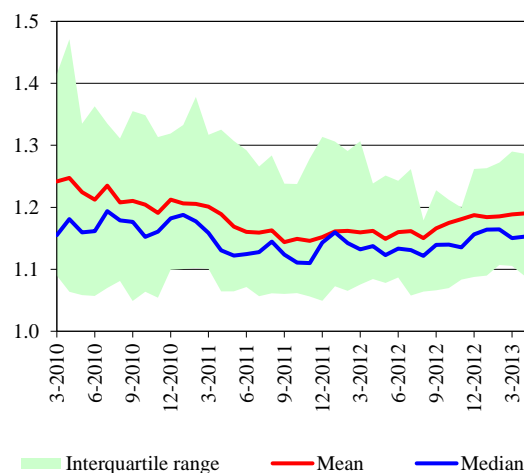
analysed, all commercial banks maintained M2 ratios above the required minimum of 1.00, and the average ratio for the sector of commercial banks slightly increased (see Figure 3.48).

Figure 3.48. Supervisory M2 liquidity standard at commercial banks



Source: NBP.

Figure 3.49. Supervisory M4 liquidity standard at commercial banks



Source: NBP.

All commercial banks also met the supervisory M4 long-term liquidity ratio. In the period anal-

⁵⁰ For tax considerations, domestic banks usually carry out Eurobond issues via a foreign specific purpose vehicle that subsequently extends a loan to the bank or places a deposit equal to the value of the issue.

⁵¹ More information on the portfolio of banks' debt instruments can be found in Chapter 3.5.

⁵² For more details on the KNF supervisory liquidity standards, see Box 2 in "Financial Stability Report – December 2009", 2009, NBP.

ysed, the average ratio for commercial banks increased considerably, and the share of banks with lowest ratios decreased.

Outlook

The liquidity position of banks improved in the period analysed and is good. At the same time, it poses no major risk to Poland's banking sector stability. Foreign funding is steadily reduced and banks use local deposit base to a larger extent, decreasing the funding gap.

At the same time, increased funding cost (against market rates), especially in the case of household deposits, have an adverse influence on banks' net interest income. It may be expected that funding cost will be limiting banks' profitability in the coming quarters.

It can be expected that as the portfolio of foreign currency-denominated loans is falling, the downward trend in funding from foreign parent entities will continue. Banks will certainly continue to broaden their deposit base and increase its share in their funding structure. A considerable interest rate decrease, coupled with investors' improved sovereign risk assessment, may also contribute to a further increase in banks' use

of debt instrument issues as a funding source. Changes in the funding structure may - to a certain extent - be driven by the need to adapt to regulatory long-term liquidity standards, including standards announced under CRD IV/CRR.

Despite their potential impact on funding cost growth, such changes in the structure of banks' liabilities should be welcomed as they contribute to an increase in their funding profile stability. In particular, the reduction of the scale of dependence on funding provided by foreign parent entities should lower the risk arising from concentration of funding sources.

Main risk factors for the liquidity position of domestic banks are tied with developments in global financial markets, in particular in the euro area. A potential substantial increase in risk aversion and a deterioration in the condition of parent banks could contribute to an abrupt withdrawal of foreign investors' funds from Poland, a depreciation of the zloty and risk premium growth. This would push up both zloty and foreign currency liquidity needs and decrease the market value of banks' portfolio of liquid assets. The impact of materialisation of such a negative scenario is analysed in Chapter 3.8.2.

Box 5. The impact of foreign funding reduction on bank lending

The majority of banking sectors of Central, Eastern, and Southeastern Europe (CESEE) are characterised by strong presence of foreign banking groups. In the period prior to the outbreak of the global financial crisis, foreign banks were expanding rapidly in CESEE markets on the back of fast growth outlook and a relatively low banking penetration of their economies. Foreign banking groups did not only commit their capital, but provided substantial funding to their subsidiaries.

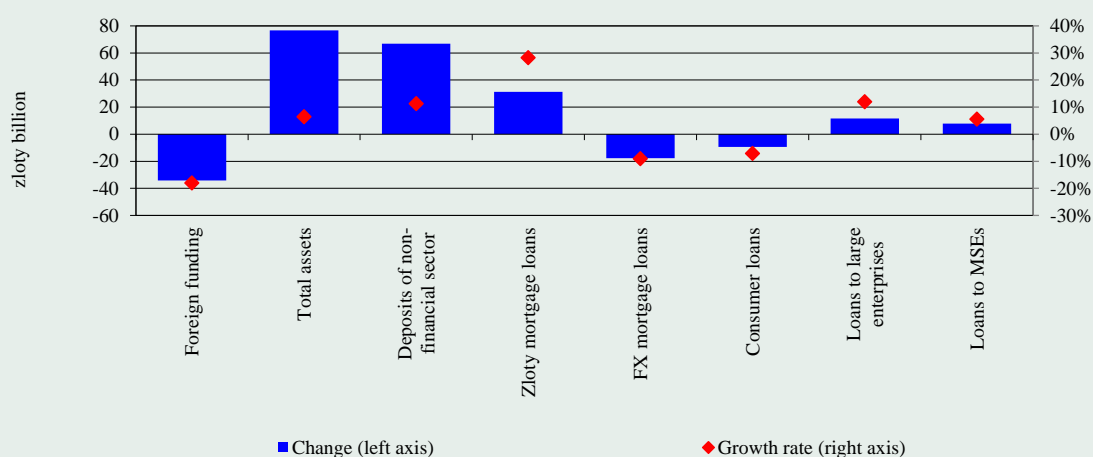
The crisis in the euro area, the market and regulatory pressure on deleveraging and downsizing and a tendency towards concentration on home markets contributed to reduction in funding provided by foreign banks to their subsidiaries in CESEE. The tendency towards decreasing external liabilities of banks from CESEE countries has been present since mid-2011. This phenomenon has raised concerns about a negative impact of foreign funding reductions on lending in CESEE and, consequently, on their economies¹.

As regards Poland, the tendency towards foreign funding reduction² started in the third quarter of 2011 (see Figure 3.46). Although decrease in the scale of foreign funding concerned the majority of foreign subsidiaries, the consolidation processes and the resulting shift in funding strategies of a

few banks and downsizing by banks which were focused mainly on foreign-currency-denominated housing loans had a dominant influence on this reduction in the banking sector as a whole. The activity of some branches of credit institutions that invest mainly in Polish government bonds also had a major influence on foreign funding volatility.

The reduction of foreign funding did not translate into a fall of the banking sector's assets. In the period analysed³, banks' assets rose by 77 billion zlotys (6%), with foreign funding falling by 34 billion zlotys (18%) (see Figure 1). Banks' financial leverage declined, but this was the effect of an increase in capital rather than a decrease in the value of assets. The analysis of the balance sheets of individual banks does not confirm a significant relationship between a change in foreign funding and a change in total assets of individual banks (see Figure 2).

Figure 1. Change in selected categories of the balance sheet of commercial banks from June 2011 to March 2013



Source: NBP.

Figure 2. Changes in the value of foreign funding and total assets (left-hand panel) and deposits of the non-financial sector (right-hand panel) from June 2011 to March 2013



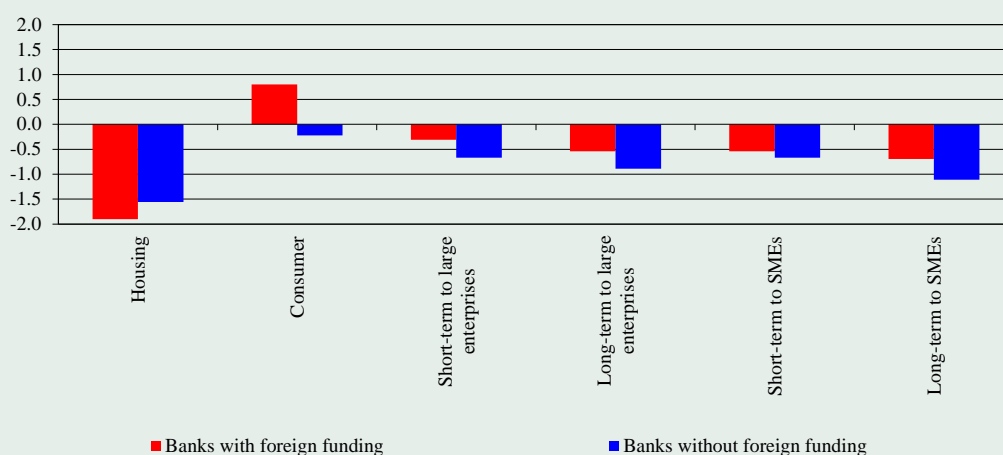
Note: includes banks for which items analysed represent over 2% of balance-sheet total.
Source: NBP.

Foreign funding was replaced by an increase in deposit base, household deposits, in particular. In the period analysed, deposits of the non-financial sector rose by 67 billion zlotys (11%), and the analysis of the balance-sheets of individual banks indicates that the majority of the banks that reduced foreign funding also increased their deposit base at the same time (see Figure 2).

The growth rate of lending to the non-financial sector slowed down in the period analysed. This phenomenon, however, seemed to be cyclical, related primarily to the economic slowdown and rising uncertainty over future growth, falling demand for credit and the result of regulatory measures. Except for foreign currency housing loans and consumer loans, banks increased their portfolios of other loans to the non-financial sector (see Figure 1).

In the period analysed, banks either tightened lending policy or left it unchanged in all main credit categories (see Figure 3.10)⁴. Survey data do not confirm that banks with a significant share of foreign funding pursued a more conservative lending policy than other banks. Changes in their policy were even less restrictive, except for housing loans, which may have been tied to a strong reduction in foreign currency loans.⁵ No surveyed bank pointed to funding as constraining its credit supply. Banks explained tightening of credit standards by uncertainty regarding future developments in the economy, industry-specific risk, and in the case of housing loans - by regulatory constraints.

Figure 3. Accumulated index of changes in credit standards at banks using and not using foreign funding from 2011Q3 to 2013 Q1



Note: the non-weighted average for individual groups of banks; positive values denote an easing of and negative values – a tightening of lending policy against an initial period – the second quarter of 2011.
Source: NBP.

The analysis of changes in the loan portfolio of banks provided with foreign funding indicates that the decrease in these liabilities was significantly correlated with the change in the value of foreign currency housing loans (see Figure 4). In fact, it seems that constraints on foreign currency housing loan origination had a vital influence on a fall in the value of such loans and, consequently, on a fall in the demand for foreign funding (in foreign currency). A corresponding analysis for zloty loans shows that the same banks increased lending in the segment of zloty housing loans.

Most of the banks that reduced foreign funding also reduced the portfolio of consumer loans (see Figure 4). However, it should be pointed out that the whole sector (including banks not relying on foreign funding) saw a decrease in such loans and that it was related to demand-side and regulatory factors.

Figure 4. Changes in the value of foreign funding and zloty housing loans (left-hand panel), foreign currency housing loans (central panel) and consumer loans (right-hand panel) from June 2011 to March 2013



Note: includes banks for which items analysed represent over 2% of balance-sheet total; changes in the value of individual credit types presented on vertical axes.
Source: NBP.

As regards lending to the enterprise sector, there is no major link between foreign funding reduction and changes in the loan portfolio (see Figure 5). In this segment, the policy of banks that cut foreign funding was very discrepant.

Figure 5. Changes in the value of foreign funding and changes in the value of loans to large enterprises (left-hand panel) and loans to SMEs (right-hand panel) from June 2011 to March 2013



Note: includes banks for which items analysed represent over 2% of balance-sheet total.
Source: NBP.

It should be emphasized that the conclusion of relatively limited impact of foreign funding reduction on lending has been confirmed by *Vienna Initiative* analyses for a group of CESEE countries. They show that the fall in the lending growth rate in the majority of countries (including Poland) was, to a greater extent, connected with demand- and supply-side factors not associated with foreign funding.⁶

¹ In order to reduce the risk, the European Commission, European Investment Bank, European Bank for Reconstruction and Development, International Monetary Fund and the World Bank established the so-called *Vienna Initiative* 2. See <http://vienna-initiative.com/>

² Unless otherwise indicated, foreign funding refers to loans and deposits received from foreign banks and branches of credit institutions.

³ In this Box, “the period analysed” covers the period from June 2011 to March 2013

⁴ Based on the quarterly survey by the NBP “Senior loan officer opinion survey - on bank lending practices and credit conditions”.

⁵ The question about lending policy in the segment of housing loans does not include a division into zloty loans and foreign currency loans.

⁶ See a quarterly publication of “CESEE Deleveraging Monitor”. According to “CESEE Deleveraging Monitor Q4 2012”, “... weak credit reflects both restrictive demand and supply factors. Amongst the latter, banks emphasize high non-performing loans (NPLs) more prominently than funding constraints.”.

3.5. Market risk

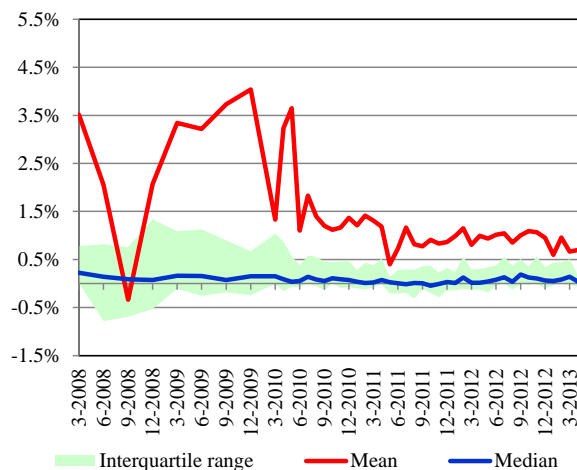
A long FX balance-sheet position in the banking sector increased in the period analysed. The increase followed a fall in FX foreign liabilities, from parent entities of Polish banks, in particular (see Chapter 3.4). The portfolio of housing loans, the largest item of FX assets, also decreased albeit to a lesser extent than FX liabilities.

The increase in the long balance-sheet position, however, did not translate into an increase in the open FX position, which is below 1% of banks’ regulatory capital (see Figure 3.50). The open FX balance-sheet position was hedged with such derivatives as *fx swaps* and CIRSs - these transactions are most frequently concluded with foreign banks. The greater use of CIRS and *fx swap* transactions in FX position management may have been related to the relatively low cost of these instruments in the market (see Chapter 2.2.2). In the period analysed, the structure of banks’ off-balance-sheet positions saw a decline in the share of *fx swap* transactions and an increase in CIRS transactions.

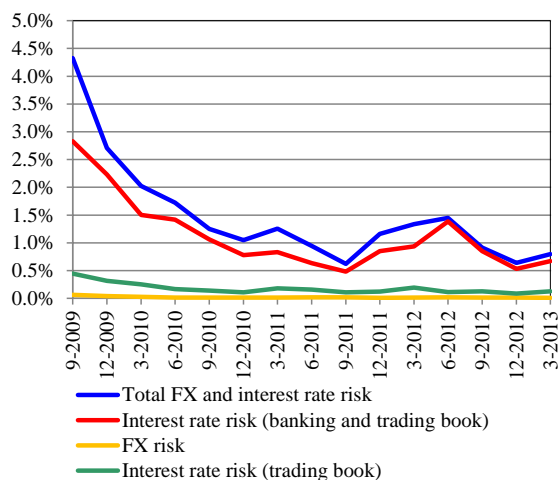
As the position is almost fully hedged, the risk of losses arising from changes in the valuation of the FX position remained limited. Value-at-

risk (VaR) for FX risk did not exceed 0.1% of the regulatory capital of commercial banks (see Figure 3.51). VaR for FX risk is calculated under the assumptions that the market for hedging instruments is liquid and that banks are fully capable of rolling over maturing hedges. Therefore, this estimate does not encompass other aspects of risk that banks are, in practice, exposed to: an increase in transaction costs, the incapability of rolling over maturing hedges and counterparty default. It can be assessed that given the greater use of off-balance-sheet transactions in the period analysed, banks’ exposures to the risk grew slightly.

A potential rise in market spreads on transactions that hedge against FX risk may pose a threat to the profitability of FX assets, if spreads on a hedging transaction are higher than the sum of deposit and credit spreads. This risk is particularly significant for some banks which extended foreign-currency denominated loans at very low spreads (in the range of 100–150 bps) in the period when market competition was at its height, and, at the same time, competed actively for new deposits. At the end of March 2013, the estimated profitability of the portfolio of housing loans was negative for around 30% of banks (see Figure 3.7).

Figure 3.50. Open FX position to regulatory capital

Source: NBP.

Figure 3.51. Median of Value at Risk for FX risk and interest rate risk

Notes: VaR at confidence level of 99% and a 10-day horizon calculated for commercial banks and expressed as % of regulatory capital.

Source: NBP.

A potentially substantial depreciation of the zloty is also a source of risk related to FX balance-sheet position hedging. Depreciation causes an increase in the value of zloty funds needed to roll over contracts that hedge FX positions on banks' balance sheets. Depreciation may also entail the need to use liquid funds for

the margin calls related to FX position-closing transactions. The risk was accounted for the stress scenario of stress tests (see Chapter 3.8.2). The results of the simulation show that for some banks (with an approximately 20% share in the sector's assets) the value of zloty funds needed to roll over hedging contracts would exceed their liquidity buffer of government bonds and NBP bills. This applies, in particular, to banks that extended foreign currency loans denominated in the Swiss franc and the euro on a large scale amid small scale balance-sheet funding in these two currencies.

Interest rate risk in Poland's banking sector is primarily related to the portfolio of fixed-rate securities.⁵³ A vast majority (about 89%) of the portfolio are domestic government bonds and BP bills (see Table 3.3). The share of money bills in the portfolio has recently risen at the expense of government bonds. This change may be related to the falling yield on bonds and the Ministry of Finance policy to extend maturities of new issues.

Approximately 91% of government bonds are held by banks in portfolios that are valued according to market prices. At the same time, for most of these banks changes in valuation are recognised in capital, not in their income statements (see Table 3.4). The risk that their prices will change is mostly hedged by derivatives. The average *duration* of the bond portfolio is relatively small and amounts to 2.1 years. In consequences, an estimated VaR for interest rate risk in banks' trading books does not exceed 0.2% of their regulatory capital (see Figure 3.51).

Interest rate risk related to money bills is insignificant due to their short maturity (usually 7 days).

Banks may be exposed to the risk arising from volatility of spread between bond yields and the underlying interest rate swaps used for hedging. This risk is not included in VaR estimates, but was taken into account in the stress scenario of

⁵³ Approximately 94% of the loan portfolio carry a variable interest rate.

Table 3.3. Balance-sheet value of debt securities in banks' portfolios by issuer (PLN billion)

Issuer	Resident			Non-resident		
	4-2012	9-2012	4-2013	4-2012	9-2012	4-2013
Central banks (money bills)	72.1	104.3	125.0	0.0	0.0	0.0
Central government agencies	128.4	124.1	135.2	1.8	0.6	0.6
-Treasury bills	7.0	5.0	7.9	1.3	0.0	0.0
-Treasury bonds	121.4	119.1	127.2	0.6	0.6	0.6
Municipalities	13.2	13.3	14.0	0.0	0.0	0.0
Financial sector institutions	5.6	6.9	8.1	1.3	0.9	0.6
Non-financial sector institutions	12.4	12.7	12.4	0.1	0.1	0.1
Total	231.6	261.3	294.6	3.3	1.6	1.3

Source: NBP.

macro stress tests (see Chapter 3.8.2). The results of the simulations indicate that the risk is not high, which largely results from the short *duration* of Treasury debt securities held by Polish banks (see Table 3.4).

Table 3.4. Classification of debt instruments issued by central government institutions (resident and non-resident) by particular portfolios (in compliance with IFRS)

Portfolio type	Share
Available for sale	76.4%
Held for trading	12.4%
Held to maturity	5.8%
Loans and other receivables	2.8%
Fair value through profit or loss	2.6%

Note: as at the end of March 2013.

Source: NBP.

Outlook

The level of market risk which Polish banks are exposed to should be assessed as low. Balance-sheet exposures that are sensitive to changes in the foreign exchange rate and interest rates are mostly hedged with derivatives.

However, a greater use of off-balance-sheet hedging transactions increases banks' sensitivity to changes in quotations and the liquidity of *fx swap* and CIRS markets. Foreign capital outflow from the domestic government bond market, resulting in an abrupt fall of their prices, could also be a potential source of risk. This should not,

however, jeopardise the stable operation of banks because of the hedged portfolio and its relatively short *duration*.

3.6. Market assessment of Polish banks

Since the publication of the previous edition of the *Report*, the share prices of Polish banks have not changed substantially. In the first quarter of 2013, shares of Polish banks listed on the Warsaw Stock Exchange (WSE), like shares of their parent banks on European stock exchanges, were subject to correction, which ended in mid-May 2013 (see Figure 3.53).

In December 2012, Alior Bank conducted an IPO. Taking into account the final sell price and the number of shares in individual tranches, its value amounted to over 2 billion zlotys, which at the same time made it the largest IPO of a private company in the history of the WSE.

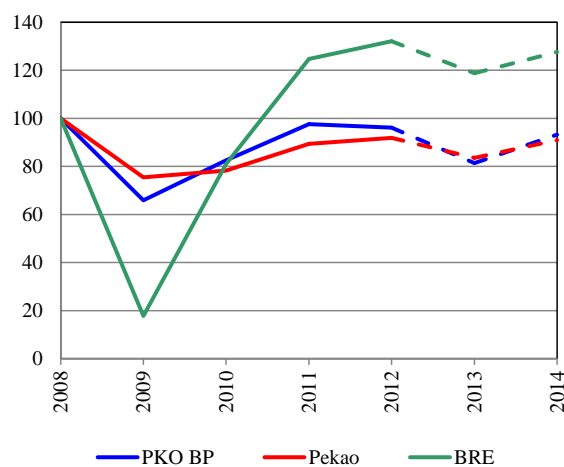
The "price to book value" for the majority of Polish banks remains stable and above 1. The ratio's high value indicates that Polish banks are positively rated by investors (see Figure 3.54). Nevertheless, in the period analysed market analysts' expectations about earnings per share of Polish banks for 2013 declined (see Figure 3.52).

The favourable assessment of the condition of

Polish banks can be evidenced by the fall in yields of individual bonds of domestic and foreign Polish banks. In the period analysed, spread between yields on bonds of Polish banks that issued bonds in the US dollar and euro and the interest on interest rate swaps in the two currencies narrowed.

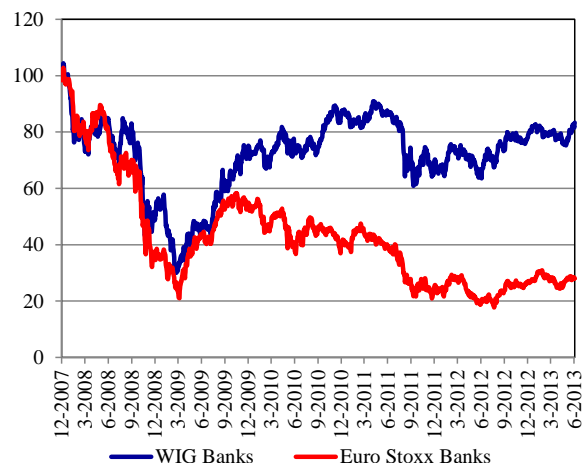
In the period analysed, the ratings agency Moody's downgraded the deposit ratings of BRE Group member banks and of Bank Millennium on the back of changes in ratings of their parent banks. As regards Bank Millennium, its financial strength rating was also lowered. According to Moody's, the deteriorating position of BCP, the Portuguese owner of Bank Millennium, has a negative impact on the creditworthiness of its Polish subsidiary (see Table 3.5).

Figure 3.52. Historical and forecasted earnings per share of selected banks



Note: earnings per share forecasts for 2013–2014, calculated as median of all market forecasts for a given bank, normalised as at the start of 2008.
Source: NBP calculations based on Thomson Reuters.

Figure 3.53. Index prices of Polish and European banks



Note: index prices rescaled to 100 at the end of 2007.
Source: NBP calculations based on Thomson Reuters.

Figure 3.54. P/BV (price to book value) ratio of indices of Polish and European banks



Source: Thomson Reuters.

Table 3.5. Ratings of Polish banks by Moody's and Fitch

Moody's	Financial strength rating	Long-term deposit rating	Short-term deposit rating	Outlook
PKO BP	C- (C-)	A2 (A2)	P-1 (P-1)	NEG (NEG)
Pekao	C- (C-)	A2 (A2)	P-1 (P-1)	NEG (NEG)
BRE Bank	D (D)	Baa3 (Baa2)	P-3 (P-2)	STA (NEG)
ING Bank Śląski	D+ (D+)	Baa1 (Baa1)	P-2 (P-2)	NEG (NEG)
Bank Zachodni WBK	D+ (D+)	Baa1 (Baa1)	P-2 (P-2)	NEG (RUR)
Bank Millennium	E+ (D)	Baa2 (Baa3)	NP (P-3)	NEG (NEG)
BPH	D (D)	Baa2 (Baa2)	P-2 (P-2)	STA (STA)
Bank Handlowy	D+ (D+)	Baa3 (Baa3)	P-3 (P-3)	STA (STA)
BGŻ	D (D)	Baa2 (Baa2)	P-2 (P-2)	STA (STA)
Credit Agricole	D (D)	Baa3 (Baa3)	P-3 (P-3)	STA (NEG)
BRE Bank Hipoteczny	E+ (E+)	Ba1 (Baa3)	NP (P-3)	STA (NEG)
Fitch	Viability rating	Long-term rating	Short-term rating	Outlook
Pekao	a- (a-)	A- (A-)	F2 (F2)	STA (STA)
BRE Bank	bbb- (bbb-)	A (A)	F1 (F1)	STA (STA)
ING Bank Śląski	bbb+ (bbb+)	A (A)	F1 (F1)	NEG (STA)
Bank Zachodni WBK	bbb (bbb)	BBB (BBB)	F3 (F3)	STA (STA)
Getin Noble Bank	bb (bb)	BB (BB)	B (B)	STA (STA)
Bank Millennium	bbb- (bbb-)	BBB- (BBB-)	F3 (F3)	STA (STA)
BOŚ	bb (bb)	BBB (BBB)	F3 (F3)	STA (STA)
BRE Bank Hipoteczny	brak (brak)	A (A)	F1 (F1)	STA (STA)
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)	STA (STA)
Pekao	bbb+ (bbb+)	BBB+ (BBB+)	A-2 (A-2)	STA (STA)

Notes: in brackets - as of the end of June 2012. 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.

Source: www.moody.com, www.fitchpolska.com, www.standardandpoors.com

3.7. Banks' capital position

From September 2012 to March 2013 the regulatory capital⁵⁴ of the domestic banking sector grew by 6,6%. The growth was mainly driven by a decrease in value of the so-called regulatory deductions from regulatory capital, in particular a deduction of the value of shares of other banks held by banks. The deductions were related to

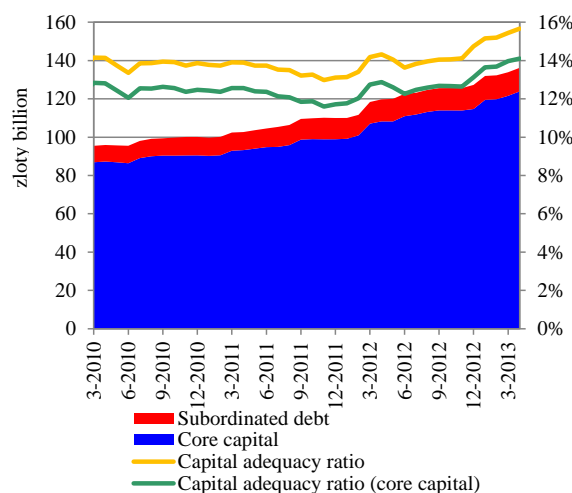
the completion of mergers of several banks and the sale of PKO BP shares by the state-owned BGK. The structure of regulatory capital was favourable from the point of view of the potential loss absorption capacity, as it was largely composed of core capital (see Figure 3.55).

The average capital adequacy ratio of the domestic banking sector rose to 15,3% (see Figure 3.55). Capital adequacy ratios for the ma-

⁵⁴ Regulatory capital used to calculate the capital adequacy ratio of banks.

jority of banks were high – banks with capital adequacy ratios above 12% had a 91.6% share in assets of domestic commercial banks (see Figure 3.57).

Figure 3.55. Selected items of the regulatory capital and the capital adequacy ratio of domestic banks

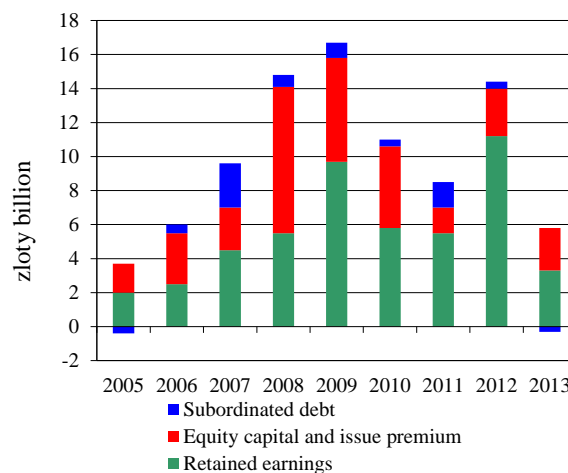


Source: NBP.

The fact that some banks – with the approval of the KNF – have moved to the IRB approach for setting the capital requirements has an influence on the level of these requirements. The requirements calculated in this way are lower than those obtained when the standardised approach is applied. In transitional period, the decrease is constrained by the limit designating the minimum capital requirement for individual types of risk⁵⁵. It can be estimated that once the transitional period is over, some banks could reduce the value of their regulatory capital by about 20% and keep the present value of capital adequacy ratio. The lower capital requirement, resulting from the change in the methodology of assessing risk and setting the capital requirements, does not imply that the risk taken by a bank has diminished. To maintain the currently sound capacity of banks to absorb losses, it would be desirable that the change to the capital requirement setting method does not result in lower regulatory capital levels through dividend payouts reducing equity capital.

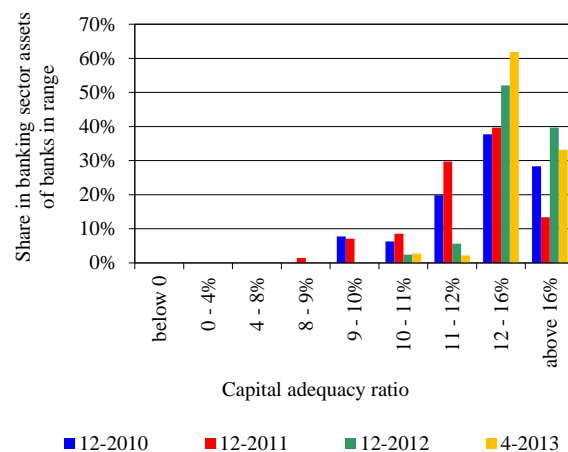
⁵⁵ The limit is expressed as a percentage of the requirement calculated according to the standardised approach.

Figure 3.56. Changes (y/y) in selected items of regulatory capital of domestic banks



Notes: the data do not include: in 2009 – 3.9 billion zlotys in government funding to Bank Gospodarstwa Krajowego; in 2011 – data for Polbank (capital increase after the branch was turned into a subsidiary); in 2012 – effects of bank mergers. Data for 2013 include the first 4 months of the year.
Source: NBP.

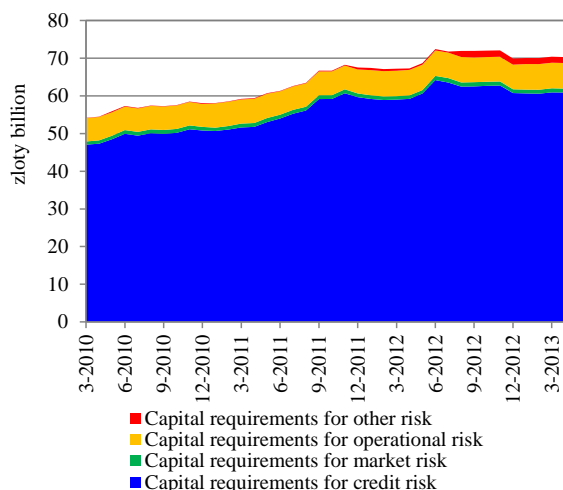
Figure 3.57. Distribution of assets of domestic commercial banks by the capital adequacy ratio



Source: NBP.

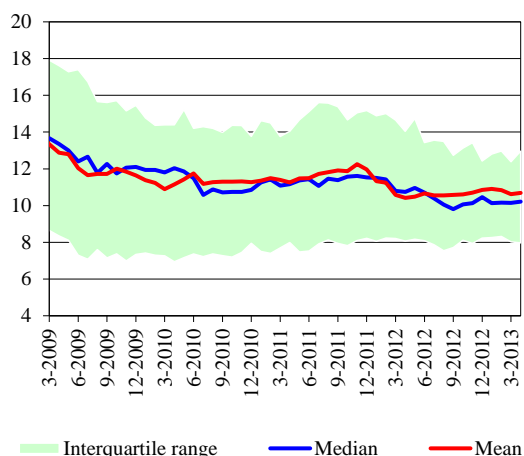
The leverage ratio is an additional measure reflecting the capital position of banks, not adjusted for asset risk weights. In the period analysed, the average leverage ratio dropped from 11.6 to 11.1 (see Figure 3.59).

Figure 3.58. Capital requirements for selected types of risk at domestic banks



Source: NBP.

Figure 3.59. Leverage ratio at domestic commercial banks



Source: NBP.

3.8. Banking system's resilience to shocks

3.8.1. Simulations of loan loss absorption capacity

Four simulations were performed to determine whether banks' capital was sufficient to ab-

sorb potential losses from credit risk materialisation.⁵⁶

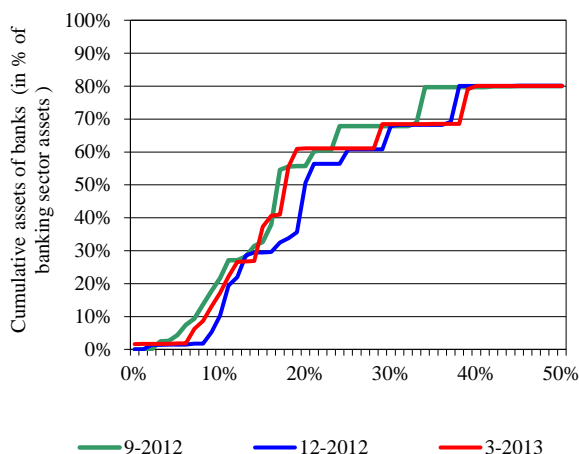
The results of Simulation I (see Figure 3.60) indicate the scale of a deterioration in the quality of performing loans that individual banks may absorb without breaching the capital adequacy standards. The results of Simulation I permit to rank these banks by their resilience to a deterioration in the quality of their loan portfolios. The share in the banking sector's assets of banks that would be able to absorb only a minor (5%) deterioration in loan portfolio quality is analysed as a metric of the sector's sensitivity. The simulation, performed on March 2013 data, indicates a slight decline in the sensitivity of the banking sector. A deterioration in the quality amounting to 5% of loans would result in a breach of the capital adequacy standards at banks with a 1.7% share in the sector's assets. In September 2012, an identical shock would have caused a breach of the standards at banks with a 2.5% share in the sector's assets.

The purpose of Simulation II was to determine the level of the capital adequacy ratio in the event of an abrupt deterioration in the quality of impaired loans and a decrease in the value of their collateral. The results of this simulation may indicate whether the present portfolio of impaired loans poses a threat to banks' capital adequacy.

The results of Simulation II show that in the period analysed the significance of the portfolio of impaired loans for banks' capital adequacy slightly increased (see Figure 3.61). Banks that register a fall of their capital adequacy ratios below 8% in the simulation may be regarded as exhibiting a relatively high value of impaired loans as compared to capital and current financial year's net profit. The share of this group of banks in the banking sector's assets stands at around 9% (see Figure 3.62), compared to 8% at the end of the third quarter of 2012.

⁵⁶ The simulations were performed on data of domestic commercial banks with a total share of around 90% in the banking sector's assets. Neither branches of credit institutions nor cooperative banks were included in the simulations.

Figure 3.60. Simulation I: assets of domestic commercial banks ranked by percentage of loans without identified impairment whose deterioration of quality would result in a breach of capital adequacy standards

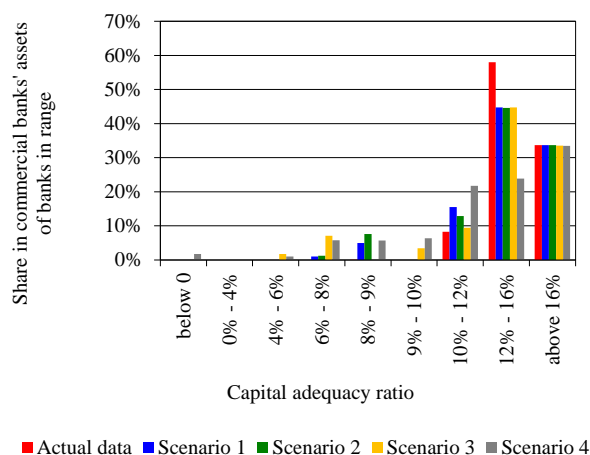


Assumptions of the simulation:

1. Deterioration in loan quality means that 50% impairment is recorded for these loans.
2. Hypothetical charges for impairment provisions decrease, firstly the bank's current net profit not classified as regulatory capital, and then the bank's regulatory capital.
3. Impaired loans carry a 100% risk weight.
4. No release of impairment provisions.

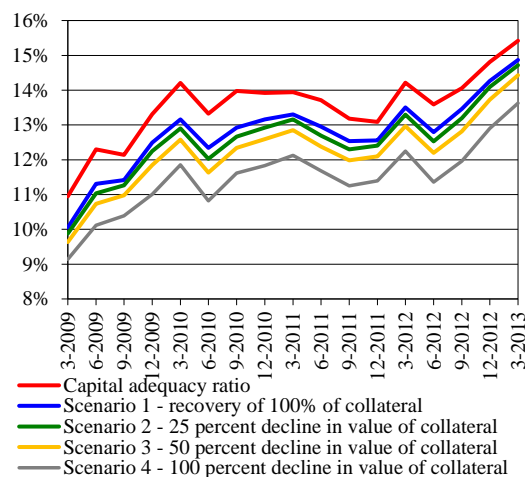
Source: NBP.

Figure 3.62. Simulation II: distribution of assets of domestic commercial banks in scenarios assuming the deterioration in the quality of impaired loans according to data as of March 2013.



Note: the scenarios are defined in explanatory notes below Figure 3.61.
Source: NBP.

Figure 3.61. Simulation II: average capital adequacy ratio of domestic commercial banks in scenarios that assume a deterioration in the quality of impaired loans



Assumptions of the simulation:

1. In all scenarios, banks bear credit risk costs (that firstly decrease the bank's current net profit not classified as regulatory capital, and then the bank's regulatory capital) equal to the value of an unsecured portion of impaired loans.
2. The portfolio of loans without identified impairment remains unchanged.
3. In Scenarios 2, 3 and 4, charges to impairment provisions are increased by the value of a decrease in collateral value (25% of collateral value in Scenario 2, 50% in Scenario 3 and 100% in Scenario 4.).

Source: NBP.

Simulation III was designed to examine the significance of the concentration risk of credit exposures in the banking sector. The simulation assessed the impact of a parallel bankruptcy of three largest non-financial borrowers (*of the sector as a whole*). Claims on these enterprises are held in the portfolios of 18 banks. The simulation assumed that impairment would stand at 100% for all loans extended to the enterprises and that the cost of provisions decreases banks' regulatory capital. The effects of a hypothetical bankruptcy of three largest financial (non-bank) borrowers were examined in a similar way. The simulation did not take into account exposures to subsidiaries and affiliates.

Simulation IV examined the concentration of credit exposures at individual banks by the impact assessment of a hypothetical bankruptcy of

Table 3.6. Simulations III and IV: the impact of a hypothetical bankruptcy of three largest borrowers of the banking sector and three largest borrowers of each bank

	Nonfinancial borrowers	Financial borrowers
Number of banks lending to investigated companies	18	9
Share of these banks in banking sector's assets	69.4%	48.0%
Credit risk cost (zloty billion)	6.4	4.9
Share ¹ of banks with capital adequacy ratio below 8% or with own funds lower than internal capital	0.4%	3.0%
	Three largest borrowers of each bank	
Credit risk cost (zloty billion)	26.1	
Share ¹ of banks with capital adequacy ratio below 8% or with own funds lower than internal capital	8.9%	

¹ Share in the banking sector's assets.

Hypothetical charges to impairment provisions decrease, firstly, the bank's current net profit not classified as regulatory capital and, next, the bank's regulatory capital.

Source: NBP.

three largest borrowers of *each bank* (see bottom part of Table 3.6).

The results of Simulations III and IV indicate that the amount of potential losses arising from the bankruptcy of three largest borrowers (in each bank's own loan portfolio or banking sector as a whole) increased as compared with September 2012. At the same time, potential losses for the majority of banks would not be high enough to jeopardise their capital adequacy. Moreover, given such restrictive assumptions of the simulations, the total shortfall of regulatory capital would be relatively small and would not exceed 4% of the regulatory capital of the sector as a whole.

The results of the simulations discussed above point to a persistent differentiation of capital buffers among banks. The majority of commercial banks hold sufficient capital to absorb any further deterioration in loan portfolio quality, and their resilience has increased. However, there is a group of several medium-sized and small banks that are less resilient to potential shocks and that should seek to increase their regulatory capital.

3.8.2. Stress tests

Stress tests that take into account a macroeconomic shock, a market shock and a liquidity shock were used to assess the resilience of banks⁵⁷ to external negative shocks. The central path of the NBP macroeconomic projection from "Inflation Report – July 2013", developed under the assumption of fixed interest rates, served as a reference scenario. The analysis aimed at quantifying the effects of hypothetical shocks to banks from the second quarter of 2013 to the end of 2015. The results of the simulation for the reference scenario and the 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. In the first stage, the analysis covered the impact of two macroeconomic scenarios (reference and shock scenarios) on banks' credit risk materialisation costs, net interest income and on their capital adequacy. Due to the multi-equation macroeconomic model used, the assumed shock scenario takes into account, to the extent possible, the complete combined impact of investigated shocks on the economic condition.

⁵⁷ The simulation relates to commercial banks. Bank Gospodarstwa Krajowego was excluded from the simulation.

In contrast to single-factor simulations (see Box 2 and section 3.8.1), which depict the sensitivity of banks to single, isolated shocks, the stress tests allow the estimation of a more complete impact of multiple simultaneous shocks on the financial condition of banks. In the second stage, the macroeconomic shock scenario was accompanied by the impact of an additional negative 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 in both scenarios were calculated, assuming that banks had to hold sufficient regulatory capital to keep the capital adequacy ratio above 12%, the capital adequacy ratio calculated on the basis of core capital above 9% and that regulatory capital had to be higher than the capital requirements internally estimated by banks under the ICAAP. The criterion applied for the value of capital adequacy ratios is more restrictive than the regulations now in force. It is, however, consistent with the standard set by EBA stress tests, and also corresponds to conditions mentioned by the KNF in its recommendations regarding banks dividend policy.⁵⁸

In this edition of the *Report*, its authors – for the first time – departed from the assumption of constant balance sheets of banks over the simulation horizon. If in the simulation period a bank met the assumed minimum capital adequacy level, then in the subsequent quarter it increased its portfolios of loans and securities and other assets at the quarterly GDP nominal growth rate.⁵⁹ The balance sheet value of the loan portfolio was also affected by impairment provisions and the portfolio of debt securities – by a market shock. A constant relation to average assets was assumed for the unmodelled items of profit and loss account. Banks complying with the minimum capital adequacy levels were also

allowed to pay out dividends from profits earned in the simulation period. The dividend rate depended on the excess of capital adequacy ratio calculated on the basis of core capital above the assumed minimum. Changes in bank assets were balanced by changes in liabilities valued at amortised cost, inter alia, deposits.

The macroeconomic shock scenario assumed a recurrence of recession in the euro area economy, caused primarily by reductions in debt levels by the private sector coupled with reduced consumer demand triggered by consumer uncertainty. In addition, excessive government debt would make it impossible to implement stimulus measures or could even prompt a tightening of fiscal policy, thus contributing to prolonging and worsening the recession. Easing monetary policy by central banks would not lead to credit growth due to banks' high risk aversion and the weakening demand. Economic growth would also slow in large developing countries.

Given such assumptions, Poland would see a substantial slowdown in the pace of economic growth (see Table 3.7), further increased by a likely pro-cyclical fiscal policy response. A tightening of fiscal policy would be prompted by the risk of exceeding the public debt to GDP prudential thresholds.

The likelihood of such a severe and long slowdown in the GDP growth rate in Poland, as the one arising from the shock scenario, can be assessed as minor (see Figure 3.63).

A market shock was added to the macroeconomic shock scenario in order to assess the potential impact of a fall in foreign investor confidence in the Polish economy, leading to capital outflows from Poland, on the capital position of banks. Capital outflows would be reflected in an increase in the yields on Polish Treasury debt securities and a depreciation of the zloty. Such developments would prompt further fiscal adjustments aimed

⁵⁸ See “Stanowisko KNF w sprawie polityki dywidendowej instytucji finansowych” [Stance of the KNF on the dividend policy of financial institutions], KNF, 28 November 2012 (available in Polish only).

⁵⁹ As long as the GDP growth rate was positive; if it was otherwise, a connection between bank assets and GDP was excluded.

at avoiding a breach of the prudential thresholds and regaining creditworthiness of the Polish government. Zloty depreciation would also bring about an increase in the capital requirements and a deterioration in banks' loan portfolio through increasing value of foreign currency loans and the related rise in loan repayment burden on borrowers. The simulation assumed a 300 basis point rise in bond yields and a 30% depreciation of the zloty against the euro.⁶⁰

The impact of a liquidity shock on banks' liquidity was examined in a separate analysis. The purpose of the simulation was to assess whether banks had an adequate buffer of liquid funds in the event of the shock scenario assuming zloty depreciation, a rise in Polish government bond yields, an outflow of some foreign funding and falling confidence from both domestic financial institutions and real sector entities resulting in a withdrawal of some of their deposits.⁶¹

Impact analysis of a potential bankruptcy of a bank in both macroeconomic scenarios on the condition of other banks via the so-called domino effect was the last element of the simulation.

At the end of the simulation period, the estimated value of a hypothetical increase in banks' regulatory capital, which would be required if the shock scenario were to unfold, would be 4.5 billion zlotys, i.e. around 7.5 times higher than in the reference scenario (see Table 3.8). Losses arising from interbank exposures would not push up banks' capital needs. The share of banks, which would have to raise the level of their regulatory capital to meet the criteria adopted for the analysis, in the banking sector's assets would be 23.7% in the shock scenario and 12.5% in the reference scenario. Although all banks complied with the statutory capital standards at the end of March 2013 (capital adequacy ratio at 8%), the share of banks that did not meet the more

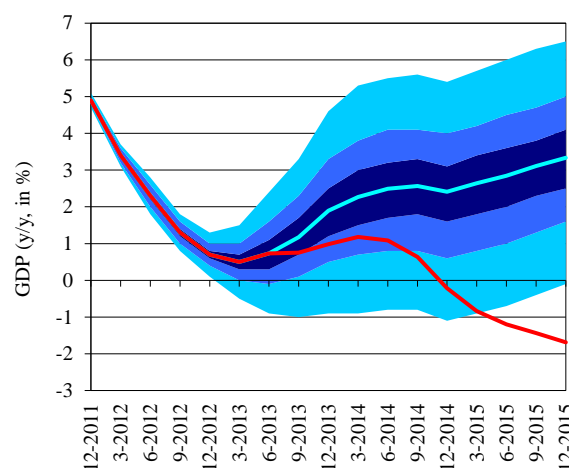
restrictive capital criteria adopted for the analysis (i.e. capital adequacy ratio at 12% and capital adequacy ratio calculated on the basis of core capital at 9%) amounted to 7.6%.

Table 3.7. Major economic indicators in macroeconomic scenarios (%)

	2013	2014	2015
GDP growth y/y			
Reference scenario	1.1	2.4	3.0
Shock scenario	0.8	0.7	-1.3
LFS unemployment rate, annual average			
Reference scenario	10.8	11.3	11.1
Shock scenario	11.2	13.0	16.0
CPI inflation y/y			
Reference scenario	0.8	1.2	1.5
Shock scenario	1.6	2.5	-0.3
WIBOR3M			
Reference scenario	3.2	3.0	3.0
Shock scenario	3.2	2.3	0.6

Source: NBP.

Figure 3.63. Macroeconomic shock scenario against the fan chart of GDP from "Inflation Report – July 2013"



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

The simulation of liquidity risk has shown that in the event of materialisation of a very restrictive shock scenario a group of banks with an

⁶⁰ Against bond yields and the zloty exchange rate as of the end of March 2013.

⁶¹ The following were assumed: withdrawal of 100% of deposits, 10% of loans and 25% of other liabilities towards foreign financial institutions; outflow of unstable (not classified as core deposits) part of deposits of households, the non-financial enterprises and general government sector and, additionally, 5%, 10% and 10% of other deposits, respectively.

around 11% share in the sector's assets would not have sufficiently high buffers of liquid assets to cover liabilities related to foreign capital outflow, zloty depreciation and a fall in investor confidence (see Figure 3.65). The majority of these banks are largely financed with foreign funds or hold substantial foreign currency loan portfolios. A shortfall of liquid funds at these banks would total approximately 30 billion zlotys.

Comparison of the results with the simulation

performed in the previous *Report* (a 38 billion zloty shortfall of liquid funds at banks with a 16% share in the sector's assets) shows that the resilience of banks continues to increase while the value of a potential shortfall of liquid funds continues to fall. The strengthening of the liquidity position of banks was driven by: reduction in foreign funding and some decrease in the foreign currency loan portfolio. In the period analysed, consolidation in the banking sector also helped substantially improve the resilience of banks.

Table 3.8. Results of macro stress tests

	Historical data for the period Q2 2012 – Q1 2013	Simulation results for the period Q2 2013 – Q4 2015	
		reference scenario ¹	shock scenario
On average per year (as % of assets)			
Charges to loan impairment provisions	-0.8	-0.8	-1.1
Net interest income ²	2.2	2.0	1.7
Net earnings	1.2	1.1	0.3
Capital needs ³ (zloty billion)			
Macroeconomic and market shocks	0.4	0.6	4.5
Domino effect	n/d	0	0
Additional information – market shock in the simulation period (zloty billion)			
Change in bond value recognized in profit and loss account	n/d	n/d	-1.3
Change in bond value recognized in capital	n/d	n/d	-7.1
Zloty depreciation (impairment charges for FX loans to households) recognized in profit and loss account	n/d	n/d	-1.5

¹ Scenario based on the central path of the NBP macroeconomic projection from “Inflation Report – July 2013”.

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

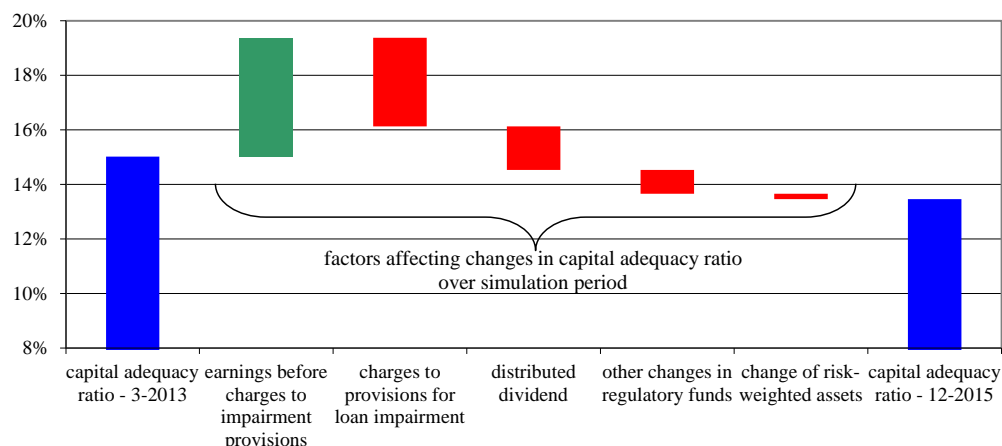
³ Value of capital injection necessary to ensure that capital adequacy ratios exceed 12%, capital adequacy ratios when taking into account core capital exceed 9% and to keep regulatory capital at the level not lower than internal capital at the end of the simulation period.

Notes: data for domestic commercial banks excluding BGK.

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

Source: NBP.

Figure 3.64. Cumulated changes in capital adequacy ratio under the shock scenario (as % of risk-weighted assets)



Notes: data for domestic commercial banks excluding BGK.

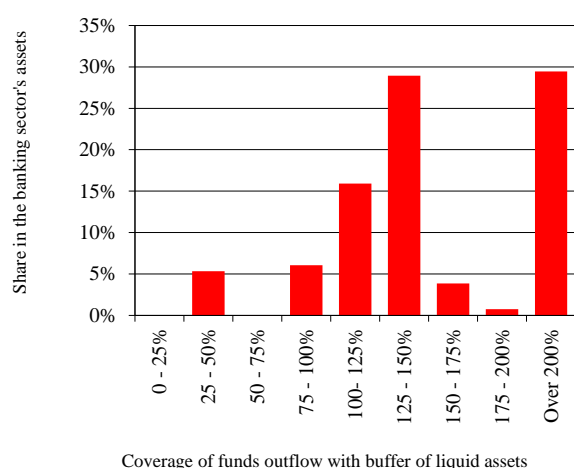
Blue bars mark the average capital adequacy ratio of the analysed banks in the beginning and end of the simulation period under the shock scenario. Factors with a positive influence on the average capital ratio in the simulation period are marked with green bars, while those with an adverse influence – with red bars. The influence of these factors is expressed in percentage points.

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

In the simulation it was assumed that banks with positive net earnings that comply with the assumed minimum capital adequacy levels (that is capital adequacy ratios exceeding 12%, capital adequacy ratios when taking into account core capital exceeding 9% and regulatory capital at the level not lower than internal capital) would pay out dividends. The dividend rate would depend on the excess of capital adequacy ratio calculated on the basis of core capital above the assumed minimum of 9%.

Source: NBP.

Figure 3.65. Assets of domestic commercial banks by coverage of funds outflow with a buffer of liquid funds in the shock scenario



Source: NBP.

The results of the simulations and stress tests indicate that the majority of domestic commercial banks hold sufficient capital to safely operate and to absorb the effects of a minor slowdown in the economy and the resulting moderate deterioration in loan portfolio quality, and a pick-up in credit risk materialisation costs. However capital buffers are discrepant among banks, and several banks are characterised by relatively low resilience.

Uncertainty associated with future developments in the economy remains high. Therefore, it is not unlikely that the scenario of a prolonged strong recession in the world economy would materialise and market turmoil would grow intense. The results of stress tests show that a large portion of banks hold capital and post earnings that allow them to absorb the effects of such a restrictive

scenario. However, given this persistent uncertainty, banks should continue to pursue a prudent dividend policy, which will provide them with a buffer to cover the effects of a hypothetical, substantial deterioration in the economic condition. In addition, banks that play a particularly important role in the financial system should – in line with recommendations of the Financial Stability Board (FSB) – exhibit an increased capacity to absorb potential losses.

The results of stress tests and the simulations of loss absorption capacity show that banks' resilience to shocks is relatively high, and has even improved since the last edition of the *Report*. As a consequence, additional capital needs in the sector as a whole would not be considerable, however for some banks the amounts of required capital increases would be relatively large when compared with their present levels. In part, these are banks whose capital position and earnings are already relatively weaker.

The results of the liquidity shock simulation pointed to a certain rise in banks' resilience, however at the same time they prove that to ensure a stable operation of the domestic financial system it is desirable that banks run a diverse funding structure and do not rely too heavily on short-term financing provided by their foreign parent

banks.

The simulation has also proven that a considerable portfolio of foreign currency-denominated loans may generate relevant liquidity risks to banks. This confirms that it is necessary for domestic banks to further steadily reduce the currently high share of foreign currency-denominated loans in the whole portfolio of loans to the non-financial sector (31% at the end of March 2013).

In addition to the simulations and stress tests, the risk related to banks' mutual exposures as well as the interconnectedness between banks and other financial institutions was analysed. This analysis indicates that besides the interconnectedness between cooperative banks and associating banks, which results from the operating model of cooperative banking, other types of connections pose no material risk to financial system stability; particularly due to a relatively small scale of the interconnectedness between insurance companies, investment fund management companies, pension fund management companies and credit unions with banks, the influence of these institutions on Poland's banking sector is limited and they generate no systemic risk (see Box 6) .

Box 6. Risk arising from banks' exposures towards financial institutions

Banks' exposures to other financial institutions are a potential source of risk to banking sector stability, because they can lead to the so-called contagion effect, when the problems faced by one institution (or a few institutions) bring about instability in the whole system.

The value of banks' claims on other domestic financial institutions can be assessed as relatively low (see Table 1). At the end of March 2013, claims on other banks accounted for about 30% of regulatory capital of Polish banks, and on non-bank financial institutions and credit unions (SKOKs) – 28%.

A dominant portion of deposits in the domestic interbank market were funds placed by cooperative banks at associating banks (28.8 billion zlotys).¹ Deposits between commercial banks were about 12.3 billion zlotys. Moreover, the value of other receivables between domestic banks, predominantly collateralised transactions such as *repo*, amounted to 26.3 billion zloty.

An analysis of the risk of the so-called domino effect was performed to assess the risk related to exposures in the interbank unsecured deposit market.² The impact of a potential bankruptcy of

each commercial bank on domestic commercial banks and cooperative banks was examined, taking into account potential losses on deposits placed at originally insolvent banks.³ The simulation showed that the domino effect resulting in the secondary insolvency of banks would be triggered by the original insolvency of 3 out of 43 domestic commercial banks operating as at the end of March 2013. A secondary insolvency would apply only to one small commercial bank with assets below 0.5% of the domestic banking sector's assets. On the other hand, a hypothetical collapse of associating banks could trigger a secondary insolvency of a considerable group of cooperative banks with a 4% share in the sector's assets and a 56% share in cooperative banks' assets. An insignificant risk of the domino effect occurring in the sector of commercial banks results from a small-sale of transactions between Polish banks and a low value of individual deposits as compared to their regulatory capital. Relatively high exposure of cooperative banks to affiliating banks results from the specific nature of their operations, including cash clearing and settlement via associating banks and depositing their excess liquidity at associating banks.

Table 1. Banks' claims on and liabilities towards domestic non-bank financial institutions and credit unions (PLN million)

	Pension funds	Investment funds	Other financial intermediaries	Insurance companies	Financial auxiliaries	Credit unions	Total
Claims, of which:	3 116	5 903	26 580	957	1 430	2	37 987
- Deposits	0	0	6	0	0	0	6
- Loans	0	265	24 201	85	806	1	25 357
- Other	3 116	5 638	2 373	872	624	2	12 624
Liabilities, of which:	15 013	17 961	8 167	22 816	9 631	1 584	75 173
- Deposits	9 699	10 946	7 607	19 708	5 488	1 578	55 025
- Loans	0	0	1	0	109	0	110
- Other	5 314	7 015	559	3 108	4 035	6	20 037
Net exposure	-11 897	-12 058	18 413	-21 859	-8 201	-1 582	-37 185

Note: data as at the end of March 2013; other claims/liabilities include all forms of on-balance-sheet claims/liabilities other than loans and deposits, including those due to *repos* and securities issues.

Source: NBP.

Bank's claims on non-bank financial institutions and credit unions amounted to about 38.0 billion zlotys, with claims on the so-called other financial intermediaries having the largest share in these claims⁴ (see Table 1). Claims on pension and investment funds were firmly lower; as regards investment funds they mostly comprised *repo* operations. Claims on insurance institutions, auxiliary financial institutions⁵ and credit unions were insignificant.

Claims on the foreign financial sector were approximately 26.0 billion zlotys. These mostly included deposits at foreign parent banks. As in the case of the Polish domestic interbank market, the risk of a domino effect was insignificant. A potential collapse of no foreign bank would trigger a secondary insolvency of a domestic bank. Claims on other non-bank financial institutions were

very low (see Table 2).

Table 2. Banks' claims on and liabilities towards foreign financial institutions (PLN million)

	Banks and branches of credit institutions	Other monetary financial institutions	International financial institutions	Other financial institutions	Total
Claims, of which:	24 830	0	0	1 194	26 024
- Deposits	16 585	0	0	2	16 587
- Loans	787	0	0	533	1 321
- Other	7 458	0	0	659	8 117
Liabilities, of which:	139 821	0	31 173	31 603	202 597
- Deposits	45 353	0	1 152	2 366	48 870
- Loans	52 821	0	29 557	23 839	106 217
- Other	41 647	0	464	5 398	47 509
Net exposure	-114 991	0	-31 173	-30 409	-176 572

Note: data as at the end of 2013; other claims/liabilities include all forms of balance-sheet claims/liabilities other than loans and deposits, including those due to *repo* transactions and securities issues.

Source: NBP.

It should be noted that banks' claims on the majority of non-bank financial institutions are lower than their liabilities. In net terms, banks' exposure is, as a result, negative - non-bank financial institutions are banks' creditors. The sector of other financial intermediaries is an exception (see Table 1). The risk arising from the potential withdrawal of funds of non-bank financial institutions from banks seems to be limited. The sum of liabilities of these counterparties represented almost 30% of the portfolio of banks' liquid assets (money bills and Treasury securities). Moreover, apart from two specialised car banks, it was not above 8% of their balance-sheet total for none of commercial banks.

The situation was similar as regards exposures to the foreign financial sector, where Polish banks' liabilities, mostly intragroup financing obtained from foreign parent entities or loans from international financial organisations (such as the European Investment Bank (EIB) or the European Bank for Reconstruction and Development (EBRD)), markedly exceeded claims (see Chapter 3.4). Liquidity risk associated with foreign funding is analysed in Chapter 3.8.2.

More detailed information on claims on non-bank financial institutions is provided by statistics of the so-called large exposures.⁶ Based on the data, it can be estimated that around half of banks' claims on non-bank entities are transactions with entities linked by capital or management. For this part of claims, credit risk seems to be limited when compared to exposures to non-group members.

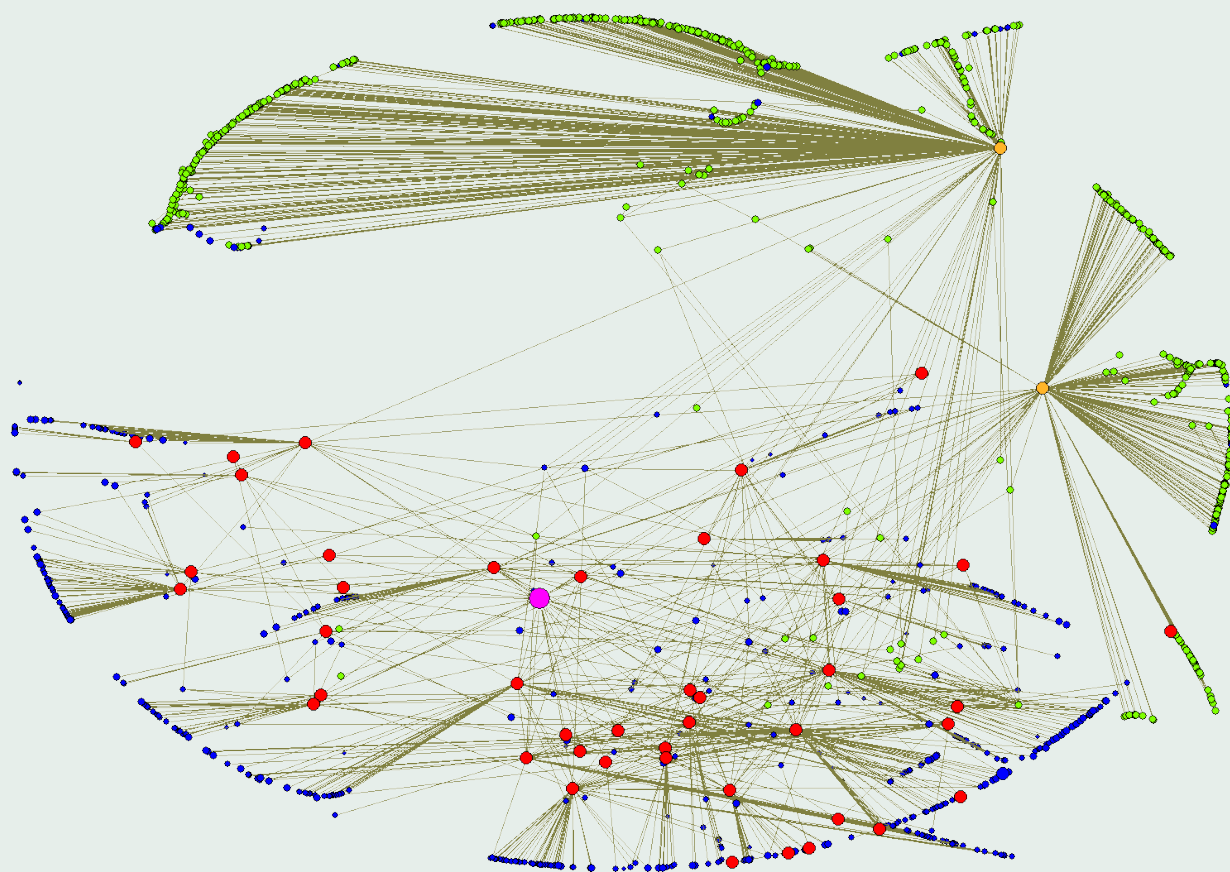
According to statistics of large exposures, banks' exposure to leasing companies was markedly the highest (16.6 billion zlotys). It can be estimated that around two thirds were transactions with affiliates from the same capital groups. Other large exposures in excess of 1 billion zlotys

applied to:

- factoring, debt collection and re-insurance firms etc. – 5.8 billion zlotys (estimated share of transactions with affiliates – 70%),
- investment funds – 3.2 billion zlotys (14%),
- pension funds – 1.9 billion zlotys (3%),
- entities carrying on business classified as “other forms of granting credits”⁷ – 1.2 billion zlotys (56%).

Analysis of inter-linkages indicates that the majority of non-bank financial institutions have liabilities towards few banks (see Figure 1). The average number of banks, from which non-bank financial institutions have contracted loans (or have other liabilities) amounted to 1.2. A network of linkages between banks and non-bank financial institutions also exhibits very low indicators describing the degree of inter-linkages between individual entities in a network.⁸ As a consequence, it can be said that the condition of individual non-bank financial institutions poses no significant threat to the banking sector.

Figure 1. Banks' exposures towards other financial institutions



Note: commercial banks marked in red, associating banks - in orange, cooperative banks - in dark green, (aggregated) foreign banks - in violet, non-bank financial institutions - marked in blue.
Source: NBP.

¹ All data shown in this Box - as at the end of March 2013.

² Based on individual data that identify deposits placed and received from other banks.

³ More information on how the domino effect is examined can be found in Box 4 in "Financial Stability Report. July 2011", NBP, 2011.

⁴ Other financial intermediaries include financial leasing and factoring companies, brokerage houses, Private Equity/ Venture Capital, securitisation funds set up to securitise assets, bankrupt banks and banks in the process of winding up or banks under organisation.

⁵ Institutions that do not provide financial intermediation services on their own account and only contribute to creating conditions enabling such intermediation.

⁶ Large exposures – for a bank in the form of a joint stock company, a state-run bank and a non-associated cooperative bank means exposure to one enterprise in excess of 500,000 zlotys, and for an associated cooperative bank – exposure to one enterprise in excess of 50,000 zlotys.

⁷ In brief, non-bank and non-credit union lending providers.

⁸ *Density* and *average degree* ratios amount to 0.003% and 2.3, respectively. The former shows the degree of network complexity as the ratio of existing linkages in the network to the maximum potential number of linkages for the network of the same number of components. The latter shows the average number of linkages for each component of the network. It should be kept in mind, however, that due to incomplete data (no data on mutual exposures of non-bank financial institutions) their information value is limited.

Box 7. Risk concentration, structure of the interconnectedness and contagion effect in the SORBNET payments system

Growing oversight requirements for ever more complex market structures cause central banks to rapidly develop quantitative analyses in the area of oversight. Simulations are used intensively, which is invaluable as they allow quantification of the effects of special situations, e.g. crisis, often difficult or simply impossible to study in a real environment. Network analyses that help better understand a highly complicated and complex financial market infrastructure and its phenomena have been developed particularly rapidly in recent times.

In the simulation research conducted by the National Bank of Poland in 2013, the Payment and Settlement System Simulator BoF-PSS2, an analytical tool developed by the Bank of Finland, was used. The software enables modelling of clearing and settlement processes in several types of payment systems with various functions and rules of operation. The simulator enables the use of real, historical transaction data. It enables analysis of liquidity requirements or settlement delays depending on the available liquidity, and creation of various scenarios of events in the payment system and assessment of their consequences. In addition, the tool enables network analyses in the payment systems.

Main assumptions of the simulation

The objectives of the simulation conducted were to provide a statistical analysis of liquidity, risk concentration and the network structure in the SORBNET payment system, and quantification of contagion effect in case of loss of liquidity of one of critical banks participating in the system.

Contagion effect that can occur in payment systems is a situation where a loss of liquidity of one of banks causes liquidity problems of other banks, which in effect of a chain reaction could cause serious disruption in the functioning of a country's financial system. Therefore, it is vital to conduct analyses, whose results would help better understand the scale and scope of risk of such event and take appropriate steps to prevent such scenario..

The simulation analysis was based on historical transaction data retrieved from SORBNET for a month featuring the highest turnover in 2012.

On a basis of the risk concentration analysis (based on an analysis of the debit side turnover on banks' current accounts) and the network structure, the critical participants of the SORBNET payment system were identified. During successive stages of the study, several simulations were conducted, according to three different event scenarios.

Scenario 1

Scenario 1 assumed a loss of liquidity by a critical participant identified on the basis of an analysis of turnover, which provided the highest liquidity to the banking sector within settlement in the SORBNET system (i.e. had the highest turnover on the debit side of its current account within interbank operations). Each of the three simulations conducted in that scenario included three successive settlement days of a selected month and assumed a loss of liquidity by a critical participant. On the first analysed settlement day of each simulation, from the beginning of operational day in SORBNET, debit orders for a participant having liquidity problems were deleted, while credit orders for that bank were left unchanged. Over successive settlement days, i.e. on the second and third day included in each simulation, the so-called behavioural aspect, which is a reaction of other system participants to liquidity problems of the selected bank (aversion to return funds or transfer new funds to the bank having liquidity problems) was taken into account, and therefore also credit orders for the critical participant were deleted.

Each simulation under the first scenario was conducted in two variants: a) and b). Variant a) assumed that transactions unsettled on a given day are transferred to the next settlement day, while variant b) that these are deleted from the system.

Scenario 2

Scenario 2 assumed a failure of a critical participant in terms of the network structure in SORBNET, identified on the basis of analysis of the system's network.

The network analyses enabling identification of the most closely linked entities and study of basic network characteristics are currently an ever more often used analytical tool by central banks. An essential element of the analyses is the possibility to understand how (and also how fast) the shocks, especially the adverse ones, could spread within the studied network.

The main criteria applied in identification of a critical participant for the purposes of the simulation were: out-degree (the number of outgoing relations) and closeness, which is a measure of time needed to propagate adverse shocks to other system participants.

Scenario 2 comprised 23 simulations, for each settlement day of the analysed month. Due to the fact that the scenario assumed a failure of a participant, from the beginning of operational day in SORBNET, both debit and credit orders for the selected bank were deleted in each simulation.

Scenario 3

Scenario 3 assumed the most extreme conditions. As in Scenario 2, Scenario 3 assumed a failure of a critical participant in terms of network structure and technical problems faced by another entity of financial market infrastructure (being a SORBNET participant). Simulations under Scenario 3 were conducted for all 23 settlement days of the selected month.

Simulation results

The results of the simulations revealed that the assumptions of all three scenarios had a negative impact on the settlement in SORBNET, resulting in inability to settle some transactions, however the values were not critical.

In the case of Scenario 1 in variant a) the number of transactions unsettled during the day ranged from 0.18% to 1.46% of a daily number of transactions submitted for settlement in the system, and their value varied from 0.36% to 2.28%. Corresponding figures for variant b) ranged from 0.01% to 2.15% in terms of number of unsettled transactions and from 0.14% to 2.15% in terms of their value.

In effect of a series of simulations conducted assuming Scenario 2 (for all settlement days of the analysed month) unsettled transactions accounted for 0.02% to 0.37% of transactions submitted to the system during the day, which represented 0.01% to 2.84% of their value (with one exception, where despite unexpected liquidity drop in the system, all transactions were settled).

Under Scenario 3, banks were unable to provide funds for settlement of 0.01% to 1% of transactions submitted for settlement in the system during the day, which represented 0.004% to 2.53% of their value.

In all simulations, participants that were unable to provide sufficient funds to cover their debit orders were banks that did not have an intraday credit facility agreement with the National Bank of Poland or those that had relatively low or zero credit limits. Other users, in the case of unexpected, abrupt liquidity slump in system, extensively used the intraday credit facility to cover their debit transactions. The maximum intraday credit used by participants during the day (with respect to all analysed scenarios) represented 20.31% of total intraday credit limit granted by the National Bank of Poland to participants (calculated on the basis of unencumbered securities in banks' portfolios).

In the situation of materialisation of the simulation's assumptions, a key role was played by the queuing mechanism, being a functionality of SORBNET provided by the National Bank of Poland, as the system's liquidity management tool. Within the mechanism, the system places orders debiting banks' current accounts, which cannot be processed for lack of funds, in the so-called central queue. After processing each payment order entering the system, which increases the balance of the entity whose orders are queuing, the queue is activated. In addition, optimisation is commenced every 30 minutes at a minimum. Optimisation procedures are based on the multilateral netting of mutual assets and liabilities, covering a maximum number of orders selected from the queue, provided that banks possess sufficient funds to process the results of such netting. In the situation of inability to process queuing orders until cut-off time for different types of orders (customer and interbank orders) or by the end of the operating day, such orders are rejected.

In the case of simulation conducted by the National Bank of Poland, the maximum number of transactions which entered the queue during the day represented 16.94% of transactions submitted to the system on that day.

Summary

The simulation proved high resilience of SORBNET and its participants to unexpected disruptions resulting in an abrupt slump in liquidity in the system. The results also showed a vital role played by an intraday credit facility provided by the National Bank of Poland and the queuing mechanism in SORBNET in crisis situations.

Selected indicators of banking sector's condition

in %	2012				2013
	Q1	Q2	Q3	Q4	Q1
Return on assets (ROA) ¹	1.26	1.22	1.20	1.17	1.14
Return on core capital (ROE) ^{1,2}	14.7	13.8	13.2	12.7	12.3
Net interest margin (NIM) ^{1,3}	2.85	2.81	2.76	2.68	2.59
Operating costs ³ to net income from banking activity ³ (C/I) ¹	51.2	51.0	51.4	51.6	52.3
Burden of charges to provisions for impaired loans ³ on net income from banking activity ¹	12.8	13.5	14.3	14.1	14.2
Loans growth rate (y/y) ⁴					
nonfinancial sector	8.2	6.3	5.6	3.4	2.2
households	5.5	4.6	3.6	2.9	2.7
consumer loans	-3.2	-3.1	-3.9	-4.1	-3.8
housing loans	8.6	7.0	6.0	5.1	4.6
enterprises	14.2	10.0	9.7	4.2	1.1
large enterprises	7.5	1.7	7.4	0.5	0.1
SMEs	20.2	16.8	11.4	6.2	2.5
Impaired loan ratios ³					
nonfinancial sector	8.4	8.5	8.8	8.8	8.9
households	7.5	7.3	7.5	7.4	7.5
consumer loans	18.3	17.8	17.9	17.2	17.3
housing loans	2.5	2.6	2.7	2.8	2.9
enterprises	10.4	11.1	11.3	11.7	11.8
large enterprises	7.7	9.4	9.7	9.7	9.8
SMEs	12.2	12.2	12.3	13.0	13.2
Burden of charges to provisions for impaired loans ³ on net value of loans ¹					
nonfinancial sector	1.07	1.11	1.12	1.07	1.05
households	1.24	1.18	1.11	0.95	0.92
consumer loans	2.96	2.73	2.52	2.23	2.09
housing loans	0.48	0.49	0.47	0.38	0.35
enterprises	0.72	0.97	1.14	1.32	1.32
large enterprises	0.72	1.11	1.14	1.60	1.57
SMEs	0.72	0.88	1.14	1.14	1.16
Funding gap ³	13.6	14.1	12.9	12.4	10.9
Short-term liquidity standard M2 ^{3,5}	1.46	1.45	1.45	1.53	1.51
Long-term liquidity standard M4 ^{3,5}	1.16	1.16	1.17	1.19	1.19
Capital adequacy ratio ²	14.2	13.6	14.1	14.8	15.4

Selected indicators of banking sector's condition

in %	2012				2013
	Q1	Q2	Q3	Q4	Q1
Core capital to risk-weighted assets ²	12.7	12.3	12.7	13.1	14.0
Financial leverage (multiple) ^{2,3}	10.58	10.62	10.55	10.82	10.63

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 4.

Non-bank financial institutions

Due to a minor degree of the interconnectedness between pension fund management companies (PTEs), investment fund management companies (TFIs), and insurance companies (ZUs) with banks, their impact on the condition of the banking sector in Poland is limited, and these institutions pose no major threat to financial system stability. Also, there is little impact of these financial institutions on the banking sector through the credit, financial and ownership channels, and mutual ties are mostly indirect as they often participate in the same capital group. In the event of shocks in the market, the potential for these entities to generate threats to financial sector stability is considerably lower compared to the banking sector.

Table 4.1. Assets of open pension funds (OFEs), insurance companies (ZUs), investment funds (FIs) and banks (PLN billion)

	NIF			NIF	Banks	NIF /
	OFE	ZU	FI			Banks
2010	221.3	145.2	121.8	488.3	1 158.5	42.1%
2011	224.7	146.2	117.8	488.6	1 293.9	37.8%
2012	269.6	162.9	151.4	583.9	1 352.6	43.2%

Note: statistics relating to the investment fund sector, prepared by the NBP, are used for the first time in this Report. Due to the change of source, data on FIs' asset value may differ from data presented in previous Reports. Source: UKNF, NBP.

Banks are stockholders or shareholders in 10 insurance companies. As at the end of 2012, the share of the banking sector in the insurance sector's core capital amounted to 0.9%. These insurance companies collected 6.1% of the gross

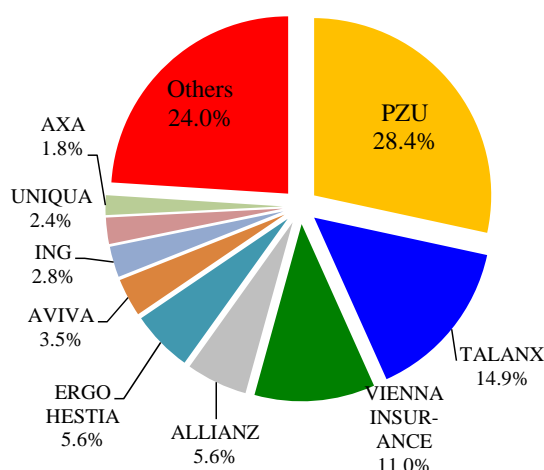
written premium (hereinafter referred to as premium).

Insurance companies in which banks are stockholders or shareholders have a minor share in the gross written premium, which explains their minimal impact on the sector through the ownership channel.⁶² A substantial part of the insurance sector (3/4 of the market measured with the premium) is controlled by large capital groups, of which the PZU group is dominant (see Figure 4.1). The second largest company is Talanx, which is the owner of: TUiR Warta and Warta Życie, HDI-Gerling Życie, TU Europa, TU na Życie Europa and HDI Asekuracja (merged with TUiR Warta on 28 December 2012). Vienna Insurance Group is a majority stockholder of Bene-

⁶² Bank Zachodni WBK holds 50% share in the capital of BZ WBK Aviva TU Ogólnych and BZ WBK Aviva Życie, as well as a 10% stake in the capital of Aviva TU Ogólnych and Aviva Życie. SGB Bank holds 5.75% share in Concordia Capital and 0.78% in Concordia Polska TUW. BNP Paribas Bank Polska is a shareholder of TUW Cuprum (2.86%), BGK – KUKE (12.15%), and cooperative banks and SGB Bank Polska – TUW (with a share in the capital amounting to 0.11% and 0.21%, respectively).

fia TU, Benefia TUnŻ, Compensa TU, Compensa TU na Życie, InterRisk TU and TUnŻ Polisa-Życie.

Figure 4.1. Groups in the Polish insurance sector (share in premium)



Source: NBP calculations based on UKNF data.

The policy of large groups impacts the insurance sector in Poland through long-term pricing policymaking and the financial group-specific product range.

As at the end of March 2013, deposits of insurance companies accounted for 1.9% of the banking sector deposits. Banks' risk related to lending to the insurance sector is minor; the value of loans provided to insurance companies accounted only for 0.1% of banks' assets.

As at the end of December 2012, domestic banks were direct shareholders in five PTEs. Their share in PTE equity capital amounted to 13%. Moreover, six banks play the role of custodians of open pension funds. As at the end of 2012, one of the banks held more than half of OFEs assets. The sector of pension funds is connected with the insurance sector to a larger degree. Domestic insurance companies have a direct share in the capital of five PTEs, which accounted for

32% of the PTE sector's own capital. Banks and insurance companies represent a majority among PTE domestic stockholders (a total of 45% compared to 48%).

Table 4.2. Exposures of pension funds (FEs), insurance companies (ZUs), investment funds (FIs) to banks (PLN billion)

	Loans and other banks' receivables from insurance companies (ZU), pension funds (FE) and investment funds (FI)				
	ZU	FE	FI	NIF	Loans NIF/Loans total
12-2010	0.2	0.4	6.9	7.5	0.9%
12-2011	1.0	0.7	2.2	3.9	0.4%
12-2012	0.3	1.9	4.6	6.8	0.7%
3-2013	1.0	3.1	5.9	10.0	1.0 %

	Deposits and banks' liabilities to insurance companies (ZU), pension funds (FE) and investment funds (FI)				
	ZU	FE	FI	NIF	Deposits NIF/Deposits total
12-2010	19.3	9.7	7.7	36.7	3.6%
12-2011	21.6	12.0	10.4	44.0	3.9%
12-2012	24.8	21.2	17.5	63.4	5.4%
3-2013	22.8	15.0	18.0	55.8	4.7%

Source: NBP.

As in previous years, OFEs financed banks to a minor degree. As at the end of March 2013, the deposits they placed represented 1.3% of the banking sector deposits. Banks' risk related to lending to OFEs is insignificant. As at the end of March 2013, the value of loans to pension funds represented only 0.3% of banking sector assets.⁶³

As at the end of 2012, six insurance companies were the sole, direct shareholders of TFIs. Their share in the sector's own capital amounted to

⁶³ Article 154 of the Act of 28 August 1997 on the Organisation and Operation of Pension Funds (Journal of Laws No. 34/2010, item 189, as amended) provides that loans and credits contracted by a pension fund must not exceed 1.5% of the value of its assets. Moreover, pursuant to article 142 (5a) (1) of the above mentioned act, the limit for an OFE investment in bank deposits and bank securities amounts, in the Polish zloty, amounts to 20% of its asset value.

15.6%. In addition, four banks were direct shareholders of TFIs; they held 9.2% of the sector's own capital.

Capital ties between TFIs and banks are usually indirect. There are a few TFIs in the market that are owned by bank groups. The presence of a bank or an insurance company in the group where a TFI is a member company influences the way participation units of investment funds they manage are distributed. Participation units can be offered via a branch network or under unit-linked insurance.

Investment funds play a minor role in bank funding. As at the end of March 2013, deposits placed by investment funds represented only 1.5% of the banking sector liabilities. On the other hand, the ratio of loans granted to investment funds to banks' assets amounted to 0.6%⁶⁴

4.1. Insurance companies

The financial situation of the insurance sector in 2012 improved as compared to 2011. The assets of the sector rose and its earnings were better than in the preceding year.

Insurers' core activity is to grant insurance protection coverage to the insured against the financial effects of fortuitous events through risk transfer and dispersion. The main source of funding for insurance companies is the premium paid by the insured.

In accordance with the systemic risk identifying criteria, developed by the Financial Stability Board (FSB) and the International Association of Insurance Supervisors (IAIS)⁶⁵, it can be said

that the basic business model of insurance companies does not generate systemic risk. However, certain activities carried out by insurance companies may be systemically significant (e.g. high exposure to derivatives, equities, credit insurance and insurance guarantees or securities lending.).

Due to a limited number of ties between entities, there is a small probability that the bankruptcy of one insurance company will trigger bankruptcies of other companies, which would generate systemic risk.

A characteristic feature of the insurance sector is the reverse product cycle. Insurance companies collect higher amounts of the written premium than the amounts of claims paid. The excess amount is treated as an investment to cover provisions (liabilities due on the insurance contracts concluded). The amount of income and claims payments and their distribution in time can be predicted and the average asset life cycle is usually shorter than the average life cycle of liabilities. Insurance companies seek to maintain stability by matching assets and liabilities and the conservative investment portfolio makes these companies less exposed to price fluctuations in the financial market than other institutions.

The exposure of insurance companies to liquidity risk is relatively small as the payment of benefits (like insurance incidents) are of a fortuitous nature and are correlated with business cycles to a small degree. Larger single claims are usually paid in instalments, often for many years.

In life insurance, funds (unless the contract is exclusively of a protective character) may be withdrawn at market price but this usually involves

⁶⁴ Pursuant to the provisions of the Act of 27 May 2004 on Investment Funds (Journal of Laws of 2004, No. 146, item 1546, as amended) open investment funds may draw loans and credits with maturity of no more than one year, exclusively from domestic banks or credit institutions. Their total value cannot exceed 10% of the fund's net assets as at the loan agreement date. Closed-end investment funds may draw loans and credits with maturity of any length from domestic banks, credit institutions or foreign banks. Their total value may not exceed 75% of the fund's net assets as at the loan agreement date. Moreover, the Act imposes limits on investment funds relating to deposits placed in the same bank or the same credit institution - their value cannot exceed 20% of asset value.

⁶⁵ "Systemic risk and the insurance sector", IAIS, 2009, <http://iaisweb.org/>, "Guidance to assess the systemic importance of financial institutions, markets and instruments: initial considerations", 2009, FSB, IMF and BIS.

tangible losses. Therefore, policyholders are less inclined toward giving up on life insurance policies. In non-life insurance (with few exceptions), the insured may not withdraw the premium paid for the period of protection granted. Liquidity problems encountered by an insurance company have little impact on other entities of the insurance sector due to a low degree of the interconnectedness between them. Thus, liquidity risk is much lower than in the banking sector.

The most important class of risk in the world insurance market is biometric risk⁶⁶ and investment risk. Due to the specific character of the Polish insurance sector, biometric risk does not play a major role. This results from the fact that the majority of life insurance is employee group insurance, unit-linked insurance and investment insurance instruments. In Poland, life annuities and sickness insurance are niche products. Moreover, insurance sold in the domestic market is not of a long-term character as insurance policies that prevail in the offer are those that provide investment.

Non-life insurance companies that hold a large credit and guarantee insurance portfolio, including credits and guarantees for systemically important institutions, may be exposed to credit risk.⁶⁷ Domestic insurance companies offer, inter alia, export credit insurance, trade credit insurance, bridging insurance, low down payment insurance. The unsecured amount of the loan is the object of low down payment insurance for a mortgage loan. In standard insurance terms and conditions, this amount is usually limited (e.g. up to 20% of the present value of the loan). The insuring party is a bank that is required to pay the premium and is entitled to receive compensation should an insurance incident occur. Benefits are paid if the borrower defaults on loan instalment repayment, when the borrower is in default and the bank terminates the loan

agreement. The insurance company pays claims up to the amount specified in the insurance contract, while the bank transfers the right to claim recourse to the insurance company.

Insurance premiums and claims

In 2012, the life insurance and non-life insurance sectors posted positive technical and financial results, and the premium was higher than in 2011.

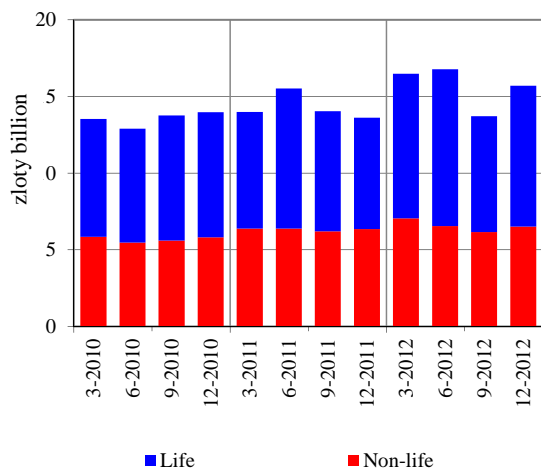
In 2012, the life insurance sector collected 36.4 billion zlotys in premium, of which the largest amount was collected in group no. 1 (19.4 billion zlotys) also comprising so-called anti-tax insurance (7.5 billion zlotys). Unit-linked insurance (UFK), in which 12.0 billion zlotys in premium was collected, continued to be very popular.

The increase in premiums observed in the life insurance sector (14.3%) was mainly driven by larger sales of anti-tax insurance with a single premium endowment insurance, written mostly for 12 months. The so-called investment insurance instruments and certain structured insurance products written in the form of endowment insurance are classified into this product group. The exclusion of capital gains tax evasion by placing overnight deposits may have contributed to increased interest in investment insurance instruments which make it possible to avoid the capital gains tax (see Box 8).

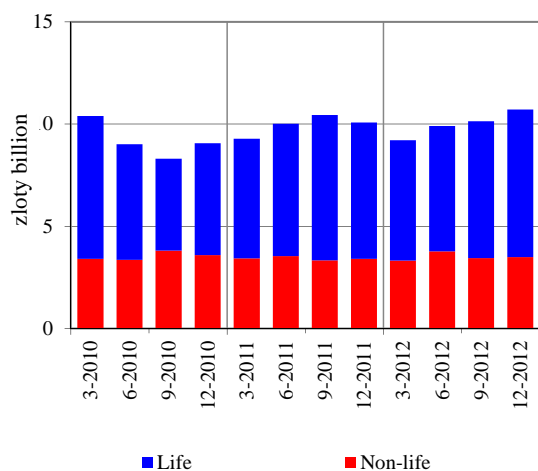
In life insurance, premium revenue in individual quarters depended on the sale policy related to anti-tax insurance. This phenomenon came to prominence in 2008-2012, in particular. The inflow of premiums in this insurance group was not correlated with payment of claims (see Figure 4.2 and Figure 4.3), which resulted in excess funds being placed on deposits to cover gross insurance provisions.

⁶⁶ Biometric risk – refers to the risk of the insured person's death, disability or longevity.

⁶⁷ In 2012, the premium due to the sale of credit insurance amounted to 0.5 billion zlotys, which represents 2% of the non-life insurance premium. The claims paid amounted to 3 billion zlotys and technical profit of this insurance group amounted to 32 million zlotys.

Figure 4.2. Gross written premium in the insurance sector

Source: UKNF.

Figure 4.3. Gross claims paid

Source: UKNF.

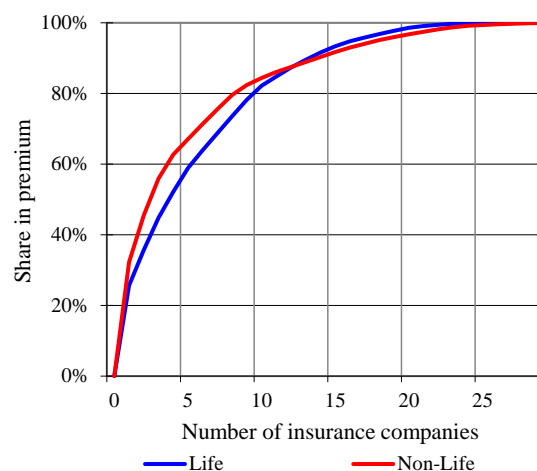
In 2012, the non-life insurance sector collected 26.4 billion zlotys in premium written. In 2012, the prices in non-life insurance were determined by entities with a large market share, while in 2009–2011 the pricing policy was influenced by companies that sold insurance online and competed, in terms of prices, with large entities.

In non-life insurance (unlike in life insurance), the inflow of premiums is evenly distributed throughout the year, which is mainly the effect of the protective character of such insurance.

The payment of claims depends on the macroeconomic situation to a smaller degree than in life insurance.

The amount of non-life insurance premium is mostly dependent on the sale of AC insurance (it accounted for 21.9% of the premium), automobile third party liability OC (it accounted for 34.8% of the premium), fire insurance and fortuitous events insurance (a 20.1% share in the premium) and other third party liability insurance.

In 2012, the concentration of the insurance sector measured with the premium slightly increased. Premium written of 10 largest life insurance and 10 largest non-life insurance companies amounted to over 81.2% and 84.3% of the premium (in 2011 – 79.9% and 82.4%, respectively) (see Figure 4.4).

Figure 4.4. Distribution of gross written premium in life and non-life insurance

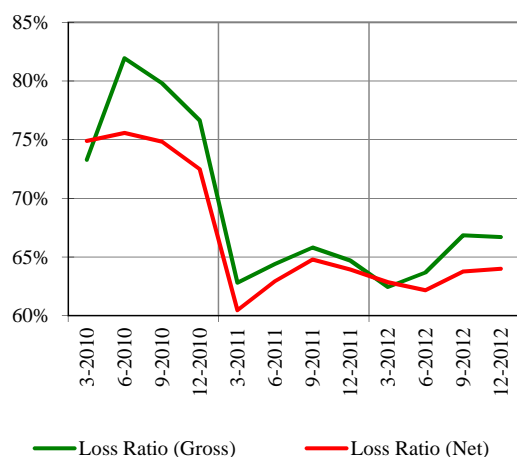
Source: UKNF.

In the insurance sector, the premium is charged at the beginning of the insurance period and claims are paid out with delay. Therefore, the ratio of costs related to claims' payment to premium revenue in the reporting period is described by the synthetic loss ratio.

The ratio measures effectiveness and has remained at a stable level (below 70%) for two years (see Figure 4.5). This shows that prof-

itability of insurance activity (without taking into account the cost of insurance activity) is high, which has a direct impact on the financial results of insurance companies.

Figure 4.5. Loss ratio gross and net in non-life insurance



Source: UKNF.

Earnings

The technical result of life insurance companies did not practically change despite the high value of premium written in 2012 (see Table 4.3), which resulted from a small margin in so-called anti-tax insurance and the need to create large insurance provisions for future claims' payment coverage. The most profitable segment in life insurance was employee insurance which has a major influence on earnings of this sector.

In 2012, technical result in non-life insurance improved. The improvement was largely driven by the price rises of automobile third party liability insurance OC and a fall of the ratio of claims to premium written. Due to a decrease in the number of traffic accidents, and smaller consequences they generated, earnings arising from automobile third party liability insurance OC and auto casco insurance AC improved significantly. The earnings depended largely on earnings of the PZU group, particularly on the dividend PZU Życie

paid to PZU (see Table 4.3).

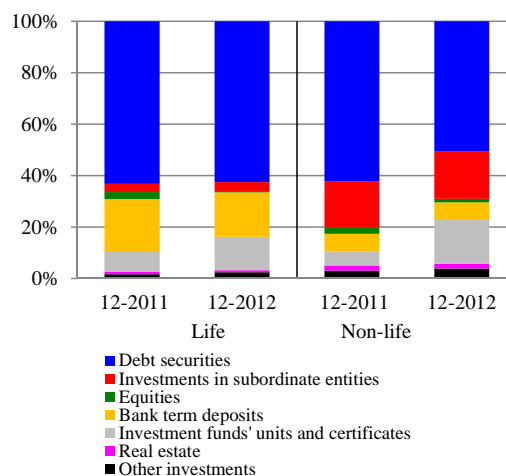
Investments of insurance companies

In 2012, the structure of investments of insurance companies did not change significantly. In non-life insurance, there was an increase in participation units of investment funds (from 5.5% at the end of 2011 to 17.4% at the end of 2012).

At the end of 2012, investments of life insurance, where the investment risk was borne by insurance companies, amounted to 49.3 billion zlotys (47.3 billion zlotys at the end of 2011), and of non-life insurance - 52.0 billion zlotys (45.5 billion zlotys at the end of 2011).

Treasury securities had the largest share in the investment portfolio of insurance companies.⁶⁸ (see Figure 4.6) The share of corporate shares quoted on the regulated market accounted for an insignificant share of the sector's assets.

Figure 4.6. Structure of investments of insurance companies



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

The structure of investments of non-life insurance companies saw a significant increase in the share of investment funds' participation units in

⁶⁸ The majority of the Treasury securities portfolio is held to maturity, which limits the impact of market interest rates changes on the valuation of insurance companies' assets.

Table 4.3. Earnings of insurance companies

	12-2010 (in million zloty)	12-2011 (in million zloty)	12-2012 (in million zloty)	Change 12-2011/ 12-2012 (in %)
Life insurance sector				
Gross written premium	31 420	31 832	36 377	14.3
Technical result	3 593	3 347	3 462	3.4
Financial result	3 653	2 919	3 239	11.0
ROE (in %)	29.6	23.9	23.2	-0,7 pp.
Non-life insurance sector				
Gross written premium	22 739	25 291	26 265	3.9
Technical result	-1 285	298	719	141.4
Financial result	3 094	3 085	3 387	9.8
<i>dividend paid out by PZU Życie to PZU</i>	<i>3 120</i>	<i>1 987</i>	<i>1 177</i>	-
ROE (in %)	18.8	17.9	16.8	-1.1 pp.

Source: UKNF, PZU.

2012. This came on the back of a change in the investment policy of the PZU group which continued to move its financial investments to investment funds for the purpose of tax (CIT on capital gains and VAT) optimization. A portion of the investments was transferred to a specialised open investment fund set up by TFI PZU for the needs of the group. These activities led to an increase of investments into PZU investment funds' participation units from 0.5 billion zlotys at the end of 2011 to 6.9 billion zlotys at the end of 2012, which had a major impact on the asset structure of the non-life insurance sector as a whole.

The value of unit-linked insurance investments, where investment risk is borne by clients, amounted to 45.1 billion zlotys at the end of 2012 (37.8 billion zlotys at the end of 2011). The largest share in the investments was that of investment funds' participation units and certificates of investment funds as well as debt securities.

Solvency of insurance companies

The stability and solvency of the insurance sector depend on the adequacy of insurance provisions,

value of assets to cover the provisions and the capacity to maintain the statutory solvency ratios at the required level. In non-life insurance, due to the large amounts of business insurance, the provisions arising from reinsurance contracts have a significant impact on the situation of the sector. At the end of 2012, all insurance companies met the requirement to hold own funds to cover the solvency margin.

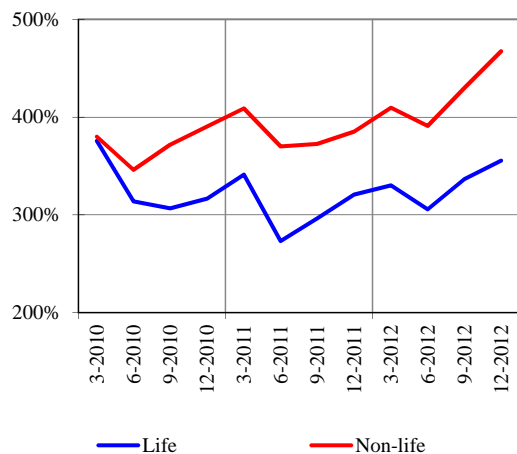
The main parameter describing the solvency of the sector is the activity monitoring ratio.

In the last two years, the insurance sector's own funds growth was higher than that of the solvency margin, which led to the rise of the monitoring ratios of both life and non-life insurance sectors (see Figure 4.7).

In life insurance, this ratio amounted to 380% for 5 largest insurance companies, and 350% – for 10 largest companies. In non-life insurance, it was 549% and 484%, respectively.

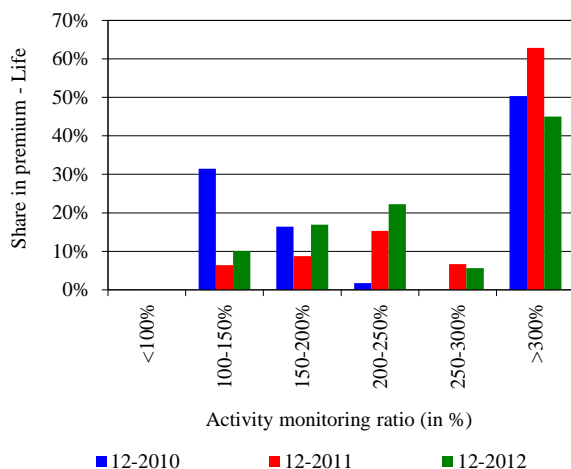
Average values of the activity monitoring ratio in both sectors exceed significantly the statutory level. The ratio in almost half of insurance sector entities (measured with premium) is higher than 300% (see Figures 4.8 and 4.9).

Figure 4.7. Activity monitoring ratio in the insurance sector



Source: UKNF.

Figure 4.8. Distribution of activity monitoring ratio in life insurance



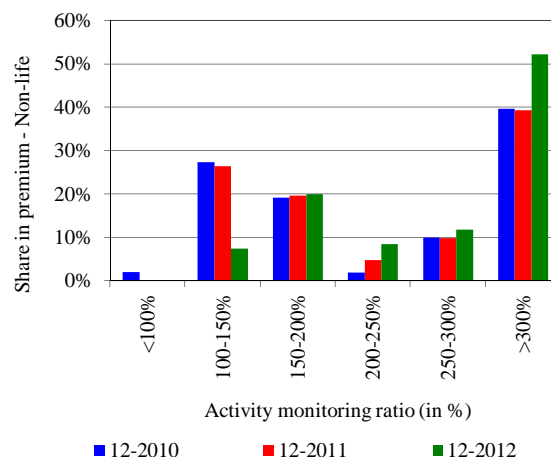
Source: UKNF.

Periodical falls in the value of the monitoring ratio were primarily caused by dividend payouts and the related decrease in own funds. Moreover, in the life insurance sector, an additional factor influencing the level of the ratio was a change in insurance provisions arising from a large increase in insurance premium. This increase has a direct impact on the solvency margin, and, thus on the activity monitoring ratio.

Domestic insurance companies hold higher own

funds (relative to the capital requirements) than European insurers. In 2012, the average European value of the monitoring ratio in life insurance was below 200%, and in non-life insurance – below 350%.

Figure 4.9. Distribution of activity monitoring ratio in non-life insurance



Source: UKNF.

Another important ratio that serves to assess the solvency of the system is the provisions coverage ratio. At the end of 2012, this ratio in life and non-life insurance stood at 111% and 127% (108%, respectively, and 124% at the end of 2011).

The ratio of provisions coverage with deposits also rose to 118.7% and 151.9%, respectively, of insurance provisions, net of reinsurance. This ratio shows that the insurance sector keeps sufficient deposits to pay claims arising from insurance contracts.

Reinsurance

Reinsurance schemes significantly contribute to the stability of the non-life insurance sector. A proper reinsurance scheme helps optimize financial results by mitigating the consequences of fluctuations in the claims ratio. Besides individual large sum insurance contracts, reinsurance cover is also provided for cat risk.

Risk is dispersed when some of it is passed onto

reinsurers as they usually operate on a global scale (they merge and offset risk from many regions of the world). Retrocession, i.e. a further transfer of risk from a reinsurer to another reinsurer, limits the vulnerability of insurance companies to the reinsurer's insolvency risk. Domestic insurance companies are primarily reinsured within groups.

Under reinsurance schemes, non-life insurance companies transferred premiums in the amount of 3.7 billion zloty in 2012 while reinsurers paid 2.3 billion zlotys in claims. In 2012, insurers' financial result on reinsurance business was positive and amounted to 95 million zlotys, while in 2011 insurance companies posted a 341 million zlotys loss on reinsurance business.

The proper level of portfolio coverage with appropriate reinsurance schemes is reflected in the loss ratio (net of reinsurance) which was lower than the gross loss ratio. The share of reinsurance companies in claims paid was higher than in premiums, and the premiums retention ratio (85.9%) was higher than the claims retention ratio (83.4%). Combined Operating Ratio – COR⁶⁹ – for domestic insurance companies (95.7%) was lower than COR on reinsurers' business (102.7%). Therefore, in 2012 insurance companies posted a positive net result on insurance business while reinsurers posted a loss on reinsurance cover provided to domestic insurance companies.

Box 8. Bankassurance in the Polish insurance market

The term bancassurance usually means the sale of insurance policies to customers of a bank through bank establishments. According to the Polish Insurance Association (Polska Izba Ubezpieczeń), the amount of the gross premium written in 2012 obtained under bancassurance accounted for 53.4% of the premium in the life insurance sector (around 5% in non-life insurance).

Insurance policies sold under bancassurance are as a rule investment insurance instruments or unit-linked insurance and are written on a group basis. Group life insurance is a contract concluded by a bank as the insurer (or another financial intermediary) on the account of its customers. These contracts are often concluded between entities linked by capital. The obligation to pay the insurance premium is the responsibility of the insurer.

Life insurance contracts sold via bancassurance as group insurance are less beneficial for customers than individual insurance policies because of the following:

- the insured is not party to the contract and has not the same rights as the insurer,
- the insured is responsible for covering the insurance costs,
- absence of the obligation to provide the insured with the general insurance terms and conditions,
- the insured may not claim damages relating to irregularities that arise from the conclusion of the insurance contract,
- no option for no-cost withdraw from the insurance contract,

⁶⁹ Combined Operating Ratio – claims paid, including change in provisions and insurance costs to premium earned.

- group insurance may be a form of circumvention of regulations relating to insurance mediation and a bank as the insurer should not play the role of an insurance intermediary being at the same time party to the contract.

Group insurance eliminates from a set of potential insurance cover measures that the insured is entitled to the right to claim damages relating to irregularities related to the course of the process of insurance, both claims connected with concluding a contract and with damage liquidation.

The design of group insurance raises legal doubts about the commission of the Act on Insurance Mediation as the insurer (i.e. a bank) acts as party to a group insurance contract and at the same time performs insurance mediation. The provisions of the Act on Insurance Mediation indicate that an insurance intermediary acts under the relationship of the parties to the insurance contract, on behalf of one of the parties but is not itself party to the insurance relationship. Such a system of mediation may give rise to irregularities in the functioning of the sector.

Insurance products sold through bancassurance are often offered as an alternative to a bank deposit. This is the case as fees on the sale of insurance policies can be higher than fees on the sale of bank products.

In view of the irregularities found in the sale of insurance products by banks in 2013, the Polish Financial Supervision Authority issued Recommendation M aimed, inter alia, at limiting the sale of investment insurance instruments via the bank channel. In the first quarter of 2013, investment insurance instruments were offered only by three banks – Credit Agricole, Deutsche Bank PBC and Nordea Bank.

4.2. Pension fund management companies and open pension funds

A shortfall in an open pension fund arising from not achieving the minimum required rate of return (MWSZ) is the main risk factor to the stability of the capital part of the pension system. In this context, equity capitals of a pension fund management companies are therefore of great importance for preserving stability and solvency of the pension funds sector. These capitals may be used to cover a shortfall once it materializes. The present condition of the pension sector indicates such a threat does not exist.

Financial results of pension fund management companies

In 2012, the financial results of the sector of pension fund management companies improved as

compared with 2011 (see Table 4.4). Despite a decline in revenues from pension funds' management, there was an increase in technical profit. This resulted from a decline in fund management costs after the prohibition of acquisition services had been introduced on 1 January 2012.

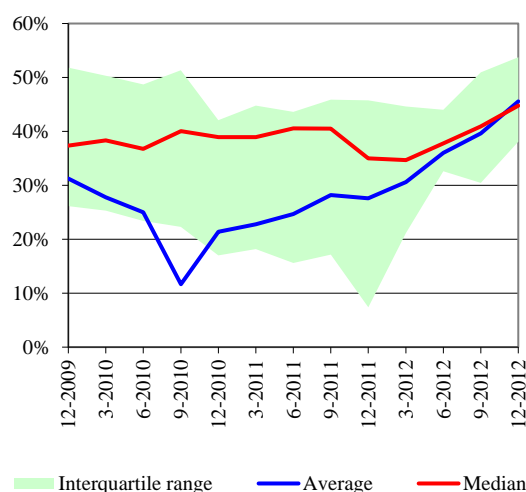
In 2012 fund management fees affected significantly PTE revenues. These revenues accounted for 68% of the PTEs revenues from management of open and voluntary pension funds. The increase in PTE revenues from funds' management observed in 2012 resulted from the considerable growth of OFE net assets (by 44.9 billion zlotys). In the analysed period, there was a significant decline in PTE revenues arising from contribution fees resulting from their statutory reduction. However, if there are no further changes in the existing regulations related to the contribution rate charged by PTEs, an increase in PTE revenues from contribution fees may be expected in 2013. This is associated with the increase in the

contribution rate from 2.3% of its base to 2.8% since 1 January 2013. Revenues from the use of the OFE reserve account had also an influence on PTE financial results in 2012. Pension fund management companies can withdraw funds accumulated on the reserve account if the 6-year rate of return of the fund they manage is equal to or higher than inflation rate for the same period. In 2012, all PTEs withdrew a total amount of 111.2 million zlotys (70.3 million in 2011) from this account.

In 2012, there was a significant increase in technical profitability of the PTE sector - up to 52% against 39% in 2011 (see Figure 4.10). The rise was driven by a considerable decline in costs resulting from the above mentioned prohibition of acquisition services. Acquisition costs declined by almost 260 million zlotys (i.e. by 67.5%) and amounted to 125.1 million zlotys at the end of 2012. As it is possible to calculate acquisition costs over time, some of the PTEs continued to present them in their financial statements.

Therefore a further decrease in acquisition costs for OFE may be expected in subsequent years. The prohibition to provide acquisition services does not, however, apply to voluntary pension funds managed by PTEs.

Figure 4.10. Technical profitability of pension fund management companies



Source: NBP calculations based on UKNF data.

Table 4.4. Financial results and profitability of PTEs

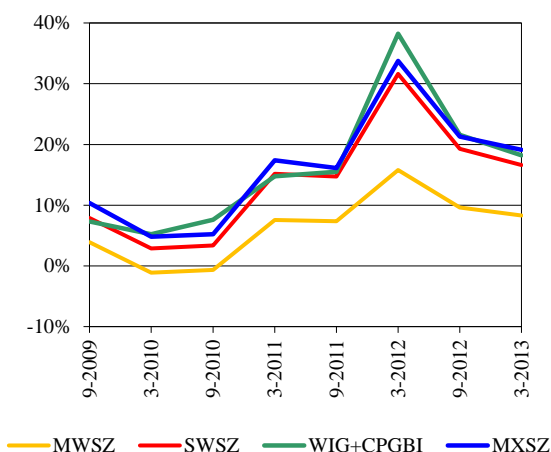
	12-2010 (in mil- lion zloty)	12-2011 (in mil- lion zloty)	12-2012 (in mil- lion zloty)	Change 12-2012/12-2011 (in %)
Revenues from funds' manage- ment:	1 828	1 683	1 515	-10.0
- contribution fee	806	554	290	-47.7
- management fee	894	981	1 032	5.2
Funds' management costs:	1 232	1 025	728	-29.0
- obligatory costs	533	428	400	-6.5
- costs of acquisition	464	385	125	-67.5
- other costs	234	212	203	-4.2
Technical profit on funds' man- agement	596	658	787	19.5
PTEs net profit	598	619	715	15.6
Technical profitability on funds' management (in %)	32.6	39.1	51.9	12.8 pp.
ROE (w %)	18.3	19.4	21.0	1.6 pp.

Source: UKNF.

Rates of return of OFEs

As at the end of March 2013, all pension funds generated 36-month rates of return which were higher than MWSZ. The weighted average rate of return (SWSZ) for the period from 31 March 2010 to 29 March 2013 amounted to 16.6%, while MWSZ was 8.3%. However, the rate of return of one of the funds was close to the value of the MWSZ. The difference between MWSZ and the rate of return of this OFE amounted to 1.5 percentage point.

Figure 4.11. Rates of return of open pension funds



Note: MWSZ/SWSZ/MXSZ - minimum required/ weighted average/ maximum rate of return of OFE. WIG+CPGBI - WIG and CPGBI rate of return. CPGBI - Citigroup Poland Government Bond Index. Source: UKNF, GPW, Bloomberg.

A significant decline of the value of SWSZ and MWSZ observed at the end of the first quarter of 2013, as compared with these rates for the period from 31 March 2009 to 30 March 2012, stemmed from the low value of the accounting unit on 31 March 2009. The comparison of 3-year SWSZ of OFEs as at the end of March and September achieved in 2009-2013 with rates of return calculated on the basis of changes in the share in-

dex and the government bond index shows that - for most of the analysed period - pension funds' investment performance was on average, lower than the results of the market portfolio with a structure reflecting that of OFEs' investment portfolio (see Figure 4.11).

The rates of return attained by OFE members do not equate the rates presented in the Figure 4.11, calculated on the basis of the value of accounting units. The reason is that rates of return for fund participants are decreased not only by the management fee but also by the contribution fee.

Equity capital of pension fund management companies

The equity capital of pension fund management companies are of particular importance for the stability of the capital part of the pension system. PTE equity capital may be used to cover shortfalls arising from a lower rate of return attained by an open pension fund than the minimum required rate of return.⁷⁰

In 2012, the capital buffer of the PTE sector increased. At the end of 2012, the value of PTEs' equity capital amounted to 3.6 billion zlotys, which represented a 14.2% rise as compared to 2011. The increase in equity capital of the PTE sector resulted, inter alia, from the recommendation issued by the KNF in January 2012 with regard to strengthen capital of PTEs. In accordance with the recommendation, PTEs should not pay dividends and retain earnings to increase equity capital if their capacity to cover a potential shortfall in OFE was low.

As a result, in 2012 seven PTEs decided to pay a dividend in the total amount of 288.3 million zlotys, while in 2011 seven PTEs paid a dividend amounting to 878.7 million zlotys.⁷¹ The value of dividends paid by PTEs in 2012 accounted

⁷⁰ A shortfall at an OFE is covered from PTE equity capital, when funds accumulated on the reserve account and in the additional section of the Guarantee Fund are insufficient to adequately increase the value of an accounting unit of the fund.

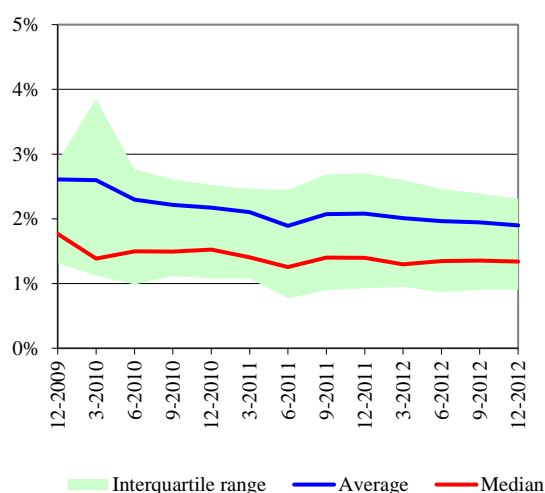
⁷¹ In 2012, ten PTEs were entitled to pay a dividend.

⁷² In 2011, two PTEs paid a dividend from profits from previous years.

for 46.6% of PTEs profit for 2011; in 2011 this ratio stood at 147%.⁷² Moreover, three PTEs allocated the whole profit to reserve or supplementary capital.⁷³

Pension fund management companies have relatively low equity capital as compared to the value of the assets they manage. In 2012, this ratio slightly decreased and amounted to an average of 1.9% (see Figure 4.12), which was caused by a higher growth rate of net assets of individual pension funds than that of equity capital of the PTE sector. On average, a PTE would be able to use its equity capital to cover a shortfall not exceeding 1.9% of the fund's assets. In comparison to shortfall which occurred in the past, a shortfall reported in September 2001 represented 7.6% of the fund's assets (35.4 million zlotys).

Figure 4.12. Ratio of pension fund management companies' capital to the value of open pension funds' net assets they manage



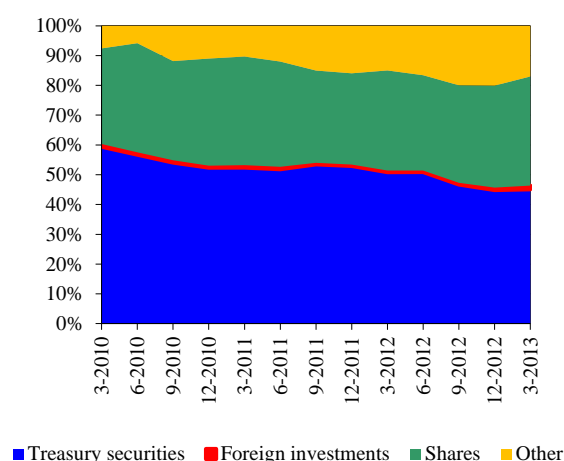
Source: NBP calculations based on UKNF data.

Structure of OFE investments

In 2012, pension fund management companies continued their investment strategy to invest the majority of OFE assets in domestic Treasury securities and shares of companies listed on the GPW (see Figure 4.13). Since the publication of the previous *Report*, the structure of OFE investment portfolio has not significantly changed. As

at the end of March 2013, the share of domestic Treasury securities declined to 44.8% of assets and was one of the smallest since the start of operating the capital part of the pension system in Poland.

Figure 4.13. Structure of investment portfolios of open pension funds



Source: UKNF.

From 1 January 2013, the regulatory limit for OFE investment in shares was increased from 45% to 47.5% of assets. In the analysed period, OFEs increased their investments in equities (from 32.6% to 36.4% of assets), despite a fall in the price of shares listed on the GPW observed in the first quarter of 2013. This increase was driven by relatively large purchases of shares by OFEs, particularly in the secondary market under a public offering. As a result, there was a decrease in the share of deposits and bank securities in OFE portfolios (by 6.1 billion zlotys compared to the end of September 2012), probably held by the funds to buy equities.

Domestic non-Treasury debt securities are the third largest category of OFE portfolio. As at the end of March 2013, their share in OFE assets amounted to 11.1%. Bonds issued by BGK for the Toll Motorways and National Road Fund were a dominant component of this category of investment. Open pension funds invest assets in

⁷³ "Sytuacja finansowa powszechnych towarzystw emerytalnych w 2012 r.", 2013, UKNF.

these debt securities due to their slightly higher interest rate than that of government bonds, and similar credit risk.

The Council of Ministers is required to review the functioning of the pension system until 31 December 2013 and submit information to the Parliament about the consequences of the application of legal regulations in this sector as well as present proposals of changes.⁷⁴ Therefore, modifications may be expected in legal acts regarding the pension fund sector, which may have an impact on the financial condition of PTEs that manage them. After cut-off date of *Report*, proposal of changes in pension sector was published. Introducing these changes can lead to lowering OFE activities. Modification that will be introduced in the pension sector should minimize their impact on financial markets. Although the final version is not known yet, it seems that some details of presented proposal can limit a development of some financial markets and increase quotes volatility.

4.3. Investment fund management companies and investment funds

The analysis in this *Report* focuses on the sector of investment fund management companies (TFI) rather than on the sector of investment funds. Given the specific nature of services they provide, investment funds, unlike the TFIs managing them, are incapable of becoming insolvent

and going bankrupt. Investment funds do not guarantee the set investment objective will be met and the risk underlying their activities is borne in whole by the holders of participation units. Therefore, investment funds' activities do not generate risk to financial system stability.⁷⁵

A potential deterioration in the financial condition or capital position of TFIs should not negatively impact the assets accumulated in the investment funds they manage. Investment fund management companies and investment funds are separate legal persons. 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. The present situation of the investment fund management companies' sector does not pose risks to financial system stability in Poland.

Financial results of investment fund management companies

The financial condition of investment fund management companies worsened in 2012 (see Table 4.5). Despite an increase in the average value of investment funds' net assets, TFI management revenues were lower than in 2011.⁷⁶

The reduction of the management fee charged by TFIs was connected with investors' minor interest in funds investing in the equity market. In 2012, the net inflow of funds was mainly observed to funds investing in debt securities.⁷⁷ The level of management fees charged by TFIs for managing equity, balanced and stable growth funds is substantially higher than for managing funds investing in debt securities. Nearly half of the

⁷⁴ Article 32 (2) of the Act of 25 March 2011 on Amending Certain Acts on the Operation of the Social Insurance System (Journal of Laws of 2011, No. 75, item 398, as amended).

⁷⁵ Investment funds managed by TFIs connected with the banking sector may be exposed to reputation risk related to a negative perception of the image of a fund or a TFI by investors and counterparties.

⁷⁶ The fee for investment fund management is the main source of TFI revenues. In 2012, these revenues accounted for 96.9% of the sector's total aggregate revenues.

⁷⁷ Due to the change in data source, the category of money and cash market funds will not be analysed as it is not listed in NBP statistics. Entities classified to this category to date have been classified as debt securities funds or other funds.

Table 4.5. Financial results and basic indicators for the TFI sector vs. average monthly net asset value of investment funds

	12-2010 (in million zloty)	12-2011 (in million zloty)	12-2012 (in million zloty)	Change 12-2012/ 12-2011 (in %)
Total revenues:	2 434	2 425	2 169	-10.6
- management fee	2 234	2 243	1 978	-11.8
Total costs	1 887	1 896	1 764	-7.0
Pre-tax profit	547	530	405	-23.5
Net profit	442	428	325	-24.1
Average value of net assets	111 409	122 395	138 585	13.2
Pre-tax profit margin (in %)	22.5	21.8	18.7	-3.2 pp.
ROE (in %)	41.5	35.4	31.7	-3.7 pp.

Note: due to a change of the source, the data may differ from those presented in previous *Reports*. Data on average monthly net asset value of investment funds for 2010 are not fully comparable to 2011 and 2012 data as their source is different.

Source: UKNF, GUS, NBP.

funds invested in domestic and foreign debt securities funds in 2012 were invested in a single entity – an investment fund established for the needs of the PZU group. 2012 also saw a decline in TFI costs. Variable distribution costs declined the most.⁷⁸ This category of costs comprises fees paid by TFIs to entities that distribute participation units. Variable distribution costs were lower by 16.8% than in 2011. The decline in costs was, however, too small to offset the decline in TFIs revenues. The sector's aggregate financial result was by almost one fourth lower than in 2011. In 2012, thirty TFIs posted a profit and 13 TFIs –

a loss.⁷⁹

Equity capital of investment fund management companies

As at the end of 2012, the sector's equity capital amounted to 975.9 million zlotys and was lower by 23% than as at the end of 2011. The decline stemmed from a decrease in financial results and dividends paid by some entities. In 2012, the dividends paid by twenty four TFIs totalled 639.8 million zlotys.⁸⁰

At the end of 2012, all TFIs met the regulatory capital requirements.⁸¹ The aggregate minimum

⁷⁸ Variable distribution costs are the main item of costs borne by TFIs. In 2012, they represented 48.8% of the sector's total costs.

⁷⁹ As at the end of 2012, fifty four TFIs held an operating licence, however one TFI received it only at the end of December. Financial data presented in the *Report* do not include data of this entity.

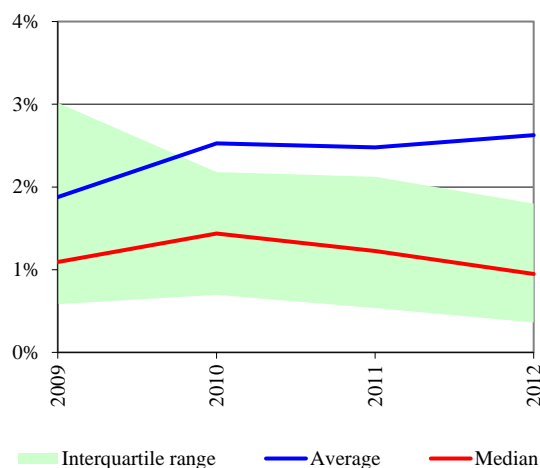
⁸⁰ In November 2012, the KNF presented its position on the dividend policy of financial institutions, including investment fund management companies. The recommendation of the KNF was aimed at strengthening TFIs' capital base.

⁸¹ As provided for in Articles 49 and 50 of the Act of 27 May 2004 on Investment Funds, an investment fund management company is obliged to keep its shareholder's 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 EUR 125 thousand, or EUR 730 thousand if the object of its activities is 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 a management company exceeds the zloty equivalent of EUR 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 EUR 250 million.

capital requirement for the sector was slightly lower than at the end of 2011, which resulted from a reduction in variable distribution costs in 2011 and a slight appreciation of the zloty in 2012.

The sum of TFIs' equity capital was over four times higher than the aggregate capital requirement. Both the aggregate and average TFIs' equity capital coverage ratio⁸² was lower than at the end of 2011. The decrease was mainly driven by a decline in equity capital in one TFI. The equity capital coverage ratio improved in over half of the entities. However, the majority of investment fund management companies registered a decline in the ratio of equity capital to the assets of investment funds they manage (see Figure 4.14). The decline could make it difficult for TFIs to pay damages should participation unit holders file claims against TFIs related to an improper management of investment funds.

Figure 4.14. Ratio of selected TFIs' equity capital to net assets of investment funds they manage



Source: Analizy Online, UKNF, NBP.

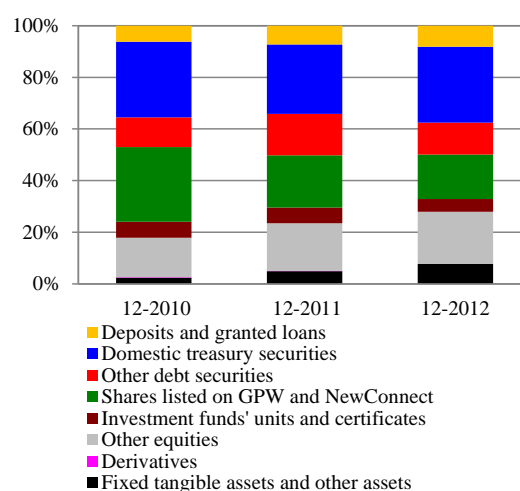
As the financial results of TFIs deteriorated, the aggregate ratio of the sector's equity capital profitability declined. ROE for individual TFIs was largely discrepant. Entities with largest assets

under management recorded the highest profitability.

Structure of assets of investment funds

The structure of investment funds' assets did not differ significantly at the end of 2011 and 2012 (see Figure 4.15). Equities and debt securities had a similar, slightly over 40%, share in investment funds' assets.

Figure 4.15. Structure of assets of investment funds



Source: NBP.

Domestic Treasury securities were the main category of funds' assets. Their share increased insignificantly compared to the end of 2011. On the other hand, there was a decrease in the significance of non-Treasury debt securities and shares listed on the main list of the GPW and NewConnect market, and investment funds' participation units.

Other equities had a substantial share in the structure of investment funds' assets. This may have resulted from investors' great interest in private equity closed-end funds used for tax optimization as the funds invested in shares of limited joint-stock partnership companies.

⁸² Equity capital coverage ratio is the ratio of the value of TFI's equity capital to the value of the minimum capital requirement.

Box 9. Money market funds

Money market funds in the world belong to the shadow banking sector. The reason for this is, *inter alia*, that their participation units are perceived as alternatives to bank deposits (in particular, participation units of constant net asset value money market funds that seek to maintain a stable value of their participation units¹) despite the lack of guarantees analogical to the deposit guarantee in the banking system. These entities may face mass withdrawals of funds. Moreover, money market funds are an important source of bank short-term funding. More than 70% of their assets are invested in banking sector instruments. In the case of financial market uncertainty, fund sponsors, often banks, may provide support to prevent an excessive decline in the value of participation units below their nominal value (sponsor support).²

In December 2012, the European Systemic Risk Board (ESRB) issued a recommendation on developing solutions aimed at mitigating the risk connected with money market funds, including, in particular, the risk of investor runs and of systemic consequences of such situation:³

- The transformation of constant net asset value funds into variable net asset value funds.⁴ As a result of such a transformation, participation units of funds should be associated, to a lesser extent, with a bank deposit as their price will reflect the value of assets in a fund's investment portfolio (market valuation). Asset valuation according to amortised cost accounting would be permitted only in specific circumstances and the funds applying it would additionally have to be subject to prudential, capital and liquidity requirements.
- Higher liquidity requirements. Money market funds would be required to maintain specific amounts of liquid assets to increase their capacity to cope with potentially larger requests for redemptions of participation units, reduce the need for sale of assets and limit the contagion effect for other entities that hold such assets in their portfolios.
- Providing investors with information. Information addressed to MMFs' investors should draw their attention to the absence of a capital guarantee and the possibility of a loss and of principal loss. Any references in the information of money market funds to possible sponsor support should only be allowed if such support is a firm commitment on the part of the sponsor. Money market funds should also inform participation unit holders about the applied asset valuation methods.
- Reporting and information sharing. MMFs should be required to report any instances of sponsor support to supervisory authorities. Expanding the scope of money market funds' reporting has also been proposed.

In Poland, the use of the term “money market” in the name of an investment fund is only permitted to entities complying with the criteria provided for in the Act on Investment Funds⁵ and in the Regulation on conditions to be met by money market funds.⁶ As at the end of 2012, there were two such funds and their asset value did not exceed 1 billion zlotys. None of the funds operating in the Polish market satisfied the definition of a money market fund as provided for in the CESR guidelines⁷ and none was included in the sector of monetary financial institutions.

In addition, the provisions of the Act on Investment Funds and the Regulation on specific accounting principles of investment funds⁸ do not permit the establishment of constant net asset value money market funds.

¹ Money market funds can operate as variable net asset value or constant net asset value entities. As at the end of 2012, assets of European money market funds amounted to 922.8 billion euro. Assets of constant net asset value funds accounted for around 40% of the sector's assets.

² Such a support may consist in, e.g., purchase of illiquid components of the fund's investment portfolio.

³ "Recommendation of the European Systemic Risk Board of 20 December 2012 on money market funds", 2012, ESRB.

⁴ In November 2012, a similar solution with regard to U.S. money market funds was proposed by the Financial Stability Oversight Council.

⁵ Article 178 of the Act of 27 May 2004 on Investment funds (Journal of Laws of 2004, No. 146, item 1546, as amended).

⁶ Regulation of the Minister of Finance of 20 August 2004 on conditions to be met by money market funds (Journal of Laws of 2004, No. 187, item 1936).

⁷ "CESR's Guidelines on a common definition of European money market funds", 2010, CESR.

⁸ Regulation of the Minister of Finance of 24 December 2007 on specific principles of accounting of investment funds (Journal of Laws of 2007, No. 249, item 1859).

Chapter 5.

Credit unions

The financial condition of the credit union (SKOK) sector, which has been subject to supervision by the Polish Financial Supervision Authority (KNF) since 27 October 2012, was assessed by the KNF. The assessment, based on preliminary financial data, was published in a study on 6 June 2013.

According to the assessment, the capital condition of credit unions is complex, regulatory capital - despite an over four-fold growth shown in the years 2006–2012 – has to be regarded as inadequate to their operations, because it does not cover the risk borne by credit unions. The liquidity risk of credit unions is at an elevated level as a result of the maturity mismatch of assets and liabilities.

As at the KNF study publication date, 44 out of 55 credit unions were obliged by the KNF to initiate rehabilitation processes. Credit unions have to urgently take restructuring measures, including via the stabilisation fund.

The rules and legal framework governing the functioning of the credit union system

The transformation of Poland's economy in the early 1990s paved the way for the rebirth of financial institutions governed by the principle of mutuality, modelled on Stefczyk's credit unions from 1918–1939. An impulse to reactivate the self-help movement was provided by the Independent Self-governing Free Trade Union "Solidarity" whose initiative was supported by the World Council of Credit Unions, Inc. (WOCCU).

The Foundation for Polish Credit Unions was established in 1990, and the first credit union

started on 31 August 1992 at a Combined Heat and Power Station in Gdańsk. The legal basis for the operation of the credit union was provided by the Act of 23 May 1991 on Trade Unions, which paved the way for opening, apart from the workplace savings and loans scheme for employees (Pracownicze Kasy Zapomogowo-Pożyczkowe, PKZP), also credit unions at the workplace. The concept of credit unions is based on their link with the workplace, voluntary association of employees to provide financial self-help and not-for-profit activity. New credit unions were set up in enterprises under this law and in accordance with the Regulation of the Council of Ministers of 19 December 1992 on workplace savings and loans schemes for employees and credit unions. In 1992, credit unions estab-

lished the National Association of Credit Unions (National Association, KSKOK), which helped to develop and file a bill on cooperative savings and credit unions with the Sejm on 18 January 1993. The bill was passed by the Sejm on 14 December 1995.

Polish SKOKs are the equivalent of credit unions, or financial self-help institutions, widespread throughout the world.⁸³ The main principle behind the idea of credit unions is to provide services only to their members, and that credit union membership is based on a common bond. Credit unions are not-for-profit entities. Like other credit unions, Polish SKOKs are associated with WOCCU.

Although deposit taking and credit granting are their core activity and although under EU law credit unions are credit institutions, they are not subject to the Polish Banking Law and other prudential regulations. Acting in their business capacity, credit unions enjoy preferential treatment as they are excluded from the EU banking directive requirements. This exclusion is the result of Poland's negotiations with the EU in the process of harmonising Polish law with the EU legal system. A similar exclusion applies to credit unions in Ireland and United Kingdom.

Under the decision to exclude credit unions from the above-mentioned requirements, they were put under review in terms of geographical reach of their business, membership, value of the loan portfolio and operating framework. The results of the review have shown that *due to a limited scope of operations of credit unions, Polish credit unions are a special part of the financial market and exclusion of these institutions from the banking directive will not be a breach of competition rules in the banking sector of the Single Market*.⁸⁴ However, it has to be pointed out that

the review covered the period prior to 1999, i.e. before credit unions' rapid asset growth.

The credit union system comprises the National Association of Credit Unions and 55 credit unions.⁸⁵ There is also a number of companies linked to the system – companies that provide financial services (e.g. the mutual insurance society – TUW SKOK, the investment fund management company – TFI SKOK, the life insurance company – TUnŻ SKOK) and institutions that perform media and education functions. The National Association of Credit Unions, a cooperative of legal persons that is neither a credit institution nor a bank, is the main institution of the system. Until October 2012, the National Association had performed supervision, control functions and broadly defined functions aimed at stabilising the operation of individual unions.

From the end of 1995 to 27 October 2012, the operation of credit unions was regulated by the Act of 14 December 1995 on Credit Unions⁸⁶ and the Cooperative Law Act. Supervision of credit unions was exercised exclusively by the National Association.

The dynamic expansion of credit unions in recent years and the fact that they have become similar to banks made public authorities start work to cover these entities with public prudential supervision.

On 27 October 2012, with the entry into force of the Act of 5 November 2009 on Credit Unions⁸⁷, credit unions and the National Association were made subject to public supervision of the Polish Financial Supervision Authority. The aim of the supervision is to ensure financial stability of credit unions, proper financial operations, security of funds accumulated by credit unions, compliance with law and proper use of the sta-

⁸³ At the end of 2011, 51,013 credit unions had around 196 million members and deposits of USD 1,221 billion in nearly 100 countries. See <http://www.woccu.org>.

⁸⁴ European Commission position of 14 November 2000 accepting the request to permanently exclude Polish credit unions from the banking directives.

⁸⁵ As at 31 December 2012. Source: NBP.

⁸⁶ Journal of Laws of 1996, No 1, item 2, as amended

⁸⁷ Journal of Laws of 2012, item 855, as amended

bilisation fund. Under the Act of 2009 on Credit Unions, the National Association performs a stabilising function by managing the stabilisation fund and providing support to credit unions from the fund. Moreover, the National Association was entrusted with performing control function over the activities of credit unions with respect to compliance with statutory regulations and KNF's supervisory recommendations.

Credit unions were set up with the aim of accumulating funds exclusively for their members, providing them with loans and lending facilities, carrying out financial settlements on their account and acting as intermediary in concluding insurance contracts. In order to ensure economic security, credit unions are required to hold own funds adequate to the size of business, reach and maintain a required capital adequacy ratio and comply with other prudential (concentration, liquidity etc.) standards. Funds that are not used for lending purposes can be, with due care, invested only in the instruments listed in the Act.

The financial condition of the credit union system

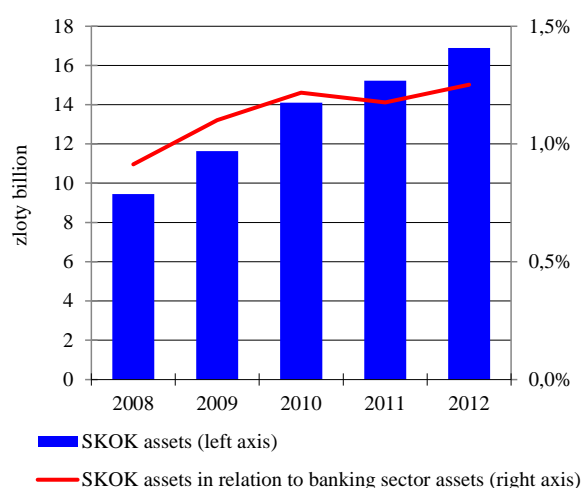
Despite the systematic development of credit unions in recent years (the number of branches is 2,076, with membership at 2.6 million), their importance in the Polish financial system remains low. As at the end of 2012, the assets of credit unions amounted to 16.9 billion zlotys⁸⁸, which equals 1.3% of the banking sector's assets.

Deposits at credit unions amounted to 15.6 billion zlotys (2.16% of the non-financial entities' deposits in the banking sector). The outstanding value of loans extended by credit unions was 13.6 billion zlotys (which equals 1.68% of the banking sector's loans). In 2011 and 2012, the growth rate of loans and lending facilities provided by credit unions declined compared to years preceding the period (see Figure 5.2).

The range of products offered by credit unions is primarily targeted at households. The share of

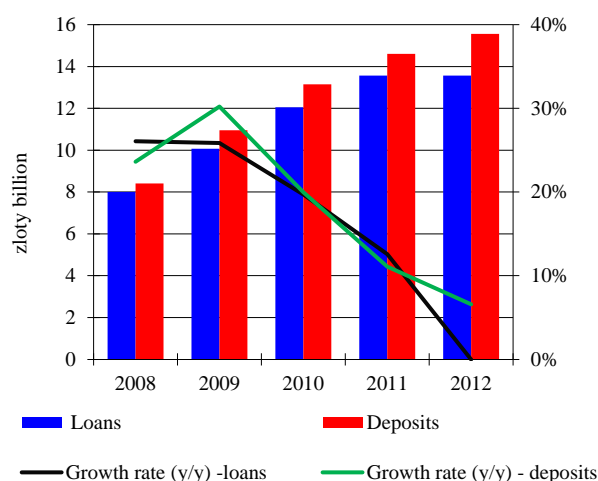
loans and lending facilities granted to households by credit unions in the sum of loans and lending facilities provided to all clients (enterprises, households and non-bank financial institutions) remains at about 80%, and the share of deposits is at about 99%.

Figure 5.1. Assets of credit unions vis a vis assets of the banking sector



Source: National Association, NBP, KNF.

Figure 5.2. Loans and deposits at credit unions



Source: NBP.

Under the Act of 5 November 2009, credit unions are required to undergo an external audit by statutory auditors. Such an audit was performed within three months from the entry into force of the Act and its findings were submitted, in-

⁸⁸ Source: KNF.

ter alia, to the KNF, NBP and the Ministry of Finance. The KNF analysis of external audit reports⁸⁹ identified problems regarding the interpretation of accounting rules, leading to auditors taking diverging approaches to the same economic events. These contentious issues include, inter alia, the method of valuation of securities purchased by credit unions, deferrals linked to fees and commissions, the correctness of recording contributions made to the National Association for the stabilisation fund, creating provisions and sale of separated parts of an enterprise.

At the same time, under the Regulation of the Minister of Finance of 8 January 2013 on reporting information by credit unions and the National Association of Credit Unions⁹⁰ credit unions submitted financial statements to the KNF for the first time in January 2013.⁹¹ Based, inter alia, on the data and GUS historical data, the KNF released a review report on the condition of credit unions in 2012 for the first time in May 2013.⁹²

The KNF report contains a description of the activities of the credit union system, discusses the evolution of its financial development and identifies the system's main risk areas. The KNF has found the condition of credit unions is not yet fully clear, and has said, at the same time, that the financial statements need to be verified fur-

ther. The KNF has also noted that the requirements regarding the rules for creating provisions against overdue receivables, set by the National Association which the credit unions had to observe till the end of 2011, significantly deviated from those set by the Regulation of the Minister of Finance from December 30, 2011 on accounting rules for credit unions.⁹³ It has also been pointed out that the capital position of credit unions is complex, and their regulatory capital should be regarded as inadequate to their operations, despite an over four-fold growth shown for the years 2006–2012. At the same time, credit unions exhibit elevated liquidity risk resulting from the maturity mismatch of assets and liabilities, because lending activity is financed with short-term funds. Given the above, the KNF has stated that credit unions have to urgently implement restructuring measures, including the use of the stabilisation fund. As at the study publication date, 44 out of 55 credit unions were required by the KNF to develop rehabilitation programmes.

Amendments to the Act on Credit Unions

The Act on Credit Unions was amended in order to further strengthen the oversight of credit unions and to enhance their stability.⁹⁴ The new

⁸⁹ For more information on the issue, see the letter of 27 March 2013 of the Office of the Polish Financial Supervision Authority to the Management Boards of credit unions at <http://www.knf.gov.pl>.

⁹⁰ See Journal of Laws of 2013, item 14.

⁹¹ Credit unions' financial data for 2012 do not take into account revisions arising from the interpretation of accounting regulations, presented by the KNF in March 2013, together with the recommendation to include them in credit unions' financial statements (irregularities identified by statutory auditors during audits conducted at credit unions pursuant to Article 87 of the Act of 5 November 2009 on Credit Unions).

⁹² A KNF study: "Information for the Polish Financial Supervision Authority. Report on the condition of credit unions in 2012.", Warsaw, 2013, <http://www.knf.gov.pl>.

⁹³ See Journal of Laws of 2012, item 45.

⁹⁴ The Act of 19 April 2013 on Amending the Act on Credit Unions and Certain Other Acts (see Journal of Laws of 2013, item 613).

⁹⁵ The act amending the Act on Credit Unions was signed by the President of the Republic of Poland on 15 May 2013. On 20 June 2013, the President sent a request, in the ex-post review mode, to the Constitutional Tribunal to rule on the constitutionality of some of the provisions of The Act of 19 April 2013 on Amending the Act on Credit Unions and Certain Other Acts. In the course of legislative work reservations were expressed about the constitutionality of some provisions. The President of the Republic of Poland asked the Constitutional Tribunal to assess the articles 74c paragraphs 3-4, 6, 8-9 and 11-12 of The Act Amending the Act on Credit Unions and Certain Other Acts, concerning the procedure of taking over the credit unions by banks and winding-up the credit unions.

solutions are designed to provide an appropriate legal framework for the restructuring of credit unions.⁹⁵ These provisions will make it possible to appoint administrators at credit unions, on a non-obligatory or obligatory basis, and conduct rehabilitation programmes. According to the new regulations, credit unions or their selected property rights or liabilities can also be taken over, when necessary. This means that a credit union or its selected property rights or liabilities can be taken over by another credit union or a bank. The new restructuring provisions also pave the way for initiating the process of a winding up of a credit union, sale of cash receivables and for bankruptcy proceedings of a credit union.

Under these regulations, the NBP can provide liquidity support to the National Association in the form of a short-term loan to replenish the stabilisation fund⁹⁶ and to individual credit unions to replenish their money resources.⁹⁷ In accordance with respective provisions, the NBP can also extend a loan to the National Association to supplement resources of the stabilisation fund

once it has been exhausted, to be earmarked for satisfying union members' claims.⁹⁸

The Act amending the Act on Credit Unions also introduces a new guarantee scheme for funds deposited with credit unions, modelled on the system functioning so far for banks. Taking into account the specific nature of credit unions, this system will operate under the Bank Guarantee Fund, where a separate credit union fund will be established. Its funds will be used to provide financial assistance to credit unions, prevent and remove their insolvency in the form of loans, guarantees as well as to make payouts of the guaranteed funds accumulated in credit unions. The changes to be implemented are designed to broaden the scope of responsibilities of the Bank Guarantee Fund as it will be authorised to support entities that either take over or purchase credit unions, selected property rights or selected liabilities of credit unions. According to the provisions, the NBP can also grant a short-term loan to the Bank Guarantee Fund for the pay out of credit unions' guaranteed funds, if the BGF funds have been exhausted.⁹⁹

⁹⁶ Article 5 subparagraph 2 of the Act of 19 April 2013 on Amending the Act on Credit Unions and Certain Other Acts (see Journal of Laws of 2013, item 613).

⁹⁷ Article 9 of the Act of 19 April 2013 on Amending the Act on Credit Unions of and Certain Other Acts (see Journal of Laws of 2013, item 613).

⁹⁸ Article 91 (3) of the Act of 5 November 2009 on Credit Unions (see Journal of Laws of 2012, item 855, as amended) and Article 11 (12) of the Act of 19 April 2013 on Amending the Act on Credit Unions and Certain Other Acts (see Journal of Laws of 2013, item 613).

⁹⁹ Article 5 subparagraph 2 of the Act of 19 April 2013 on Amending the Act on Credit Unions and Certain Other Acts (see Journal of Laws of 2013, item 613).

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 a year; in the case of data on balance (stock) – average value of balance in a year.

Assets of limited liquidity – according to KNF Resolution No. 386/2008 defining liquidity standards binding for banks, approximately, 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.

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

Claims retention ratio – relation of claims paid net of reinsurance to gross claims paid.

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 capital – according to the Polish Banking Act of 27 August 1997 (Journal of Laws of 2002 No. 72, item 665), it consists of paid-up and registered capital (in cooperative banks paid-up members share fund), capital surplus (resource fund), reserve capital (reserve fund), general

risk reserve, undistributed profit from previous years, profit under authorisation and net profit from current period reduced by expected dividends and other burdens. Core capital is diminished through deduction of own shares and intangible assets in possession of a bank, prior period losses, loss pending confirmation and current period net loss. Other balance sheet items added to core capital are specified by the KNF Resolution No. 434/2010 of 20 December 2010 *on other bank's balance sheet items that are included in original own funds, their amount, scope and conditions for their inclusion in the bank's additional own funds*. Other regulatory deductions are defined by the KNF Resolution No. 381/2008 of 17 December 2008 *on other deductions from original own funds, their amount, scope and conditions for the deduction of these items from the original own funds of a bank, other bank's balance sheet items that are included in the additional own funds, their amount, scope and conditions for their inclusion in the bank's additional own funds, deductions from the additional own funds, their amount, scope and conditions for the deduction of these items from the bank's additional own funds and the scope and manner of inclusion of banks' operations in holdings in calculation of own funds*.

Core deposits – the stable part of deposits of the non-financial sector.

Core liquidity reserve – according to KNF Resolution No. 386/2008 defining liquidity standards binding for banks, approximately, cash, receivables and other assets in the amount obtainable within 7 days.

Coverage of insurance provisions by investments – the ratio of investments to insurance provisions net of reinsurance.

Credit Default Swap (CDS) – a credit derivative whose seller undertakes to pay the buyer the face value of a third party's contractually specified defaulted obligation in case of a credit event pertaining to a third party (reference entity) in exchange for a premium. A credit event may be the reference entity's declaration of bankruptcy, a contractually specified change to the credit rating of the entity or a change to the rating of a specified debt security.

Cross Currency Interest Rate Swap (CIRS) – commits both sides of the transaction to the exchange of periodic interest payments calculated on the basis of a given nominal amount over an agreed period of time and, if so determined in the terms of a transaction, the exchange of nominal amount (at the agreed exchange rate) at the end of the transaction date and potentially at its inception. Interest payments are denominated in different currencies and calculated on the basis of interest rates agreed for each currency.

Cross Currency Interest Rate Swap (CIRS) basis – CIRS transaction, where interest rates set for both counterparts are floating rates and one of them is adjusted for an agreed margin, so-called basis.

Debt service burden ratio (corporate sector) – the quotient of liabilities (residents and non-residents) and the balance-sheet total. Data compiled by GUS based on F-01 reports are used for calculations both on the level of the sector as a whole and on the level of individual enterprises.

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.

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.

Domestic banking sector – domestic commercial banks and cooperative banks.

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

Effective interest rate – the ratio of interest income (cost) to average value of claims (liabilities) in a given period.

Equity coverage ratio (TFI) – the ratio of equity to capital requirement.

European Financial Stability Facility (EFSF) – a special purpose vehicle created on June 7th 2010 (decision to establish the EFSF was taken in May 2010). Its purpose is to raise funds, by issuing bonds in the financial market, for euro area Member States experiencing financial difficulties and unable to do so on their own. Bonds issued by the EFSF are backed by guarantees given by the euro area Member States. The capacity of the EFSF to extend new loans to distressed euro area Member States expires as of June 2013. After that date the EFSF will not enter into any new programmes, but will continue the management and repayment of any outstanding debt issued by the EFSF.

European Stability Mechanism (ESM) – an intergovernmental organization that commenced its operations in October 2012. Its aim is to safeguard financial stability in the euro area Member States. It is the main mechanism to fund new financial support programmes for euro area Member States from the contributions of its members. The ESM, together with the EFSF, has a maximum lending capacity of EUR 700 billion.

Financial leverage – the ratio of assets to core capital before regulatory deductions.

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 (FRA) – a transaction under which the parties are obliged to pay interest on an agreed nominal amount for a defined period beginning in the future. The interest is accrued according to the interest rate set on the contract date.

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.

Illiquid assets – according to KNF Resolution No. 386/2008 defining liquidity standards binding for banks, approximately, 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.

Initial Public Offering (IPO) – The initial public offering, the first introduction of company shares to trading on stock exchange.

Insurance provisions – provisions of an insurance company to cover current and future liabilities from written insurance contracts.

Interest burden ratio (enterprise sector) – the quotient of aggregated profit and sum of paid interest on loans. Data from F-01 GUS reports.

Interest Rate Swap (IRS) – a transaction under which two parties are obliged to exchange interest payments from given nominal amount for a fixed term. Payments are settled in the same currency and valued with interest rate defined for each party. IRS rates presented in the *Report* are the fixed interest rates paid in exchange for floating interest based on WIBOR.

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

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 – according to KNF Resolution No. 386/2008 on the establishment of liquidity standards binding for banks, in case of banks with total assets over 200 million zlotys – 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 – according to KNF Resolution No. 386/2008 on the establishment of liquidity standards binding for banks, in case of banks with total assets over 200 million zlotys – 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.

Modified Duration – a measure of price sensitivity of debt securities to changes in market interest rates. It approximates the percentage change in price of a debt security in response to a change in market interest rates by 100 basis points.

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 income on fees and commissions, income on stocks or shares, other securities and financial instruments of a variable rate of return, net/gains losses on financial operations, net FX gains/losses).

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.

One-month liquidity gap – the difference between the book value of assets with the maturity of up to 1 month and the book value of liabilities with the maturity of up to 1 month.

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

Outright Monetary Transaction (OMT) – a programme of euro area sovereign bonds purchase in the secondary market introduced by the ECB in September 2012. It is designed for countries that apply for financial support from the EFSF/ESM. Its aim is to improve the ECB monetary transmission mechanism in all euro area Member States. The programme will primarily cover bonds with maturity of 1 to 3 years.

Overnight Index Swap (OIS) – a transaction under which two parties are obliged to exchange interest payments from given nominal amount for a fixed term. Payments are settled in the same currency and valued with interest rate defined for each party. OIS rates presented in *the Report* are the fixed rates paid in exchange for interest based on average O/N rate for the duration of the contract.

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 activity (TFI) – the ratio of gross financial result and total revenues.

Pre-tax profit margin on sales (enterprise sector) – the quotient of gross profit and sales revenues.

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

Profit margin on sales – the quotient of net profit and sales revenues.

Provisions coverage ratio – ratio of assets to gross insurance provisions.

Sales profitability rate – the quotient of profit from sales of products, goods and materials and net revenues from sales of products, goods and materials.

Stable external funds – according to KNF Resolution No. 386/2008 defining liquidity standards binding for banks, approximately, 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.

Single Supervisory Mechanism (SSM) – the proposal of the European Commission set out in September 2012 conferring the responsibility for microprudential supervision exclusively on the ECB. Scope of ECB's supervision will cover banks operating in the euro area and those in other EU countries which decide to establish close cooperation with the ECB. In addition to transferring supervisory powers (hitherto on a national level) over banks, the ECB is to receive certain powers regarding macroprudential policy in the euro area Member States.

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

Supplementary liquidity reserve – according to KNF Resolution No. 386/2008 defining liquidity standards binding for banks, approximately, 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 Regulation European Parliament and Council Regulation (EU) No. 1092/2010 of 24 November 2010 on the EU macro-prudential oversight of the financial system and establishing a European Systemic Risk Board).

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.

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 profitability of the insurance – the 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.

Unstable external funds – according to KNF Resolution No. 386/2008 defining liquidity standards binding for banks, approximately, funds not included in stable external funds.

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.

WIG20 – the Warsaw Stock Exchange Index of large companies. The index consists of 20 biggest, in terms of market value, and most liquid companies listed on the Warsaw Stock Exchange.

Abbreviations

AC	Auto Casco
ACI Polska	Polish Financial Markets Association – ACI Polska
BFG	Bank Guarantee Fund
BGK	Bank Gospodarstwa Krajowego
BIK	Credit Information Bureau
CDS	Credit Default Swap
CESEE	Central, Eastern and Southeastern Europe
CESR	Committee of European Securities Regulators
CIRS	Cross Currency Interest Rate Swap
COR	Combined Operating Ratio
CPGBI	Citigroup Poland Government Bond Index
CRD	Capital Requirements Directive
DJIA	Dow Jones Industrial Average
DRP	Money Market Dealer
EBA	European Banking Authority
EBI	European Investment Bank
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
EFSF	European Financial Stability Facility
ESM	European Stability Mechanism
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
EC	European Commission
EP	European Parliament
EU	European Union
EURIBID	Euro Interbank Bid Rate
EURIBOR	Euro Interbank Offered Rate
EURO	Stock index of the biggest companies in the euro area
STOXX 50	
EURO	Stock index of the biggest banks in the euro area
STOXX	
BANKS	
FCL	Flexible Credit Line
FED	Federal Reserve System
FI	Investment fund

FRA	Forward Rate Agreement
GDP	Gross domestic product
GPW	Warsaw Stock Exchange
GUS	Central Statistical Office
IFRS/IAS	International Financial Reporting Standards / International Accounting Standards
IMF	International Monetary Fund
IPO	Initial Public Offering
IRS	Interest Rate Swap
KNF	Polish Financial Supervision Authority
KPF	The Conference of Financial Companies in Poland
LFS	Labour Force Survey
LIBOR	London Interbank Offered Rate
LTRO	Longer-term refinancing operations
LtV	Loan-to-value
MBS	Mortgage-backed Securities
MdM	“Home for the Young”
MF	Ministry of Finance
MSCI EM	Stock index of companies from emerging economies
mWIG40	Warsaw Stock Exchange index of medium-sized companies
MWSZ	Minimum required rate of return
MXSZ	Maximum rate of return of Open Pension Fund
NBFI	Non-bank financial institution
NBP	National Bank of Poland
NC	NewConnect
NEG	Negative rating outlook – expected downgrade
NIM	Net interest margin
O/N	Overnight
OC	Third party liability insurance
OFE	Open Pension Fund
OIS	Overnight Index Swap
OMT	Outright Monetary Transactions
PAS	Polish Accounting Standards
POLONIA	Polish Overnight Index Average
PTE	Pension fund management company
QE3	Quantitative easing 3
RBS	Royal Bank of Scotland
ROA	Return on Assets
ROE	Return on Equity
RP	Republic of Poland
RPP	Monetary Policy Council
RUR	Rating Under Review
S&P	Standard & Poor’s
S&P 500	Stock index of US companies
S/N	Spot next
SACP	Stand-Alone Credit Profile

SME	Small and medium-sized enterprise
SORBNET	System for Banks' Accounts Servicing at the NBP Head Office (RTGS system) – from June 10th, 2013 SORBNET2)
SSM	Single Supervisory Mechanism
STA	Stable rating outlook
sWIG80	Warsaw Stock Exchange index of small companies
SWSZ	Average weighted rate of return
T/N	Tomorrow next
TFI	Investment fund management company
UBS	Union Bank of Switzerland
UFK	Insurance investment fund
UKNF	Office of the Polish Financial Supervision Authority
VaR	Value at Risk
WIBID	Warsaw Interbank Bid Rate
WIBOR	Warsaw Interbank Offered Rate
WIG	Main index of the Warsaw Stock Exchange
WIG20	Warsaw Stock Exchange index of large companies
WIG-Banki	Warsaw Stock Exchange index of banks
ZBP	Polish Bank Association
ZU	Insurance company