



Financial Stability Report

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The aim of this *Report* is to assess financial system stability in Poland. Financial system stability is a situation when the system performs its functions in a continuous and efficient way, even when unexpected and adverse disturbances occur on a significant scale. The stability of the financial system is a necessary condition for ensuring sustainable economic growth.

The stability of the banking system 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 October 2012. The *Report* was approved by the Management Board of the National Bank of Poland at a meeting on 14 December 2012.

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Chapter 1.

A synthetic assessment of Poland's financial system stability

1.1. Assessment of financial stability and its outlook

In the period analysed in the *Report*¹ the current financial condition of the banking sector was good. In the first 3 quarters of 2012, the banking sector's earnings did not change significantly from the 2011 record high. However, the first effects of the decline in GDP growth (from 4.3% in 2011 to 3.6% and 2.3% in the first and second quarter of 2012, respectively) were noticeable in some areas of banking business. The ratio of credit risk cost to assets rose slightly in the second and third quarter of 2012 vs. 2011. In turn, net interest margin slightly decreased in the period, which was associated with continuing strong competition for household deposits.

The capacity of banks to absorb losses improved slightly in the period analysed in the *Report*. The majority of banks increased their regulatory capital, and their average adequacy ratios stabilized and remained high, despite increase of risk weights for foreign currency-denominated housing loans by the Polish Financial Supervi-

sion Authority (KNF)². Since the onset of the global financial crisis in 2008, no bank has required recapitalization with public funds. The results of macroeconomic 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 capital adequacy at a high level. 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 expected economic slowdown and high 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 lending in foreign currency should continue to seek to strengthen their capital and liquidity positions.

The current financial condition of cooperative banks was slightly better than that of commercial banks. Cooperative banks were characterised by a better quality of the loan portfolio and higher net interest margin, however as their cost efficiency was lower, their profitability was barely above that of commercial banks. The

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

² Resolution No. 153/2011 of the KNF of 7 June 2011 entered into force on 30 June 2012. In accordance with the Resolution, risk weight for foreign currency-denominated loans was raised from 75% (for the fully and completely secured part of the loan) to 100%.

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 environment of the Polish economy takes account of both the most likely developments and the risk of the materialization of a significantly more unfavourable scenario.

Source: NBP expert assessment.

value of the capital adequacy ratio of cooperative banks did not differ from the value of the same ratio for commercial banks. Cooperative banks have a surplus of deposits over loans (a negative funding gap), 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 poses no major threats to financial system stability. Due to the distinctive nature of financial services, including insurance services, provided by these non-bank financial institutions (NBFIs) and a relatively minor scale of interconnectedness with banks, the impact of NBFIs on the situation of Poland's banking sector is limited. The situation of the non-life insurance sector improved – the rise in prices of automobile auto casco and third party liability insurance helped the insurers to further improve their technical profitability in the first half of 2012. Stabilisation of the profitability of insurance undertakings helps strengthen the safe operations of this sector and positively impacts financial stability.

It will be possible to assess the financial condition of the sector of credit unions (SKOKs), subject to the supervision of the KNF since 27 Oc-

tober 2012, only after their financial statements were audited by statutory auditors. The unions are bound to deliver findings of the audits to, inter alia, the KNF, the Minister of Finance and the NBP by 27 January 2013.

Outlook for the environment of the Polish economy, which will affect the operating conditions of the Polish financial system, continued to deteriorate since the publication of the previous edition of the *Report*. Growth forecasts for the world economy, in the euro area in particular, for 2013–2014 have been successively revised downwards in the period (the autumn European Commission macroeconomic forecast envisages 0.1% GDP growth of in the euro area in 2013, compared to 1.0% in the spring 2012 projection.). Data on GDP for the first 3 quarters of 2012 point to a fall in GDP in the euro area, which coupled with the persistent fiscal crisis and significant capital needs of banks in some euro area countries, results in persistent tensions in world global markets. Three-year longer term refinancing operations conducted by the ECB in December 2011 and February 2012 had only temporarily limited risk aversion of players in financial markets. The optimism of the players increased on the ECB's announcement of a new bond purchase programme (Outright Monetary Transac-

tions) in September 2012 and on the start of work on a uniform banking supervision mechanism for the euro area, which is associated with the option to use ESM and EFSF funds for bank recapitalization (so-called banking union – see Box 1). However, it is difficult to say whether the stabilization of market situation will be lasting.

The November NBP projection indicates that Poland's GDP growth in 2012–2014 will be significantly slower than in 2011. This slowdown should not jeopardise the stability of the domestic financial system, however it will contribute to lower profitability of financial institutions. The degree of uncertainty about global economic climate in the coming months remains high, including uncertainty about the scale and length of slowdown in economic growth in countries that are Poland's main trading partners. Despite the substantial resilience of the domestic financial system to disturbances, the worsened growth outlook and the persistent debt crisis in the euro area make it possible to assess that the risk of materialization of threats to domestic financial system stability has grown. The scenarios of risk materialisation are discussed later in the text of this Chapter.

1.2. Risk factors

Macroeconomic risk and funding risk

The main risk factor is the course of events in European Union Member States and in other developed countries. A banking crisis, coupled with a crisis of public finance, persists in several euro area Member States. These negative phenomena are accompanied by excessive private sector debt, which is the legacy of the property market boom of the pre-crisis period. Due to these phenomena, coupled with a new fall in GDP in the euro area in the first half of 2012, it is now difficult to say when the euro area economy 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. These measures should aim at stabilising and, subsequently, reducing the public debt-to-GDP ratio of these countries. The factor that hinders the re-balance of public finance is, however, a pro-cyclical impact of fiscal tightening of economic activity in these countries.

Uncertain macroeconomic outlook leads to persistent tensions in financial markets. When the stabilisation mechanisms in place in the EU are used, this may contribute to easing the tensions. In the period analysed, work started on the proposal of integrated European banking supervision that would, in the first place, include euro area countries. In line with conclusions of the October 2012 meeting of the Council of the European Union, when such a body is established, it will be possible to use ESM funds for bank recapitalisation. This is designed to make the financial condition of banks independent from the fiscal condition of countries in which they operate.

If these measures do not lead to a lasting resumption of investor confidence by fiscally distressed countries, this could give rise to an intensification of a negative feedback effect, where the mutually reinforcing concerns regarding the solvency of countries and financial institutions result in: a recurrence of economic slowdown, a decline in the liquidity of financial markets, capital outflow and problems with debt refinancing by financial institutions.

Such feedback mechanisms would resemble the condition during the aftermath of the collapse of the Lehman Brothers investment bank in September 2008. However, unlike in 2008, the government sectors of a number of developed countries are not capable of taking over the risk accumulated on the balance sheets of financial institutions. As interest rates in the world's leading economies are very low, the possibility of counteracting the feedback described above by means of conventional monetary policy tools is limited. However, it can be expected that ow-

ing to the experience gained during the financial market turmoil of 2008–2009, the financial sector is better braced for a potential substantial fall in liquidity in financial markets.

If the scenario involving a simultaneous deterioration in the financial condition of some euro area countries and a substantial weakening of economic activity in the euro area as a whole were to unfold, it would be particularly unfavourable for domestic financial system stability. The interdependence between the processes enhances the likelihood of their simultaneous materialisation. Recent developments in the economy point to intensified slowdown in GDP growth in the euro area and other developed countries, which leads us to judge that the probability of such a scenario materializing has significantly grown.

If the scenario outlined above were to unfold, it would lead to materialisation of refinancing risk and a rise in credit risk cost in the Polish banking sector. A recurrence of turmoil in global financial markets would cause, via its negative impact on the economic condition of developed countries, a further slowdown in economic growth in Poland, which would eventually result in a deterioration in loan quality. A significant share of loans with high LtV ratios in banks' loan portfolio is the factor that may increase the potential impact of economic slowdown on loss losses in the housing loan portfolio. Economic slowdown would have an adverse impact on the condition of public finances and on Poland's perceived credit risk.

In an environment of increased global risk aversion, some banks could encounter difficulties in renewing swap transactions that serve to hedge against risk associated with FX loan portfolios as well as in rolling over other forms of market funding. The surge in risk aversion would also involve heightened market pressure on the deleveraging of European banks, characterized by a continued increase 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 also deteriorate. An additional factor that may lead to the deleveraging of European banks is market and regulatory pressure on increasing the capital adequacy, particularly where banks were not capable of raising capital via share issues or conversion of other types of liabilities (e.g. subordinated debt) to high quality capital. Deleveraging may take the form of a change in the structure of assets as to increase exposures with low risk weights, which may encourage banks to reduce their exposures to subsidiaries operating in other countries.

As the situation of the Polish economy and of 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 recently diminished. These changes are not abrupt and do not exert a significant influence on banks' lending; in the case of some banks they are associated with intended changes in the funding structure, aimed at increasing the share of deposits of domestic clients. The decrease in 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 banks; this process could lead to a further reduction in the availability of intragroup funding. Despite current market disturbances, yields on Polish government bonds fell significantly, which shows that investor assessment of Poland's solvency is rated positively, which suggests that a potential rise in risk aversion could, to a larger extent, affect other economies.

Deleveraging in countries where the scale of macroeconomic imbalances was the greatest in the pre-crisis period is more intensified than in Poland. These countries also see the strongest reduction in lending. However, analysis made under the so-called Vienna Initiative 2.0³ show that both the supply factors and limited loan de-

³ See "CESEE Deleveraging Monitor", 9 November 2012, <http://www.imf.org/external/np/sec/pr/2012/pdf/pr12430.pdf>.

mand at a time of slowdown in the economy are behind the reduced lending.

Although the materialisation of a negative scenario should not jeopardise financial stability, it may however, pose a significant challenge to some financial institutions, in particular to funding stability. The implications of a materialisation of credit risk for domestic financial system stability were the subject of stress test analysis. The results of the tests indicate that the resilience of the Polish banking sector is sufficient. Owing to the minima role of credit exposures to foreign counterparties, an increase in credit risk cost in the Polish banking sector would result primarily from an economic slowdown in Poland.

It is difficult to make *ex ante* assessment of the impact of a likely materialisation of funding risk and market turmoil risk on the condition of the banking sector. The scale of this impact will hinge, inter alia, on changes in the financial condition of strategic investors of banks that operate in Poland as well as measures taken by the 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, which include funding risk, indicate that further gradual reduction in the reliance of some domestic banks on funding from foreign parent entities would be favourable for the stability of the domestic financial system. This stems from the fact that some Polish banks do not have sufficient liquidity buffers that could cover the potential outflow of funds in a scenario involving the 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 high profitability of operations in Poland, may decide to sell Polish subsidiaries as part of their restructuring programmes. As the finan-

cial condition of certain majority shareholders of banks operating in Poland is difficult, the decision whether to sell their shares may also be prompted by 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 banks 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. The probability of ownership changes taking place in the Polish banking sector has not significantly changed as compared to 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 Recapitalisation of Certain Financial Institutions*⁴. In accordance with the Act, the State Treasury may provide a guarantee to recapitalisation operations of financial institutions or take over such institutions. Domestic business entities can also become involved in the process of ownership changes in the Polish banking sector.

1.3. Recommendations

The role of “Financial Stability Report” is, apart from risk analysis, to offer measures aimed at containing these risks. This is one of the activities that the National Bank of Poland performs, fulfilling its mandate to support the stability of the domestic financial system.

On the basis of its assessment of risk factors presented in this publication, the National Bank of Poland indicates that the following measures

⁴ The Act of February 2010 on the Recapitalisation of Certain Financial Institutions, Journal of Laws No. 40/2010, item 226, as amended.

would contribute to further strengthening of the stability of the Polish financial system:

1. **Banks should continue to pursue a policy of strengthening their capital base.** In an environment of high risk persistent in the external environment of banks, it is desirable for the banking sector to continue a prudent dividend policy. The bank vulnerability areas identified in this Report indicate that such a need arises particularly for these banks that hold substantial portfolios of foreign-currency housing loans so that they have a buffer to cover potential increase in credit risk cost. High capital levels may also help banks to obtain funding on their own.
2. **Banks whose liquidity position is particularly sensitive to an intensification of market turmoil or availability of funding within their capital group should continue to strengthen their liquidity position.** Such measures may involve the restructuring of funding, supplemented, when necessary, with correcting asset growth plans. Banks should hold sufficient liquidity, while banks holding a substantial share of financial instruments denominated in foreign currency 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 significantly higher zloty exchange rate volatility.
3. **It is desirable for banks to diversify their funding sources and extend the maturity of their liabilities.** Market issues of long-term financial instruments may help achieve the goal. A shortening of the maturities of new housing loans may contribute to limiting the scale of maturity mismatch of assets and liabilities.
4. **Foreign currency-denominated housing loans should be a niche product, offered exclusively to borrowers who receive regular income in the currency of the loan.** One should seek to sustain the presently observed favourable downward trend of the stock of foreign currency housing loans. Implementation of the Recommendation of the European Systemic Risk Board of 21 September 2011 should support this trend.
5. **Banks should monitor their portfolios of loans for residential property for their current LtV and contain risk arising from the portion of the portfolio characterised by high LtV.** However, banks should not apply measures that would increase borrowers' loan servicing costs as they would increase the likelihood of the borrowers losing their loan servicing capacity. An additional capital surcharge (under the Second Pillar of capital adequacy regulations) on banks with substantial portfolios of high LtV loans can be considered. It would be advisable to amend the accounting regulations so as to enable creation of impairment provisions in a way that would reflect the risk of the non-recovery of all loans should the borrower's loan servicing capacity worsen in the future. Due to on-going work on modifying the International Financial Reporting Standards (IFRS), the possibility of introducing such amendments should be re-assessed after the final proposals of new international standards have been prepared.
6. **It is desirable for insurance companies, pension fund management companies and investment fund management companies to continue to increase their capital.** Capitals held should be determined by the level and profile of risk taken by non-bank financial institutions which are, among others, associated with the scale of their activities. Non-bank financial institutions' policy with re-

spect to capital should also take into account the present elevated risk in their external environment

The condition of public finance is an important macroeconomic risk factor. Consolidation implemented in the years 2011—2012 contributed to a decline in the risk in Poland. These measures should continue without additionally contributing to a weakening of economic growth rate. This relates both to the scale of tightening and the structure of expenditures, which should be development-oriented, if possible. An effective and sustainable consolidation of public finances will improve Poland's creditworthiness which will contribute to sustainable long-term growth and stability of the domestic financial system.

**

In a longer time frame, a necessary condition for the economies of the European Union and other developed countries with high debt levels to the path of sustainable growth is the implementation of credible fiscal consolidation programmes and structural reforms that will help them increase the potential economic growth rate. Their implementation will be a difficult challenge on account of concerns about the negative short-term impact of these changes on economic growth rate, which is currently very low in the developed economies. A credible implementation of these measures will, however, con-

tribute to strengthening the global financial system and macroeconomic stability. The present crisis should also prompt economic policymakers to pay particular attention to long-term sustainability of public and private sector debt, so that it does not exceed levels above which it exerts a negative impact on economic growth. The experience gained during the period of the build-up of macroeconomic imbalances prior to the current crisis should be used to develop domestic, pan-European and global institutions in the area of fiscal and macro-prudential policy that will diminish the probability of booms and crises in the future.

In the context of the euro area crisis, measures aimed at stabilising the capital and liquidity position of banks, and efforts to reduce public sector debt, especially in countries that have lost financial markets' confidence, should be welcomed. Effective measures in this respect would also positively impact the Polish financial stability outlook. Legislative initiatives also include concepts to restructure the EU institutional infrastructure, inter alia, in the area of supervisions of financial institutions (the so-called banking union proposal), deposit guarantees and resolution of financial institutions. However, the new institutional solution developed for the EU have to preserve the balance between competences entrusted to individual institutions and their responsibility for financial stability, including potential fiscal burdens.

Box 1. Banking union

On 12 September 2012, the European Commission released a proposal of a regulation conferring powers on the European Central Bank (ECB) concerning policies relating to the prudential supervision of banks in the euro area.¹

A European Commission's proposed Regulation for a Single Supervisory Mechanism (SSM) is subject to further negotiations by the European Union, therefore at this stage it would be premature to make a final assessment of the proposal. Nevertheless, it is possible to make a number of observations and initial remarks.

Basic assumptions of the proposed Regulation

The proposal envisaged that the ECB will – by law – exercise supervision of banks in the euro area. The powers to make decisions relating to supervisory policy will be taken over by the ECB Governing Council. A Supervisory Board, to be set up in the ECB, will be composed of a Chair, four representatives of the ECB and of one representative of the national authority competent for supervision in each participating euro area Member State. The Supervisory Board will be responsible for preparing proposals of ECB decisions on supervisory matters. In special cases, the Governing Council may decide to delegate certain tasks and related decision-making powers to the Supervisory Board.

The national supervisors will assist the ECB in the exercise of its day-to-day supervisory tasks, and they will be involved in the preparation and implementation of supervisory decisions for the Supervisory Board and the ECB Governing Council.

Essential elements of the proposed Regulation include not only transferring microprudential powers to the ECB, which at this stage will take place in 2014, but also conferring some macroprudential policy powers on it. According to the original proposed Regulation, the ECB was to impose capital buffers, including a countercyclical capital buffer, and conduct a macroprudential policy using available supervisory tools.

According to the original proposal of the European Commission, as a first step the ECB was to exercise its supervisory tasks on banks, which had received or requested public financial assistance, and – as a second step – on systemically important banks. Ultimately, the proposal provided that the ECB should be able to exercise supervisory tasks in relation to all banks of Member States participating in the SSM.

By law, the SSM is to include euro area countries, however this mechanism is, by definition, also open to non-euro area countries. They may participate in the SSM provided that they have entered into close cooperation arrangements (an opt-in option) between a relevant national supervisory authority and the ECB. This cooperation would require *opt-in* countries to comply with the ECB guidelines and recommendations addressed to relevant national authorities and, upon request by the ECB, to provide data on banks operating in their territory.

Initial comments on the proposed Regulation

The concept to set up a SSM for the euro area, coupled with the possibility to directly recapitalize banks under the ESM, constitutes a chance to strengthen the stability of the euro area banking sector by, inter alia, breaking the negative feedback loop between banking and fiscal crises. Due to a significant share of foreign (mostly euro area) banks' assets in the Polish banking sector, it is extremely important for the parent banks of subsidiaries operating in Poland, to be of sound and stable condition. Making the ECB a single supervisor of euro area banks might help achieve those aims.

The proposed Regulation on the SSM is a first stage of regulatory changes in the European Union. However, for a banking union to be effective and live up to its expectations, it should include three pillars, i.e. a single supervisory mechanism, a common deposit guarantee scheme and a single bank resolution framework. Only a fully-fledged banking union, i.e. delegating not only decision-making powers but also fiscal accountability for financial stability to a central level, offers

a chance to establish a coherent financial safety net in the area covered by the banking union. At this stage, the proposals concerning the last two pillars have not been spelt out, however the 12 September 2012 Communication from the Commission to the European Parliament and the Council² indicates that further reforms are needed.

The fact that the SSM will be open to voluntary participation of non-euro area countries should be assessed positively. However, for the opt-in option to be encouraging for those countries, the European Commission's proposal of a Regulation had to modify, inter alia, the following issues: (i) the rules, based on which countries participating in the SSM on an opt-in basis will participate in the ECB supervisory decision-making; (ii) the rules concerning access to liquidity support and fiscal backstop and (iii) ECB's macro-prudential policy powers. It is desirable for non-euro area countries that have decided to join the SSM, to be granted full voting rights in the Supervisory Board and a direct access to the ELA from the ECB (a swap line between a national central bank and the ECB). The participation of non-euro area countries in the SSM may help contain the potential risk of concentrating SSM's supervisory approach on the banking group as a whole. Should such supervisory approach be assumed, this could lead to underestimation of the risk existing in particular domestic markets in host countries.

The significant change, as introduced by the SSM Regulation, lied in the ECB being granted powers to develop macro-prudential policy in the banking union. In line with the preliminary proposal, the ECB would have powers to impose capital buffers, including countercyclical buffer, and apply other macroprudential instruments in response to risks that jeopardise financial stability in the EU. If enforced according to the original proposal, such solution would unduly limit the domestic authorities' flexibility to respond to growing imbalances in the financial system and the real economy. Taking into account the heterogeneity of national financial systems and unsynchronised business cycles in particular EU countries, including in euro area states, macroprudential policy should remain within the remit of relevant national authorities. Those arguments were reflected in recommendations of the European Systemic Risk Board on the macroprudential mandate of national authorities, which indicate the need for adequate institutional arrangements that take into consideration country-specific conditions.

A compromise version of the proposed Regulation on the SSM was agreed by the ECOFIN Council at a meeting on 12 December 2012. The compromise to a wide extent takes into account comments and demands made by Member States: (i) the mechanism was established to allow non-Eurozone area Member States participating in the SSM to actively take part in the process of decision-making by the Supervisory Board; (ii) the national competent authorities of Member States are to have significant powers regarding adjusting macroprudential policy in their jurisdictions. The agreement adopted in the Council under so-called general approach will give the Council of the European Union a mandate to negotiate with the European Parliament. A final agreement with the Parliament will have to be formally adopted by the Council.

¹ Legislative proposal for a Council Regulation conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions, COM (2012) 511 final.

² Communication from the Commission to the European Parliament and the Council, A Roadmap towards a Banking Union, COM (2012) 510 final.

Chapter 2.

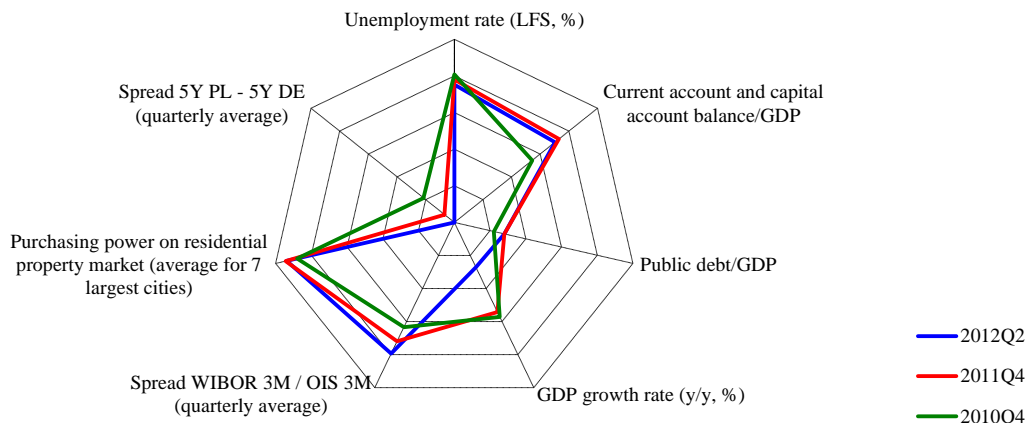
Financial institutions' economic environment

Data from the world economy show that an economic slowdown continues. The difficult fiscal condition of some euro area countries remains uncertainty factor for the economic growth outlook for European Union Member States, including Poland. In the second quarter of 2012, Poland's GDP growth declined and the NBP November macroeconomic projection shows that the rate of economic growth in 2012-2014 will be substantially lower than in 2011, however it will be significantly higher than in the euro area.

Measures taken by central banks, primarily by the ECB, were in line with market expectations and helped improve sentiment in the world financial markets in the period from June to October 2012. These measures were implemented to increase the liquidity of the banking sector and ease tensions in the government bond market of some of euro area countries.

In the period analysed, the functioning of the domestic money market was stable. Market participants expected a strong easing of the monetary policy conducted by the NBP. Poland's government bond yields declined across the field curve, reaching historically low levels. This was primarily the effect of a strong influx of non-residents' to the domestic market for government bonds, which was supported by a relatively good outlook for Poland's economic growth, the scale of fiscal consolidation in 2010 – 2011, a successful implementation of the public debt management strategy, a lower than planned implementation of the budget deficit in the first 3 quarters of 2012 and expectations regarding NBP interest rates decrease, expressed by market participants. The fall in risk aversion in the world financial markets and foreign investment in the domestic capital market were working towards the appreciation of the zloty.

The prices of flats continued to fall in the residential housing market in Poland. This downward trend may be expected to continue in the coming quarters. It will be driven by both supply and demand factors, in particular the large and increasing number of flats offered by developers.

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 second quarter of 2012.

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 2.16. 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 Polish and German bonds.

Source: GUS and NBP.

2.1. Macroeconomic developments

The rate of global economic growth remained low in the first half of 2012. Economic activity exhibited fairly marked regional diversity: a moderate economic growth in the United States was accompanied by recession in the euro area, most notably in countries most hit by the crisis. Although the pace of economic growth in the largest developing countries remained substantially higher than in developed ones, it decreased significantly as compared to previous years.

Central banks in developed countries continued to pursue an expansionary monetary policy, leaving interest rates at record lows. At the same time, new asset purchase programmes were launched. The Fed started to purchase securities collateralized with mortgage loans. The Euro-

pean Central Bank unveiled a new programme of *Outright Monetary Transactions* (OMTs) that will ensure outright purchase transactions in the euro area's secondary sovereign bond markets that aim at safeguarding an appropriate monetary policy transmission and the singleness of the monetary policy.

Decline in commodity prices, which coupled with lower demand observed in a number of countries, contributed to a fall of inflation across the world. In the United States, inflation was low, although its systematic decline observed since the fourth quarter of 2010 was halted. In the euro area, inflation remained at an elevated level, which resulted, inter alia, from higher energy prices on the back of a depreciation of the euro against the US dollar. The outlook for economic growth continues to remain substantially uncertain. The European Commission's Novem-

ber forecast indicates a very low GDP growth rate in the euro area in 2013 and a continuation of recession in countries now involved in large-scale fiscal adjustment. Further slowdown in the developed economies or in the largest developing countries could negatively affect the pace of economic growth in Poland. The rate of economic growth in Poland declined to 2.3% y/y in the second quarter of 2012 from 3.6% y/y in the first quarter of the year. The decline in annual GDP growth was driven by the slowdown in domestic demand. Individual consumption growth decreased, which was associated with a fall in household disposable income and persistently pessimistic consumer sentiment.

In the second quarter of 2012, the unemployment rate was registered as the number of economically active people rose, which was partially related to activation of people previously absent from the labour market. At the same time, as GDP growth was falling, the annual growth of people who work in the economy (LFS data) declined albeit it remained positive (0.3% y/y in the second quarter of 2012). The unemployment rate measured by LFS in the second quarter of 2012 rose in annual terms by 0.4 percentage points to 10.1%. In the period analysed, the nominal growth rate of salaries declined on the back of lower demand for labour. These processes had limited impact on the quality of banking sector claims on households (see Chapter 3.3.2).

The annual growth of gross fixed capital formation declined to 1.9% y/y in the second quarter of 2012 (compared to 6.7% y/y in the first quarter of 2012). Investment by large and medium-sized enterprises as well as residential investment was dampened. As shown by the NBP economic climate surveys⁵ enterprises expect the economy to slow. At the same time, the growth of public sector investments in the second quarter of 2012 remained significantly lower than in 2011.

The financial condition of enterprises deteriorated

in the second quarter of 2012. Net profits dwindled by 1/3 from the record high figure a year ago. Their decrease at a time when revenues continued to grow translated into lower profitability ratios. The net profit margin amounted to 3.9% (a 2.2 p.p. decrease y/y), whereas the return on sales stood at 4.3% (a 1.2 p.p. decrease y/y). However, the levels of profitability ratios did not differ from their long-term averages (calculated from 1995). The liquidity ratios of enterprises still remain high despite a slight decrease. The decrease in short-term investment, mainly among large enterprises (where liquidity levels had been so far highest), was the main factor behind the deteriorating ratios.

According to the government, the general government deficit (according to ESA 95 standard) will be by 1.6 p.p. lower than in 2011 and amount to 3.5% of GDP. The deficit is scheduled to be reduced further in 2013. However, on account of lower VAT revenues and deeper-than-assumed economic slowdown, the pace at which imbalances in the public finance sector will be limited is likely to be slower than provided for by the "Updated convergence programme 2012". According to the *Programme*, the deficit was to be cut to 2.9% of GDP in 2012 and to 2.2% of GDP in 2013.

The economic slowdown was accompanied by the reduction in the current account deficit (to 2.2 bn euros in the second quarter of 2012 from 4.1 bn euros in the second quarter of 2011). Reduction was primarily driven by a decrease in the trade deficit, and also by an improvement of the income balance. The current and capital account deficits in relation to GDP also declined. In the second quarter of 2012, there was an increase (vs. the first quarter of 2012) in the coverage of the capital and current account deficits with and inflow of FDI.

According to the central part of the projection showed in the November "Inflation Report", Poland's real GDP growth will be 2.3% in 2012,

⁵ Source: "Information of the condition of the enterprises sector, including the economic climate in 2012 Q2 II and forecasts for 2012 Q3", NBP, 2012.

1.5% in 2013 and 2.3% in 2014. The Autumn 2012 European Commission forecast indicates that Poland's GDP will grow by 2.4% in 2012, 1.8% in 2013 and 2.6% in 2014.⁶

The Polish economy is in the downturn. The deterioration in the economic situation of Polish main trading partners, Germany, in particular, may lead to further slowdown in economic growth. Economic situation in the coming quarters will largely depend on economic situation across the world and sovereign debt developments in euro area countries. At present, it is very difficult to forecast how these processes will develop in the future.

2.2. Developments in financial markets

2.2.1. Global markets

Since the publication of the previous *Report*, the domestic financial market has been primarily affected by economic and political developments in the euro area. Improved sentiment in the financial market, observed from June to October 2012, was largely supported by measures taken by central banks, in particular the ECB, which was in line with market participants' expectations. ECB policy was aimed at improving liquidity of the banking sector in the euro area and reducing tensions in the government bond markets of some euro area countries.

The fall in risk aversion related to the results of the June 2012 election in Greece welcomed by market participants, which – in their opinion – reduced the risk of insolvency of that country and its disorderly exit of the euro area, turned out to be short-lived. The weaker-than-expected macroeconomic data pointed to the high likelihood of a recession in the euro area. Moreover,

market sentiment and money market liquidity were negatively impacted by the significant risk of the deepening of the sovereign debt crisis in the euro area, including primarily mounting problems of Spanish banks arising from large credit exposures to the residential and construction markets. Concerns about the form and scale of their potential recapitalisation and the related rise in sovereign debt were reflected in downgrades of Spain's ratings by the largest rating agencies (see Table 2.1).

Given the difficult situation of public finances and the related elevated funding costs in the Treasury debt securities market, on 25 June 2012 Spain made a request to the EU to recapitalise its banking sector by the EFSF/ESM. At the EU summit of 28-29 June 2012, the decision was made that any help for the Spanish banking sector coming directly from the EFSF/ESM would be conditional on the establishment of the central supervision authority for banks run by the ECB, which is scheduled for 2013 (see Box 1). However, Spain eventually did not formally apply for financial support. Given the lack of consent from some euro area countries to directly recapitalise Spain's banks before the set-up of the central supervisory authority for banks such support would increase its national debt to GDP ratio by around 4 p.p. and, probably, debt servicing costs.⁷

On 5 July 2012, the ECB cut the interest rate on the main refinancing operations of the Eurosystem by 25 basis points to 0.75% and the interest rate on the deposit facility to 0% (for the first time in history). The aim of these decisions was to encourage European banks to conclude transactions in the interbank market, as well as to invest more funds in the euro area Treasury debt securities. Although the interest rate on the deposit facility was decreased, banks continued to invest a significant portion

⁶ "Autumn 2012 European Economic Forecast", European Commission, November 2012.

⁷ Results of stress tests released on 28 September 2012 show that Spain's 14 largest banks representing almost 90% of the country's banking sector require recapitalisation in the amount of 59.3 billion euros. Source: http://www.bde.es/f/webbde/SSICOM/20120928/informe_ow280912e.pdf.

Table 2.1. Ratings of selected countries and dates of ratings revisions in the period from 1 June 2012 to 31 October 2012

	MOODY'S	S&P	FITCH
Greece	C	CCC	CCC
Ireland	Ba1	BBB+	BBB+
Spain	Baa3	BBB-	BBB
	<i>13 June 2012 (A3)</i>	<i>11 October 2012 (BBB+)</i>	<i>7 June 2012 (A)</i>
Portugal	Ba3	BB	BB+
Italy	Baa2	BBB+	A-
	<i>13 July 2012 (A3)</i>		
Poland	A2	A-	A-
Czech Republic	A1	AA-	A+
Hungary	Ba1	BB+	BB+

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

Source: Bloomberg.

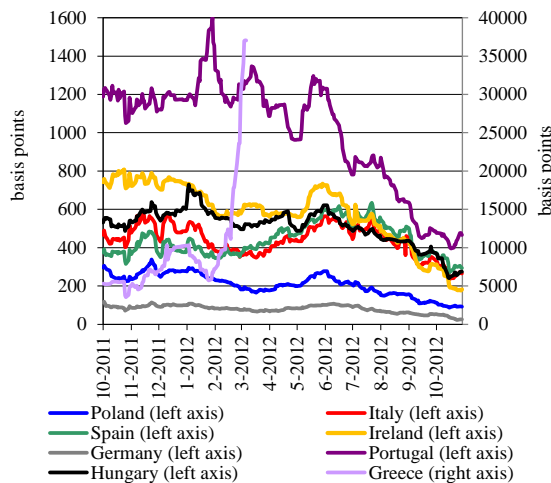
of surplus liquidity in the ECB, in non-interest-bearing deposits or in current accounts. This was encouraged by the temporarily negative yields on euro area Treasury securities, and also negative rates in repo transactions collateralised with government bonds issued by countries with highest creditworthiness. As during the EU summit no decisions were made to permanently reduce the observed uncertainty in the financial markets and funding costs of, inter alia, Spain and Italy, in July 2012 the ECB declared to take firm steps to ensure financial system stability and appropriate monetary policy transmission in all euro area Member States.

These announcements were put into practice by the 6 September 2012 launch of the purchase programme of outright monetary transactions (OMTs) in the euro area secondary markets for sovereign bonds. Participation in the programme is conditional, in that it will require a prior request of a given country for funds from the EFSF/ESM, which would involve the obligation to carry out reforms aimed at improving the condition of public finances. No limits on the value of asset purchases are set in the programme. In line with the announcements, primarily government bonds with maturities of between 1 year and 3 years will be covered by the

programme. Unlike the previous bond purchase programme (Securities Markets Programme or SMP, terminated upon the decision to launch OMTs), in the case of newly purchased securities the ECB will hold no senior status against other creditors. The decision to launch OMTs was accompanied by the suspension of the existing minimum credit rating for euro area bonds that may be used as collateral in operations with the ECB. In addition, a set of instruments accepted by the ECB was extended to bonds denominated in selected foreign currencies, issued in the euro area.

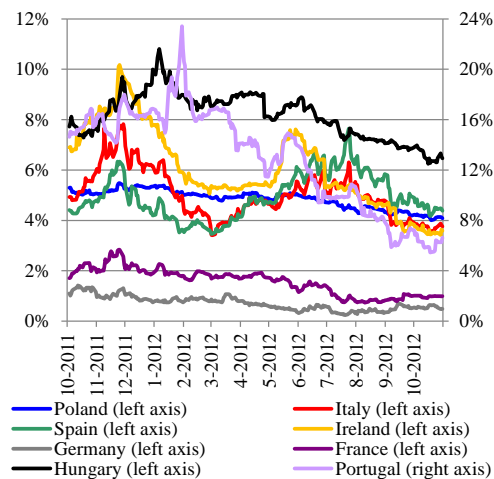
In response to the measures taken by the ECB, a significant improvement in market sentiment was observed, which was demonstrated, inter alia, by a fall in perceived credit risk reflected in CDS premia (see Figure 2.2), and yields on government bonds of some euro area Member States (see Figure 2.3), as well as in the appreciation of the euro against the US dollar. The related fall in global risk aversion and liquidity premia contributed to a further decline in EURIBOR 3M/OIS 3M spread, which in the period from 1 June 2012 to 31 October 2012 decreased from 30 basis points to around 3 basis points – the level observed prior to the turmoil in the global money market in 2008 (see Figure 2.4).

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



Source: Thomson Reuters.

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

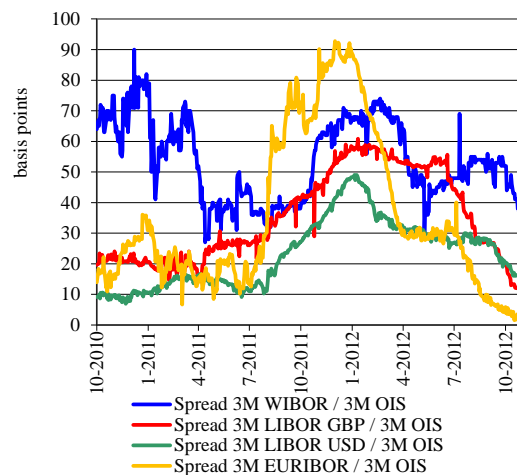


Source: Thomson Reuters.

Other central banks also eased their monetary policy in response to weaker-than-expected macroeconomic data, which raised market participants' concerns about a severe slowdown in global economic growth. According to the FED, GDP growth in the United States was still too low to improve the situation in the labour market. Consequently, on 13 September 2012, the FED took the decision to launch a new round

of Quantitative Easing. Under this programme, up to 40 billion US dollars in Mortgage-Backed Securities will be purchased a month (no time constraints have been set for this operation). One of the symptoms of monetary policy easing by the FED was also the decision to extend operation Twist, aimed at keeping long-term interest rates low. In the period analysed, other central banks also decided to increase the scale of asset purchases, including the Bank of England (under Extended Collateral Term Repo) and the Bank of Japan, whereas, inter alia, the Bank of China cut interest rates. These moves led to the improved market sentiment and a decrease in perceived credit risk of the largest world economies.

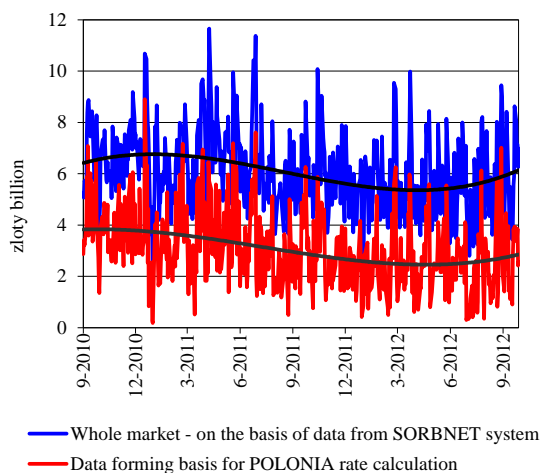
Figure 2.4. Spread between money market and OIS rates



Source: NBP, Thomson Reuters.

2.2.2. Money market

The situation in the Polish money market was stable from May to September 2012. Average daily net turnover in the domestic interbank unsecured deposit market amounted to 5.6 billion zlotys and was slightly higher than in the period November 2011 to April 2012 (see Figure 2.5). The average daily value of overnight transactions, on which the calculation of the POLONIA rate is based, amounted to around 2.5 billion zlotys.

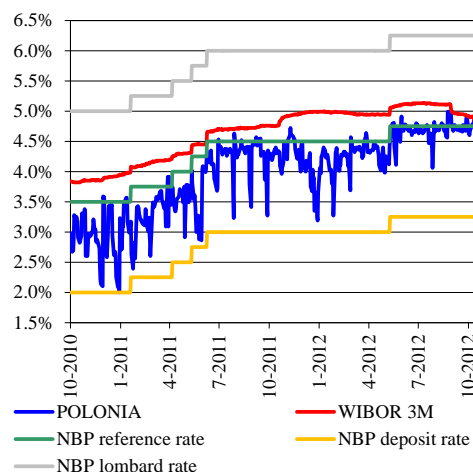
Figure 2.5. Turnover in the interbank unsecured deposit market in Poland

Source: NBP.

In the period analysed, the term structure of the interbank unsecured deposit market was dominated by O/N transactions, as their share in the turnover amounted to 90%. This was connected with limited long-term financing needs of domestic banks, the use of operations with shortest maturities for liquidity management purposes and the maintenance of low credit limits imposed by banks on one another. As a result, transactions with maturities exceeding one week were concluded only sporadically.

A gradual decline in the deviation of the POLONIA rate from the NBP deposit rate was observed from June to October 2012 (see Figure 2.6). This decline was primarily driven by the NBP fine-tuning operations, including the regular issue of money bills on the final day of the reserve requirement maintenance period.⁸ This substantially mitigated the effects of the earlier fulfilment of the reserve requirement obligation (frontloading) that resulted in the decrease of the POLONIA rate to the level of the NBP deposit rate, as market participants expected the central bank to balance liquidity in the banking system by using open market operations with yields equal to the NBP reference rate.

⁸ A NBP press release of 20 July 2011 on fine-tuning open market operations: http://www.nbp.pl/home.aspx?f=/aktualnosci/wiadomosci_2011/20110720_dok.html.

Figure 2.6. Market interest rates against NBP rates

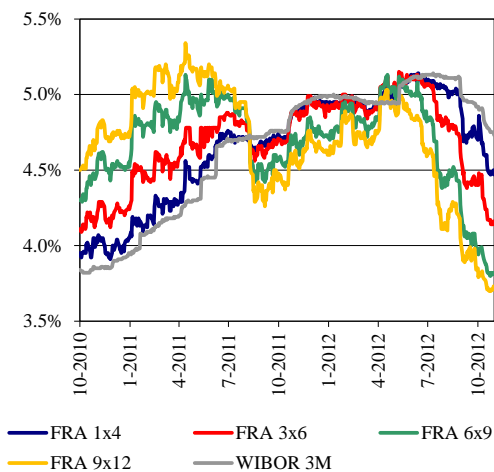
Source: NBP, Thomson Reuters.

Starting from June 2012, market participants expected easing of the NBP monetary policy. These expectations were supported by a lower-than-expected inflation rate in July and August and the 30 August release of GUS data on GDP growth rate in the second quarter of 2012. This was reflected in FRA market rates, which from the beginning of September 2012 pointed to a fall in interest rates by around 1 percentage point over a one-year period (see Figure 2.7). Expectations of some market participants concerning a possible NBP interest rate decrease by the MPC brought down WIBOR rates for longer maturities. Fluctuations of the WIBOR 3M/OIS 3M spread, observed in the second half of the year, resulted primarily from different strength of reaction of WIBOR 3M rates and POLONIA rates to shifts in market participants' expectations over future NBP interest rate levels and reaction of OIS 3M prices to changes in POLONIA rates volatility (see Figure 2.4).

In the period analysed, the implied zloty interest rate in fx swap transactions was close to WIBOR reference rates, which implies that the domestic money market was functioning effectively (see Figure 2.8). A substantial decrease in risk aversion in the euro area money market had an

impact on the cost of domestic banks' hedging against currency risk. From June to October 2012, the premium which domestic banks had to pay above the EURIBOR rate in exchange for the WIBOR rate in CIRS basis transactions decreased by 2/3 and at the end of this period amounted to around 30 basis points. Continued strong non-residents' demand for the zloty in the fx swap market and a significant rise in Polish government bond prices, connected, inter alia, with market participants' expectations for NBP interest rate decreases, led to the situation, in which the cost of acquiring the zloty in short-term swaps from August to October 2012 was significantly higher than bond yields. In this context foreign entities funding their investment in the domestic capital market more often than in the preceding periods preferred to purchase the zloty in spot transactions, which contributed to its appreciation.

Figure 2.7. Current and expected WIBOR rates



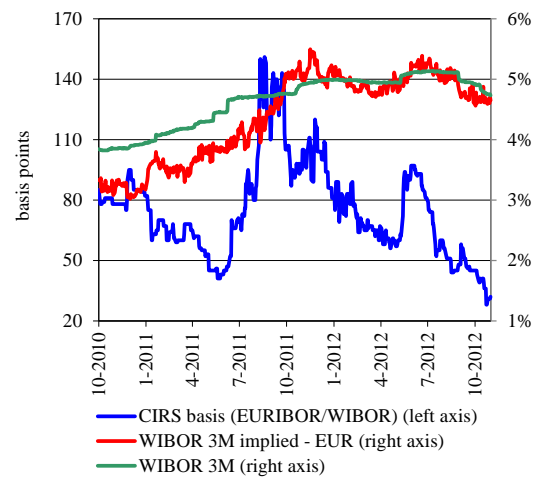
Source: Thomson Reuters.

In June, the NBP and the Swiss National Bank concluded a CHF/PLN fx swap agreement.⁹ In the event of severe disturbances in the money markets for foreign currencies this agreement enables the NBP to provide domestic banks with Swiss franc liquidity, which they need to hedge against risk arising from the mismatch of the cur-

⁹ A press release on the swap agreement between the Swiss National Bank and the National Bank of Poland: http://nbp.pl/homen.aspx?f=/en/aktualnosci/2012/250612_en.html.

rency structure of assets and liabilities.

Figure 2.8. Premia in the CIRS basis and fx swap market



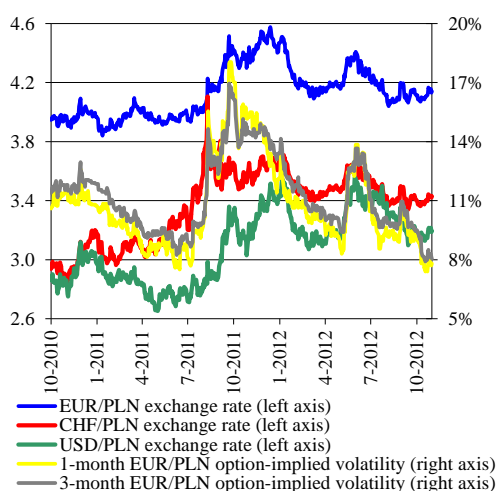
Note: For CIRS basis transactions, the premium is defined as the margin paid above the EURIBOR rate in exchange for the WIBOR rate; implied WIBOR is calculated on the basis of 3M EUR/PLN fx swap rates, taking the EURIBID 3M rate as the interest rate on deposits in euros. Source: NBP calculations based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

2.2.3. Foreign exchange market

Since the publication of the previous *Report*, the zloty exchange rate against the euro and the US dollar was mainly affected by external factors, such as EU measures aimed to stabilise the situation in the euro area and the policy of the major central banks. The fall in risk aversion in the global financial markets encouraged short-term investors to invest in mature emerging markets. Together with a continued foreign investment inflow to the domestic capital market (mainly to the government bond market), this contributed to the significant appreciation of the zloty – from June to August 2012, it strengthened against the euro and the US dollar by, respectively, around 7% and 5% (see Figure 2.9). A similar tendency was also observed, inter alia, in the Hungarian forint market. The appreciation of the zloty was

accompanied by a substantial decrease in its exchange rate volatility. The effects of a temporary depreciation of the zloty in late August and early September 2012 were outweighed by improved sentiment in the global financial markets related to the ECB announcement of the OMT programme in early September and the FED's launch of a new round of Quantitative Easing.

Figure 2.9. Zloty exchange rate and its volatility



Source: Thomson Reuters.

In early October 2012, the Polish government approved the draft assumptions of the draft law amending the Act on Public Finances and the Act on VAT. The draft includes the Ministry of Finance proposal of a new way of defining whether the prudential thresholds contained in the Act on Public Finances¹⁰ have been exceeded. According to the proposal, public debt would be converted to the zloty by means of arithmetic average of the foreign exchange rates announced by the NBP and effective on business days from the financial year, for which debt-to-GDP ratio is announced. Next, this amount would be decreased by the Ministry of Finance's end-of-financial-year disposable financial resources assigned to finance the borrowing needs of the State budget in the forthcoming financial year. Only if the value of the public debt-to-GDP ratio, calculated in this man-

ner, exceeded the law-determined thresholds, the prudential procedures provided for in this law would be activated. According to the draft assumptions, the new proposals would be used for the calculation of the public debt-to-GDP ratio for 2012. The proposed changes are aimed, inter alia, at containing the risk of triggering the prudential procedures solely as a result of unfavourable zloty exchange rate movements in late December, e.g. as a result of speculative activities in the foreign exchange market.

2.2.4. Bond market

The prices of Polish government bonds grew significantly from June to October 2012. Their yields decreased across the yield curve, registering a historically low level (see Figure 2.10). This was primarily the result of a strong inflow of foreign investors to the domestic market for these instruments, related to a fall in perceived credit risk in the world markets, which was reflected in CDS premia on government bonds (see Figure 2.2). The expansionary policy of developed countries' central banks preserved the disparity of interest rates between developed and developing countries. This was accompanied by the decrease of the number of available financial instruments with investment rating. As a result, foreign investors rebalanced their portfolios of debt securities, looking for investments that would yield higher rates of return (search for yield) and invested funds in mature emerging markets, also in Poland. These institutions, including some central banks, showed interest in buying Polish government bonds issued in the domestic market because of attractive yields on these instruments for the given credit risk and high liquidity of the secondary market (from 1 June 2012 to 30 September 2012, the average daily value of outright transactions amounted to around 14.6 billion zlotys).

Investments in the domestic government bond

¹⁰ The prudential thresholds and the procedures in the event of them being exceeded are regulated by Article 86 of the Act of 27 August 2009 on Public Finances (Journal of Laws No. 157/2009, item 1240)

market were supported by the relatively good outlook for Poland's growth, a successful implementation of the State Treasury debt management strategy and a high degree of financing the borrowing needs of the State budget. This was confirmed by high GDP growth rate forecasts as compared to euro area countries and other countries of the region (despite the expected slowdown in comparison with 2011, Poland's GDP growth in 2012 will be one of the highest in the EU). Poland's economic growth prospects were also positively assessed by rating agencies which suggested that an upgrade of the sovereign rating would be possible in the midterm provided that measures aimed at improving the situation of public finances would continue.

Figure 2.10. Yields on Polish government bonds, IRS to Polish government bonds spread and Polish to German government bonds spread



Source: Thomson Reuters.

Apart from a high degree of financing the borrowing needs of the State Treasury (in October, all of its borrowing needs were financed and pre-financing for 2013 began), the good state of public finances resulted from the lower-than-expected execution of the budget deficit in the first three quarters of 2012. This allowed the Ministry of Finance some leeway to supply debt securities in the second half of 2012 which, coupled with high investor demand, supported the decrease in yields on Polish government bonds in

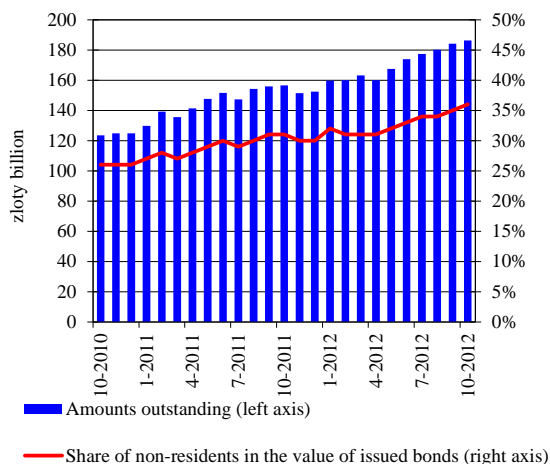
the primary market (which can be demonstrated by good results of auctions in the domestic market and a number of supplementary auctions).

The factors that additionally contributed to a decline in yields on the Polish government bonds in the secondary market were market participants' expectations for decreases in NBP interest rates. Strengthening of these expectations in the third quarter of 2012 fuelled speculative operations performed by nonresidents, which may be reflected in a rise in activity of this investor group in the market for both outright and conditional transactions.

A continued inflow of foreign investors to the domestic market was reflected in the rise in value of their portfolio of government bonds, which amounted to 186.3 billion zlotys at the end of October and was 18.9 billion zloty higher than at the end of May 2012 (see Figure 2.11). Non-bank financial institutions were the largest group of foreign investors. These institutions increased their bond holdings since the end of May by 6.3 billion zlotys to 143.5 billion zlotys at the end of September 2012 (see Figure 2.12). The corresponding period also saw a significant rise (by 4.5 billion zlotys to 25.6 billion zlotys) in the value of the Polish government bond portfolio held by foreign banks whose investments are highly volatile and often short-term. At the same time, from the end of May to the end of September 2012, the bond portfolio of the largest group of domestic government bond buyers, i.e. pensions funds, dwindled by over 7 billion zlotys.

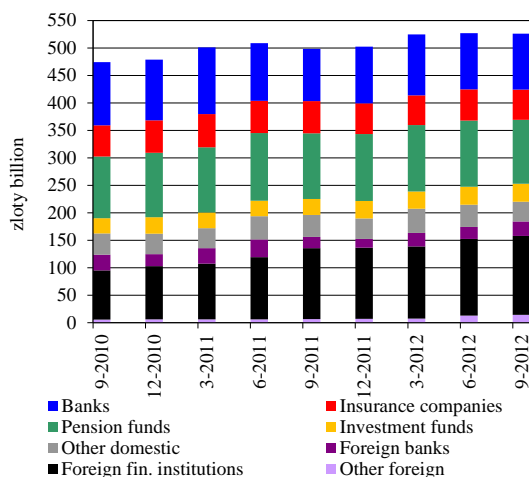
Foreign investors' demand was concentrated on the largest and most liquid bond series of short- and medium-term maturity, and largely depended on the type of debt securities offered at auctions by the Ministry of Finance. In this period, the average maturity of the bond portfolio held by foreign investors slightly increased and amounted to 4 years (modified duration of nonresidents' portfolio of wholesale fixed interest domestic bonds amounted to around 3.1 at the end of September 2012).

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



Source: Ministry of Finance.

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



Source: Ministry of Finance.

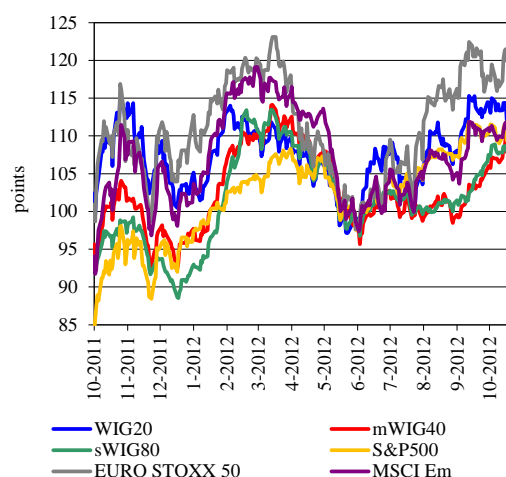
2.2.5. Equity market

From June 2012 to October 2012 the situation in the domestic equity market was influenced by trends in the global financial markets, determined primarily by monetary policy easing by central banks, political developments in the euro area and the release of macroeconomic data from major world economies. The significant impact

of global factors was associated, inter alia, with non-residents' large investments in the domestic equity market. At the end of August 2012 they held 45.5% of equities traded in organised markets.

The European Union 28-29 June 2012 summit decisions and decisive action taken by central banks of the United States, United Kingdom, Japan, China and the euro area led – despite the worse economic growth outlook for these economies – to a continued upward trend of world stock exchange indices, such as S&P500 and EURO STOXX 50. Improved investor sentiment was also observed in the domestic market. The stability of the Polish economy was conducive to non-residents' equity purchases, whose balance from June to August 2012 amounted to 7.9 billion zlotys. The above mentioned factors contributed to equity price rises on the Warsaw Stock Exchange. WIG rose by 14.4% and WIG20 by 10.6% from 1 June to 31 October 2012 (see Figure 2.13). The strongest share price increases, both in the world markets and the GPW, were recorded in early September 2012, as the ECB announced the launch of the OMT programme.

Figure 2.13. Selected stock market indices



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

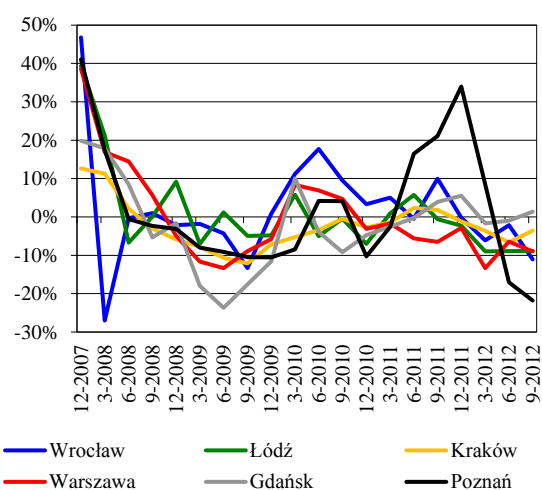
Companies from the commodity sector stood out against the domestic market, which was con-

nected with a rise in commodity prices in the global financial markets. However, the persistent problems of construction companies, arising, inter alia, from excessive debt and problems in cash flow management which brought about the bankruptcy of a few of them, had a negative impact on the domestic equity market. WIG-Budownictwo fell by 18.1% in the analysed period.

2.3. Property market

In the period covered by this *Report*, average prices of flats in large cities slightly declined. In annual terms, the average decline in transactions prices in the largest residential property markets¹¹ amounted to 6.7% in the primary market and 7.8% in the secondary market (see Figures 2.14 and 2.15). Estimated total average decline in the prices in the two markets from mid-2008 was 15% and 11%, respectively

Figure 2.14. Growth in residential property transaction prices in the primary market, in selected cities (y/y)



Source: NBP.

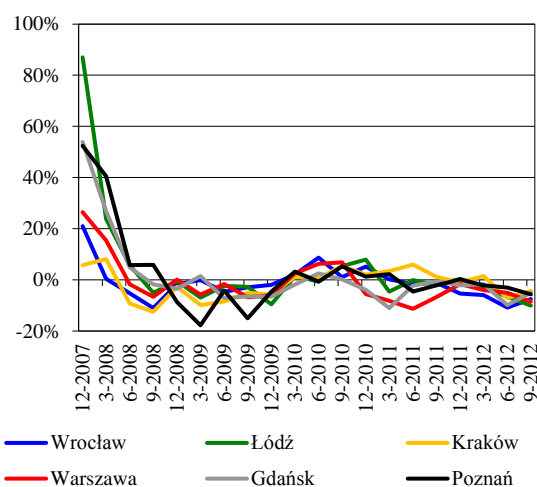
The falls in the prices of flats were driven by both demand and supply factors. Further restrictions

¹¹ The fall of average prices weighted by the size of housing stock. The largest residential property markets include Gdańsk, Gdynia, Łódź, Kraków, Poznań, Warsaw and Wrocław.

¹² See “Residential Market in Poland Q3 2012”, REAS, 2012.

on the availability of housing loans, resulting, inter alia, from tighter lending policies (see Figure 3.11) and the September 2012 decrease in the price limits that qualify for the “First family home” programme, had a negative impact on demand.

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



Source: NBP.

Of supply factors, the decline in dwellings prices was mostly driven by a large number of flats offered by developers. At the end of the third quarter of 2012, the offer in the biggest residential property markets was around 1.6-2.2 times larger than annual sales¹². Moreover, the number of unsold completed flats in the markets rose from March to September 2012 (from 11.7 thousand to 12.7 thousand), which increased downward pressure on prices.

According to GUS data, the number of flats in new construction projects started by developers did not change significantly in the first three quarters of 2012 vis a vis the corresponding period of 2011 despite the substantial rise in the first four months of the year, resulting from the April 2012 entry into force of the *Act on the Protection of Rights of Buyers of residential Units*

and Single Family Houses. In the third quarter of 2012 alone, the number of newly-started construction projects declined by 35.9% as compared to the previous year. The first three quarters of 2012 also saw an 8.8% fall in the number of flats for which developers had successfully sought building permits. If the trends continue, this would reduce the scale of imbalances in the market.

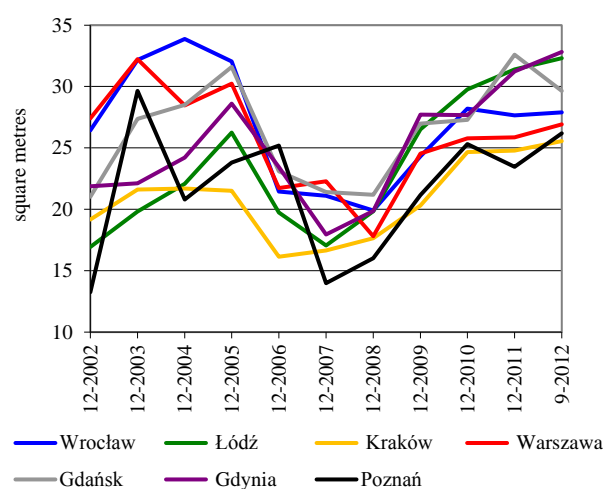
In the period analysed in the *Report*, the availability of flats slightly increased (the size of a flat which a household with an average income for a given voivodship can buy for a zloty-denominated loan) in Poland's largest cities (see Figure 2.16). The increase was primarily driven by flats' price falls and slight wage growth.

Falls in the prices of flats may be expected to continue in the coming quarters.¹³ Of supply factors, the number of flats offered by developers has to be emphasised as it remains high in relation to the number of transactions. In turn, the worsening outlook for lending growth in the segment of housing loans will negatively affect demand (see Chapter 3.2), which results, inter alia, from the phasing out of the "First family home" programme at the end of 2012. The launch of the successor programme "Home for the Young" should be expected in mid-2013 at the earliest.¹⁴ Although the number of flats bought under the "First family home" programme may grow in the fourth quarter of 2012 (cumulated demand from customers before the phasing out of the scheme), analysis of the number of flats that have been purchased shows that this should not lead to containing imbalance in the market.

A fall in the prices of flats may have some impact on the situation of the banking sector. A fall in itself does not pose a threat to the repayment

performance of housing loans, in particular loans taken out by borrowers for purchase of property to satisfy their housing needs – these loans are prevalent in Poland. In the event of the borrowers losing their capacity to service the loans, the lower prices of dwellings, however, are reflected in lower recovery rates on collateral. Analysis of the sensitivity of banks to a simultaneous deterioration in the repayment performance of housing loans and the fall in property prices has been shown in Box 4.

Figure 2.16. 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.

¹³ For more information on future developments in the residential property market, see the NBP quarterly "Information on home prices and the situation in the residential and commercial real estate market in Poland in 2012 Q1".

¹⁴ For more information on the programme, visit the website of the Ministry of Transport, Construction and Maritime Economy: http://www.transport.gov.pl/2-482be1a920074-1795650-p_1.htm.

Chapter 3.

Banking sector stability

The condition of the banking sector was good in the period under analysis, which is reflected by, inter alia, earnings maintained at a level close to 2011 record highs, high capital levels and a continued lending growth. However, a slower economic growth produced some negative effects which may increase in the forthcoming quarters.

Financial difficulties of some enterprises engaged in the implementation of infrastructural projects led to the fall in quality of the portfolio of corporate loans. The quality of the portfolio of household loans remained broadly unchanged, and impaired loans' growth affected mainly housing loans. The rise in burden of credit risk materialization costs on net income and a decrease in net interest margin translated into a fall of the sector's average profitability ratios.

Most banks reduced the value of foreign funding and at the same time developed their local deposit base, which contributed to the reduction in the funding gap and pushed up costs related to development of their customer base. In the banking sector as a whole, the buffer of liquid assets was substantially higher than unstable funding sources. The liquidity position of individual banks was, however, distinctly discrepant.

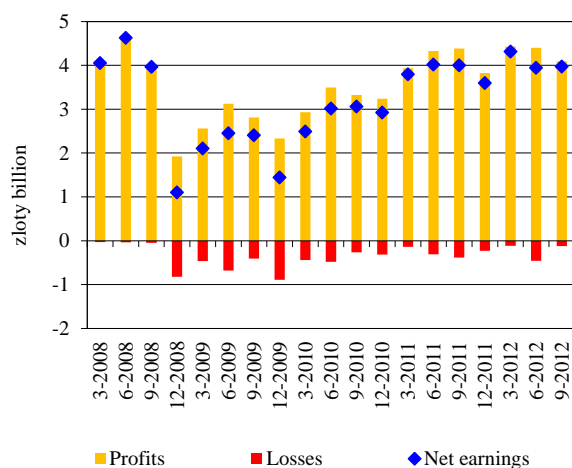
Expected economic slowdown, at a speed consistent with the NBP macroeconomic projection, will contribute to the rise in credit risk materialisation costs, most notably in the case of corporate loans. Regarding housing loans, the burden of loan impairment charges is likely to grow also due to the ageing of the loan portfolio. Competition for stable funding sources may, at the same time, lead to a 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.

The capacity of banks to absorb losses has improved since March 2012. The banking sector's capital has grown, and since the start of crisis in the 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, the forecasts for economic growth globally and in Poland markedly deteriorated and economic outlook remains highly uncertain. Consequently, it is desirable for banks to maintain high capital buffers and to continue a prudent dividend policy.

3.1. Earnings

In the period analysed¹⁵, Poland's banking sector generated earnings similar to those posted in the period referred to in the previous edition of the *Report*. Quarterly profits were above 4 billion zlotys, and quarterly losses – following a temporary increase in the second quarter of 2012¹⁶ – returned to the downward trend (see Figure 3.1).

Figure 3.1. Quarterly net earnings of the banking sector



Source: NBP.

The number of institutions with negative profitability ratios increased to 20 (from 18 in March 2012), but their share in the banking sector's as-

sets was rapidly falling (to 2.2% from 3.6% in March 2012). This was related to the making of net profit of a few medium-sized commercial banks that had been previously making losses and to the losses made by a few previously profit-making cooperative banks. The group of banks with negative profitability ratios included 3 domestic commercial banks, 7 cooperative banks and 10 branches of credit institutions.

The earnings' growth rate of banks diminished and was slower than that of the scale of banking activities, which was reflected in the fall of average ROAs and ROEs (see Table 3.1). However, these ratios remained relatively high compared to Europe's largest banks.

Larger banks on average showed higher profitability. In the second and third quarters of 2012, their advantage over the rest of the sector diminished (see Figure 3.2).

Decomposition of changes of ROE of the domestic banking sector¹⁷ (see Figure 3.3) shows that its decrease was driven by:

- the increase in burden of credit risk materialisation costs and operating costs on net income from banking activity, unlike in preceding quarters. The increase in charges to loan impairment provisions resulted mainly from the deteriorating quality of the corporate loan portfolio (see Fig-

¹⁵ This Chapter covers a period from March to September 2012.

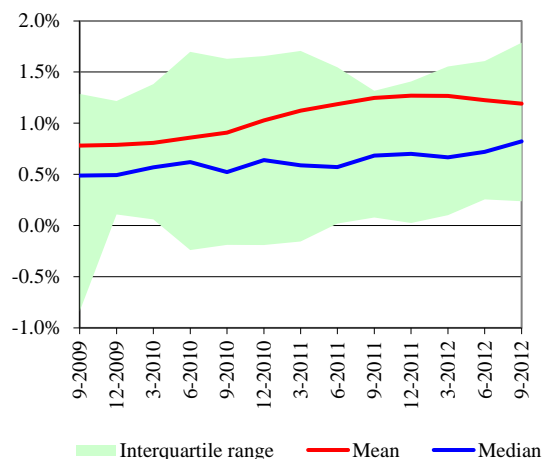
¹⁶ One commercial bank alone was responsible for a substantial portion of Q2 losses after it had considerably tightened its loan quality assessment standards.

¹⁷ Formula of decomposition of ROE shown in Figure 3.3:

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

ure 3.4), in the construction industry, in particular (see Chapter 3.3).

Figure 3.2. Return on assets



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

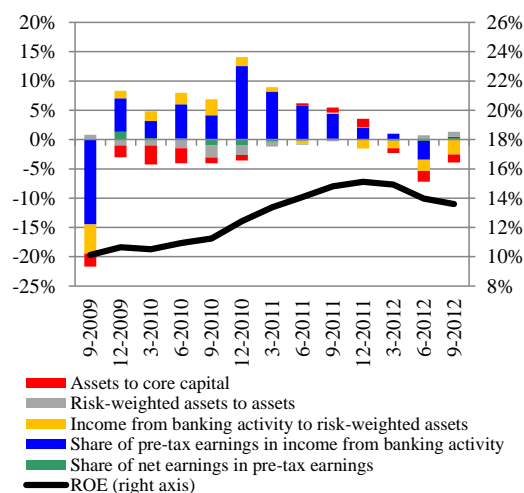
- the decrease in margin on risk-weighted assets (measured by the relation of net income from banking activity to risk-weighted assets), which affected both net interest margin and net non-interest margin. One of the reasons behind the decrease was a steep increase in risk-weighted assets caused by the raising of risk weights for foreign currency loans by the KNF (see Chapter 3.6), which, on the other hand, was reflected in the rise of the average risk weight of assets (i.e. the relation of risk-weighted assets to assets).

The fall in net interest margin was also associated with competition for funding sources, seen in an increase in the effective interest on liabilities (see Chapter 3.4). At the same time, lending was growing at a

slower rate (see Chapter 3.2), and value of a consumer loan portfolio – whose estimated profitability is the highest (see Figures 3.6 and 3.8) – declined.

- a further decline in banks' financial leverage, primarily related to the rise in their regulatory capital (the leverage ratio dropped from 12 at the end of March to 11.6 at the end of September 2012.).

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 the part of net income from banking activity that was not used to cover operating costs and costs of credit risk materialization. Source: NBP.

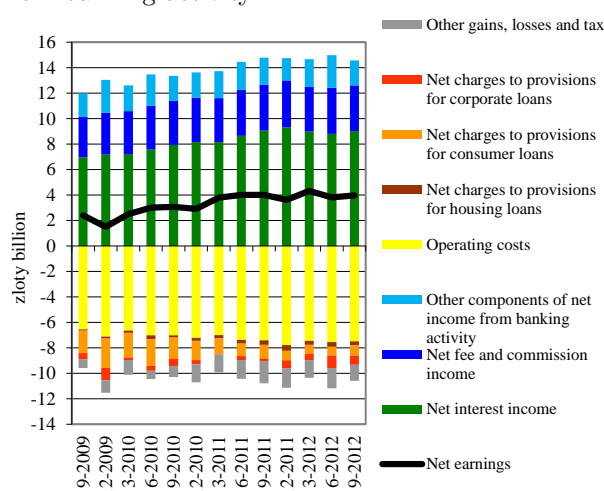
Intermediation between savers and borrowers remained the major source of net income from banking activity (see Figure 3.4). Due to the above discussed processes (higher funding costs, flagging lending, a deterioration in loan portfolio quality) profitability of this activity measured by an adjusted net interest margin began to diminish in the period analysed (see Figure 3.5).

Credit products were further diversified with regard to their estimated profitability (see Figures 3.6–3.9). Consumer loans remained the most profitable product, and their profitability rose despite higher funding costs. As for housing

loans and loans to enterprises, the rise in effective interest on liabilities was reflected in the fall of their estimated profitability. Profitability of

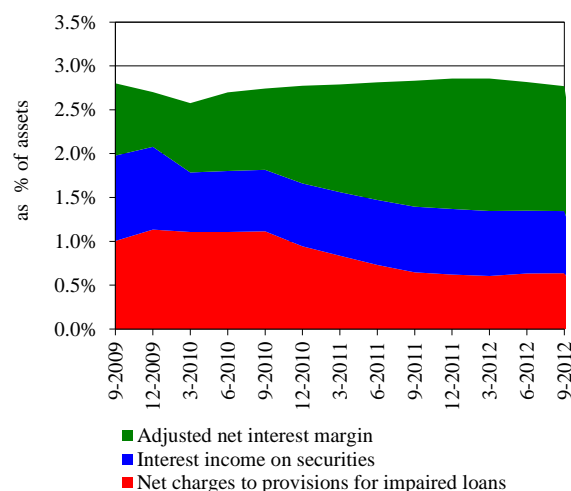
loans to large enterprises and SMEs¹⁸ was diminishing also on the back of the deteriorating quality of these portfolios.

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



Note: quarterly data.
Source: NBP.

Figure 3.5. Net interest margin



Notes: annualised data.
The upper edge on the area in this Figure corresponds to the net interest margin (NIM). It is partially composed of interest income on debt securities (not classified into “Loans and other receivables”), issued primarily by the government, and therefore carrying low credit risk. The remaining part of interest margin after deduction of charges to provisions for impaired loans is the adjusted net interest margin that measures the net profitability of intermediation between savers and borrowers.
The decrease in the ratio of interest income on debt instruments to assets in the first quarter of 2010 is related to a change in the way interest income on debt instruments classified as “held for trading” and “designated at fair value through profit and loss account” is presented. By the end of 2009, this income had been recorded as interest income, however it is currently recognized jointly with price changes of these instruments. In 2009, this portion of interest income accounted for 27.7% of total interest income of debt instruments.
Source: NBP.

¹⁸ 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		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
As % of average assets ¹							
Net interest income	2.80	2.82	2.84	2.86	2.85	2.81	2.76
Net non-interest income	1.96	1.91	1.88	1.83	1.79	1.79	1.75
Net income from banking activity	4.76	4.73	4.73	4.68	4.64	4.59	4.51
Operating costs ²	2.48	2.46	2.42	2.40	2.38	2.34	2.32
Net charges to provisions for impaired loans	0.84	0.73	0.63	0.60	0.59	0.62	0.64
Pre-tax earnings	1.40	1.48	1.54	1.58	1.59	1.54	1.52
Net earnings	1.12	1.18	1.23	1.25	1.26	1.22	1.20
As % of net income from banking activity ¹							
Net interest income	58.7	59.6	60.1	61.0	61.4	61.1	61.3
Net non-interest income	41.3	40.4	39.9	39.0	38.6	38.9	38.7
Net income from banking activity	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Operating costs ²	52.2	51.9	51.3	51.3	51.2	51.0	51.4
Net charges to provisions for impaired loans	17.6	15.5	13.3	12.9	12.8	13.5	14.2
Pre-tax earnings	29.4	31.2	32.5	33.7	34.3	33.6	33.6
Net earnings	23.6	25.0	26.0	26.7	27.2	26.6	26.6
As % of average core capital ^{1,3}							
Pre-tax earnings ⁴	16.6	17.6	18.4	18.8	18.6	17.4	16.6
Net earnings ⁴	13.4	14.1	14.8	14.9	14.7	13.8	13.2
Amounts ⁵ (zloty billion)							
Net interest income	8.16	16.80	25.87	35.19	8.99	17.78	26.81
Net non-interest income	5.56	11.36	17.08	22.51	5.69	11.88	17.42
Net income from banking activity	13.72	28.16	42.95	57.70	14.68	29.66	44.23
Operating costs ²	7.00	14.38	21.79	29.58	7.46	15.01	22.51
Net charges to provisions for impaired loans	1.74	3.63	5.33	7.43	1.81	4.21	6.30
Pre-tax earnings	4.68	9.60	14.63	19.44	5.36	10.07	15.03
Net earnings	3.79	7.81	11.81	15.42	4.31	8.13	12.10

¹ Annualised data.

² Operating costs = general expense and depreciation.

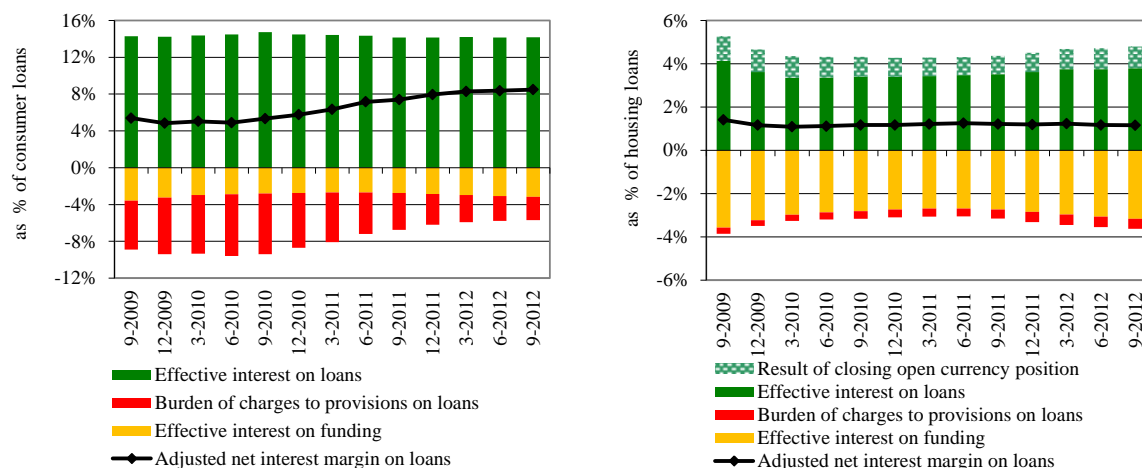
³ Core capital without deductions by the shortfall of specific provisions and other so-called regulatory deductions.

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 loans (left-hand panel) and housing loans (right-hand panel)

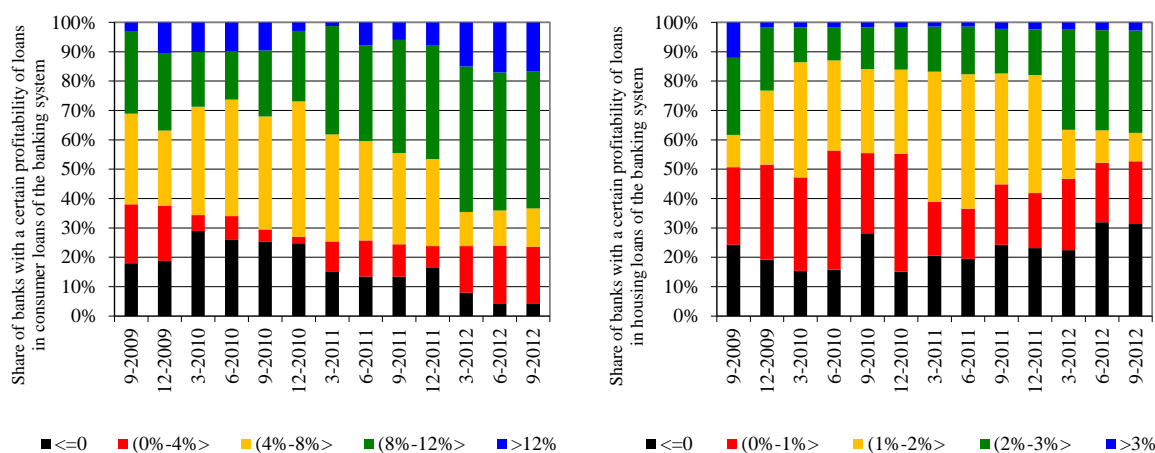


Notes: annualised data.

The presented values of the adjusted net interest margin should only be regarded as a proxy for 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), inter alia, related 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).

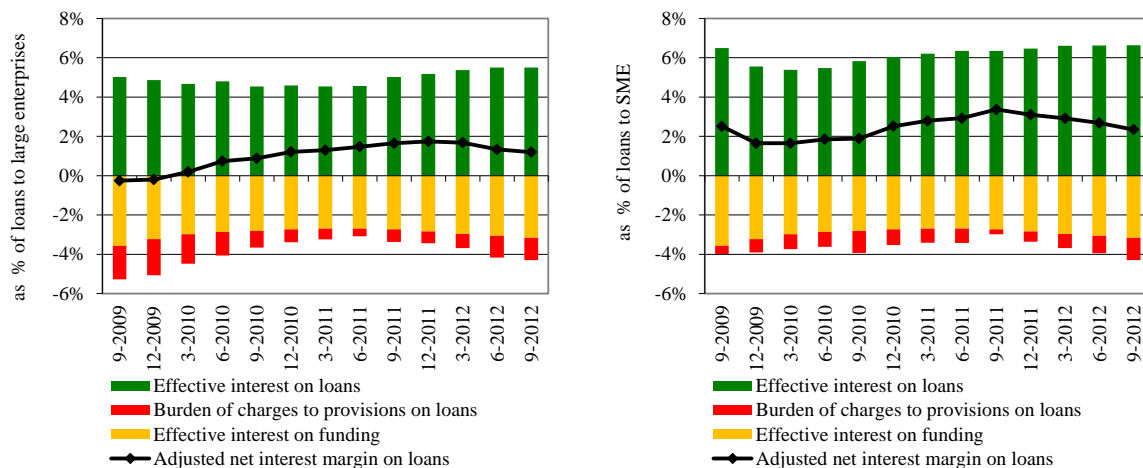
The “result of closing open currency position” for housing loans is the estimated net gains/losses on closing an open FX position by banks (related to the origination of Swiss franc-denominated housing loans), assuming the use of rolled over 3-month CHF/USD and USD/PLN FX swaps. The result of such a hedging transaction 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. This 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



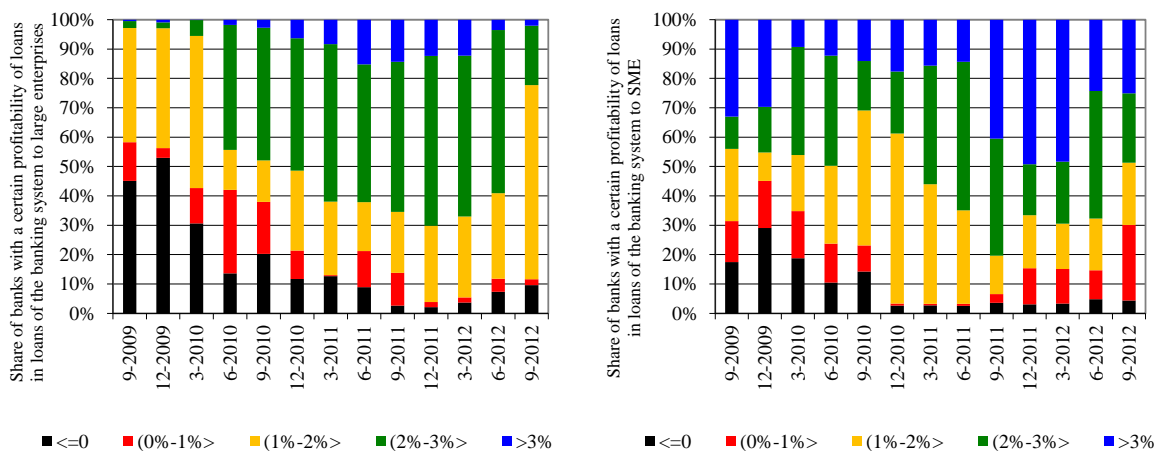
Note: for a description of estimated profitability measurement, see Notes to Figure 3.6.
Source: NBP.

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.

The profitability of banking business, measured by ROA, can be expected to decrease further in the upcoming quarters. The following factors will impact profitability indicators:

- **An increase in the burden of credit risk materialisation costs on earnings.** A slower pace of economic growth will continue to have an adverse effect on the quality of corporate loans, and next it may also have a negative influence on the quality of loans to households. The condition of building businesses may be an additional risk factor (see Chapter 3.3).

As regards housing loans, the burden of loan impairment provisions may grow also due to the ageing of a loan portfolio and deterioration in the quality of loans originated in the period of lenient lending policy.

In the case of the portfolio of consumer loans, the burden of charges to impairment provisions may be expected either to stabilize or to rise slightly. The value of the provisions will largely depend on changes in the quality of loans originated in the period of a more restrictive lending policy.

- **A fall of net interest margin.** On the cost side, the fall may be driven by competition for stable funding sources, and on the revenue side – by lending structure that points to a likely further decrease in the share of high interest rate-bearing consumer loans in banks' portfolios (see Chapter 3.2). Market expectations about a decline in WIBOR rates (reflected in FRA rates – see Chapter 2.2.2) may also push down net interest margin in the future. In

the past, when market interest rates were decreasing the net interest margin of banks was declining, possibly because interest on current deposits remains relatively stable despite market rate movements, and interest on some of current deposits of non-financial entities at banks is close to nil, regardless of the level of market interest rates.

- A likely further fall in non-interest margin, related, inter alia, to an expected fall in the growth rate of economic activity and to forecast (voluntary or regulatory) reduction in the interchange fee.
- Limited opportunities of improving cost effectiveness. A continuation of the implementation of restructuring programmes and bank mergers may dampen the growth rate of employment and the expansion of branch network. Implementing these plans involves restructuring costs, but in the long term it should help improve cost effectiveness. In addition, banks' general expense may grow as a result of the planned introduction of an additional prudential fee for the BFG stabilisation fund.¹⁹

Banks will find it difficult to raise the profitability of core capital also because of the limited possibilities of increasing financial leverage. This will result both from market pressure and regulatory measures.

A decline in profitability ratios, coupled with a likely low growth rate of the loan portfolio and banks' balance-sheet (see Chapter 3.2) will lead to a fall in banks' profits, in nominal terms.

3.2. Lending

The growth rate of lending to the non-financial sector declined from March 2012 and amounted to 5.6% y/y (a 2.6 percentage point fall) at the

¹⁹ See the draft law of 11 October 2012 on *amending the Act on the Bank Guarantee Fund and certain other acts* available in the Public Information Bulletin of the Government Legislation Centre.

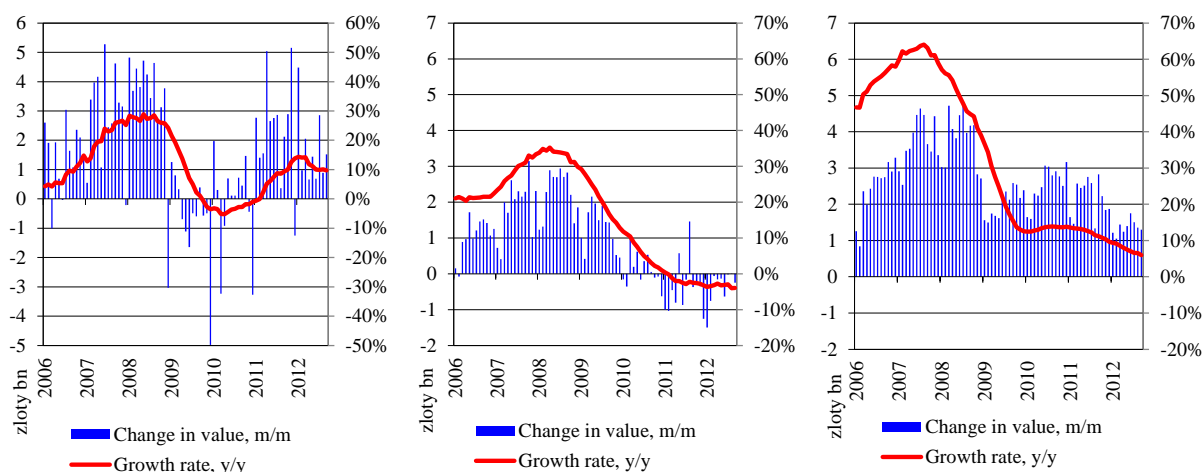
end of September 2012.²⁰ The lending growth decline concerned all main loan types, i.e. loans to enterprises and loans to households: housing and consumer loans (see Figure 3.10).

At the end of September 2012, corporate loans were growing at 9.7% y/y. At the same time, lending to SMEs slowed to a lesser degree than to large enterprises. This may have resulted from smaller, on average, own funds of SMEs to finance their current activity than of large enterprises and therefore from greater need to seek external funding. On the other hand, the tightening of lending policy towards SMEs was substantially stronger than towards large enterprises (in the third quarter of 2012, the net percentage representing changes in lending standards²¹ amounted on average to -35% and -20%).

The growth rate of consumer loans has been neg-

ative for a year and a half; at the end of September 2012, it amounted to -3.9% y/y. The value of new²² consumer loans has been steadily falling. The fall was driven, inter alia, by a tightening of lending policy of banks. Due to a substantial deterioration in the quality of loans extended at a time when lending policy was too lenient and to the resulting high charges to provisions for impaired loans, some banks strongly tightened lending standards in 2008–2009 (see Figure 3.11). The banks that voluntarily tightened lending policy were joined by banks that in 2010 had been required to amend it on the scheduled implementation of provisions of Recommendation T *on good practices with regard to risk management of retail credit exposures*. Banks' lending policy on consumer loans has not been significantly modified since the end of 2010.

Figure 3.10. Changes in the value (m/m) and growth rate (y/y) of lending to corporates (left-hand panel), consumer loans (central panel) and housing loans to households (right-hand panel)



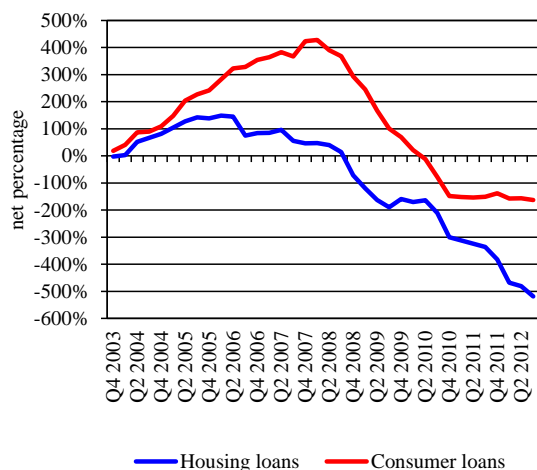
Note: data after excluding the impact of foreign exchange rate changes.
Source: NBP.

²⁰ Changes in the value of loans referred to in Chapter 3.2 apply to data after excluding the impact of foreign exchange rate changes.

²¹ The net percentage is the difference between answers “eased” and “tightened” to the question about changes in lending policy. A negative value of the net percentage implies that lending policy has been tightened. For more information on the issue, see “Senior loan officer opinion survey – on bank lending practices and credit conditions”, NBP, 2011–2012 editions.

²² Data on new loans based on a sample of 19 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.

Figure 3.11. Accumulated index of changes in banks' lending policy standards



Note: positive values denote an easing of, while negative ones – a tightening of lending policy as compared to the initial period of the fourth quarter of 2003.

Source: NBP.

At the same time, two banks responsible for a substantial fall in value of the sector's debt, in 2011 moved consumer loan origination to non-bank lending firms. This move helped to circumvent the requirements imposed by Recommendation T, but it was not in line with the regulator's intention.

The standards of granting housing loans have been tightened for some considerable time, and the most distinct change occurred at the turn of 2011 and 2012 (in the first quarter of 2012, the net percentage was -85%). The tightening followed, inter alia, the entry in force from 2011 of the amended Recommendation S *on good practices with regard to management of credit exposures that finance property and are mortgage-secured*. Banks continued to tighten their lending policy in the second and third quarter of 2012 (in the third quarter, the net percentage was -38%).

The growth rate of housing loans has been gradually diminishing since autumn 2010 on the back

of, inter alia, changes in banks' lending policy as well as amendments to the government programme called "First family home"²³ according to which as of 31 August 2011 applicants in most large cities found it more difficult to meet the programme requirements. The growth rate of housing loans amounted to 6.0% y/y in September 2012.

The upward trend of the share of zloty-denominated loans in the currency structure of new housing loans, which is favourable from the point of view of financial system stability, strengthened for another successive quarter (see Figure 3.12). However, foreign currency-denominated loans continued to prevail in the currency structure of the loan portfolio (around 57%, of which most of them are denominated in the Swiss franc).

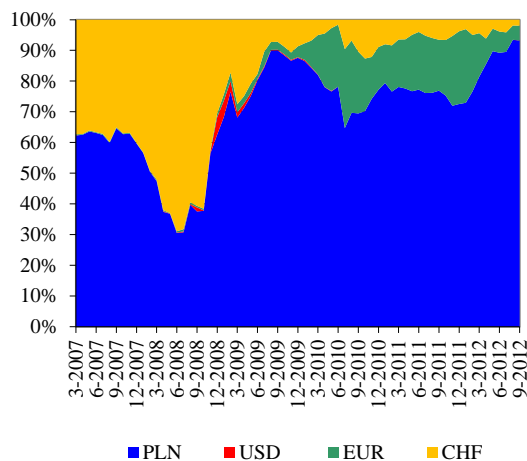
A persistently high share of foreign currency-denominated loans in a loan portfolio makes banks exposed to credit risk arising from households' vulnerability to a depreciation of the domestic currency. The weakening of the zloty also increases the LtV, therefore liquidation of mortgage collateral may not ensure that 100% of the loan is recovered.

In addition, foreign currency loan origination involves funding and liquidity risks for banks, and also enhances volatility of their capital requirements. It also carries macroeconomic risks by, inter alia, distorting transmission of monetary impulses. Therefore, leaving the option to take out foreign currency loans only to borrowers receiving regular income in the currency of the loan would be good for domestic financial system stability.

The resilience of banks to credit risk arising from the depreciation of the zloty and to liquidity risk related to the need to roll over hedges of their open balance-sheet FX position was analysed in stress testing (see Chapter 3.7.2).

²³ From 31 August 2011, certain assumptions of the programme were modified by, inter alia, substantially lowering the coefficients for calculation the maximum property price, and setting the age limit for a borrower (35 years of age). See the Act of 15 July 2011 *on Amending the Act on Financial Support to Families to Acquire their Own Accommodation, and Certain Other Laws*, Journal of Laws of 2011, No. 168, item 1006.

Figure 3.12. Currency structure of new housing loans to households



Notes: Data on new loans based on a sample of 19 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 September 2012, the share of these banks in the whole portfolio of zloty-denominated housing loans of the banking sector amounted to around 77%, and of foreign currency-denominated housing loans – around 65%. Since June 2010 loans denominated in the US dollar have not been included in interest rate statistics.

Source: NBP.

Economic forecasts for 2013–2014 show that the outlook for household loan growth is worse than in the period analysed in the previous *Report*. The growth rate of these loans may be expected to decrease further in the coming quarters. However, the pre-announced amendments to the supervisory recommendations, to take effect in 2013, may have an impact on halting this trend.

UKNF has announced amendments to Recommendations S and T, which – according to the regulator’s intention – are designed, inter alia, to counteract the limiting of lending targeted at households. The draft amendments to Recommendation T were unveiled in October 2012 (see Box 2).

²⁴ The launch of the MdM programme was announced by the Prime Minister in his address in the Polish Parliament on 12 October. The 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.

The implementation of the proposed solutions may increase the value of loans provided by some banks, i.e. the banks whose decision to tighten their lending standards was mainly prompted by the 2010 amendment to Recommendation T, and which meet today the regulatory standards. It can be expected that the impact of the new rules of loan origination, including in particular simplified rules, on lending will be smaller for banks that adjusted their lending policy to market conditions on their own.

Demand for housing loans will be lower due to the January 2013 termination of the government programme “First family home”, which will reduce the creditworthiness of a certain portion of prospective borrowers. Loans extended under this scheme in 2010–2011 accounted for, on average, around 40% of zloty-denominated housing loan growth and for around 33% in the first half of 2012. This may point to a noticeable impact of this move on the level of lending.

The reduced demand associated with the termination of the programme “First family home” will be partially restored after the launch of a new government programme to support home purchase by selected borrower groups, “Home for the Young” (MdM). The launch of this scheme has been initially scheduled for mid-2013.²⁴ The programme provides for granting State subsidies for loans for first home purchase to persons below 35 years of age. The subsidies will be relatively high: 10% of the value of a loan, 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 a fourth child. The estimates made on currently available incomplete data on the details of the scheme make it possible to say that it will be almost as attractive to families with children as today’s “First family home” programme (after the birth of a third child, the MdM programme will become more attractive than the “First family home”

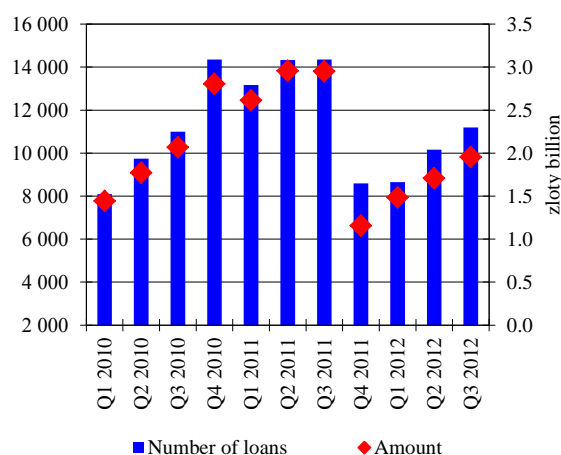
programme), and to other borrower groups – less attractive.

On the basis of the announcements made by UKNF officials on the planned amendments to Recommendation S, it can be claimed that its requirements will also be eased. Whether banks actually take the opportunity to ease lending standards with regard to housing loans will depend, as in the case of consumer loans, on credit risk outlook assessment made by individual banks. Prior to the unveiling of the draft of the updated Recommendation S, it is difficult to assess the potential scale of the impact of these amendments on banks' lending.

It is difficult to unambiguously express expectations over corporate loan growth developments. It seems that in the short-term factors pointing to low corporate demand prevail: lower rate of economic growth in 2013–2014 and holding back investment by the majority of the survey-responding enterprises²⁵ Banks surveyed by the

NBP also indicated lower corporate demand. However, on the other hand, results of surveys conducted among enterprises in 2011–2012 were not consistent with the observed movements in the stock of loans.

Figure 3.13. Loans extended under the *First family home* programme



Source: BGK.

Box 2. A countercyclical impact of macro-prudential policy

Macroprudential policy (also referred to as macroprudential supervision) is based on an analysis of the financial system as a whole, its links with the real economy, as well as the early identification and response to threats to financial system stability. The primary aim of the macroprudential supervision is to contain systemic risk, understood as the risk of distress in the financial system and its environment, that may generate serious adverse effects on financial markets and the real economy. The ultimate aim of the macroprudential policy, as part of the overall economic policy, is to stabilise economic growth (to reduce the scale of cyclicity of economic growth). Two aspects of macroprudential policy can be identified – a cross-section aspect that is focused on identifying of and counteracting risk related to the financial system structure and the nature of links with the real economy and its environment, and a time aspect that concentrates on counteracting the pro-cyclical trends in the financial system. Macroprudential policy measures should, therefore, encompass macroeconomic perspective (the phase of the business and credit cycle).

The slower economic growth rate observed currently is accompanied by a decline in credit growth, which is particularly significant in the segment of consumer loans. In October 2012, the UKNF submitted for public consultation the draft amendment to Recommendation T¹. The amendment

²⁵ See “Information on the condition of the enterprise sector, including the economic climate in 2012 Q3 and forecasts for 2012 Q4”, NBP, 2012.

arises from the need to counteract banks cutting back retail lending amid growth in activity of non-regulated entities in this market segment.

The draft Recommendation includes, inter alia, the option for banks complying with the increased quality requirements² to apply simplified customer creditworthiness assessment rules.

The simplified rules will allow banks to grant a loan on the basis of client's declaration on incomes and expenditures. At the same time, bank will be required to examine the client's credit record on the basis of information from interbank databases. These simplified rules pertain to relatively low value and instalment loans, and loans to clients with no prior cooperation with the bank as well as to loans in the amount in excess of 3 and 6 times average monthly wages in the corporate sector to clients the bank has previously cooperated with.

It may be assessed that the regulations included so far in this Recommendation have had a positive impact on the quality of banks' loan portfolios. In parallel, they have however contributed to a fall in consumer loan growth rate, which has remained negative since the first quarter of 2011 (see Figure 3.10). As in the pre-crisis period the ratio of consumer loans to GDP reached the level that may be regarded high compared to other countries, the decline in the stock of consumer loans and the resulting decrease in this ratio have not so far raised any concerns.

The proposed changes in Recommendation T allow banks with good financial standing to ease some of their lending standards. In the current economic situation, such a move can be – in principle – considered appropriate from the point of view of the countercyclical role of macroprudential policy. The changes may bring about an increase in the supply of credit, although its scale will also hinge on the banks' appetite for risk taking. A reduction of the role of non-bank institutions in the consumer loan market may also be an additional positive result of the proposals.

The countercyclical modifications of supervisory recommendations need to be symmetrical. While it seems justified to somewhat ease lending standards at this stage of a slowdown in economic activity, it may be necessary to tighten them when economic growth accelerates. On this account, it seems desirable that the standards contained in supervisory recommendations are reviewed on a regular basis, also with regard to tightening them when fast lending growth is back in the future. Therefore, the effects of amendments to Recommendation T should be closely monitored with regard to their impact on banks' lending and credit risk they take.

¹ See Recommendation T on good practices with regard to risk management of retail credit exposures (draft), KNF, 12 October 2012.

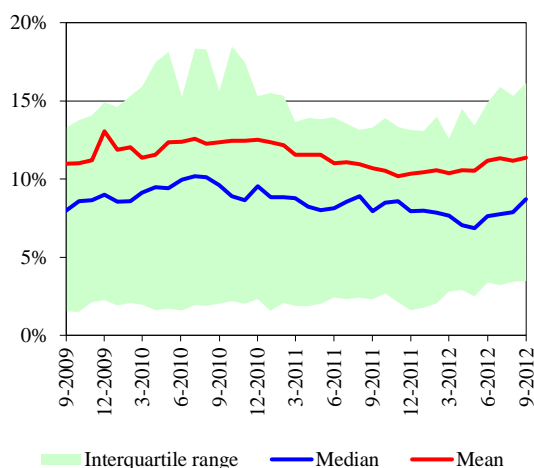
² In the draft amendment to Recommendation T, banks meeting the increased quality requirements are the banks that in the past six months simultaneously met the following prudential requirements: capital adequacy ratios above 12%, Tier 1 capital ratio above 9%, all liquidity standards specified by the KNF in a special resolution and (from 1 January 2014) supervisory credit risk and management review and assessment scores not lower than 2.5.

3.3. Credit risk

3.3.1. Credit risk of corporate loans

In the period analysed, the quality of corporate loans deteriorated. The impaired loan ratio went up by 1 percentage point from March 2012 and amounted to 11.4% at the end of September 2012 (see Figure 3.14). The ratio rose on faster growth of impaired loans than lending growth (see Figure 3.15),²⁶

Figure 3.14. Impaired loan ratio for enterprises



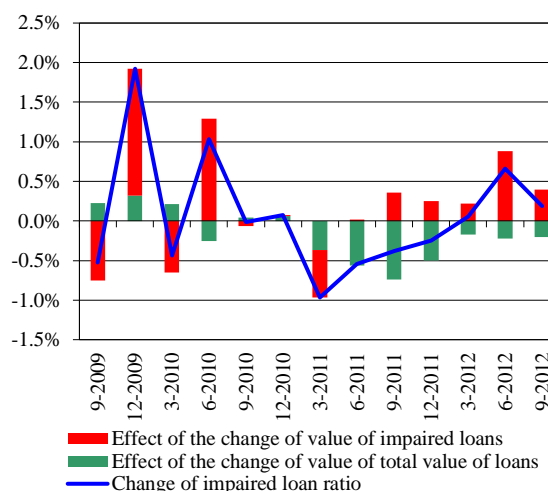
Source: NBP.

The rise in value of impaired loans concerned primarily the segment of loans to large enterprises. The condition of enterprises from the section of *construction* had a dominant influence on this rise. In the period analysed, the industry accounted for 52% of impaired loan growth of all sections of the economy.²⁷

The rise in value of impaired loans was also reflected in the rise in value of charges for impairment provisions. The rise in the value of provi-

sions also applied, evenly, to loans to large enterprises and loans to SMEs (see Figure 3.18), which may be connected, inter alia, with the higher degree of loan coverage with collateral provided by large businesses.

Figure 3.15. 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.

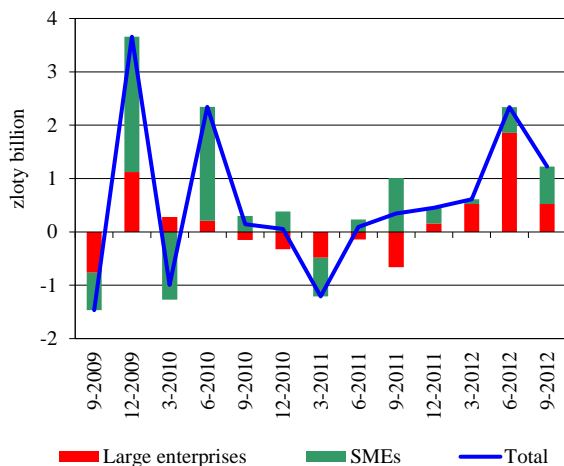
As regards housing loans to enterprises (mainly loans taken out by developers) the impaired loan ratio slightly increased (see Figure 3.19). Although it is high (25%)²⁸, risk related to housing loans to enterprises seems to be limited in the banking sector as a whole. For banks that extended most of such loans, their shares in the whole loan portfolio are not substantial and do not exceed 4%.

²⁶ 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.

²⁷ These estimates based on so-called large exposures – see Notes to Table 3.2.

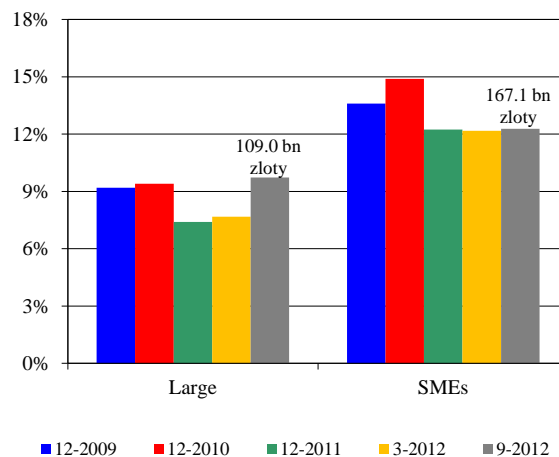
²⁸ Value of the ratio after excluding Bank Gospodarstwa Krajowego (BGK). BGK, as a state-owned bank, was not included due to its specific activities that include, inter alia, extending subsidized loans for residential construction under the state-provided funds.

Figure 3.16. Quarterly changes in the value of impaired loans to enterprises



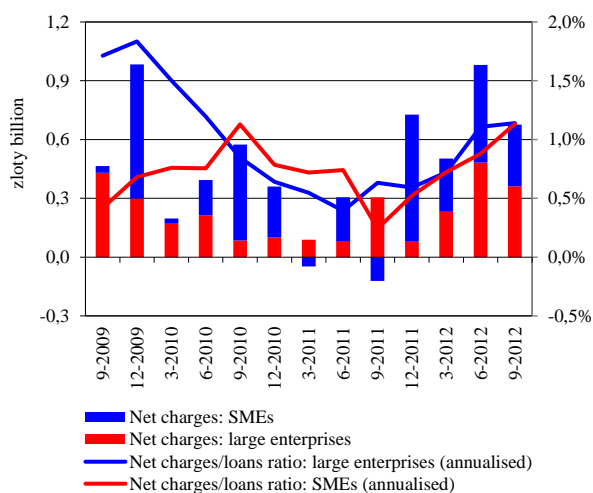
Note: data after excluding the impact of foreign exchange rate changes.
Source: NBP.

Figure 3.17. Impaired loan ratios for enterprises



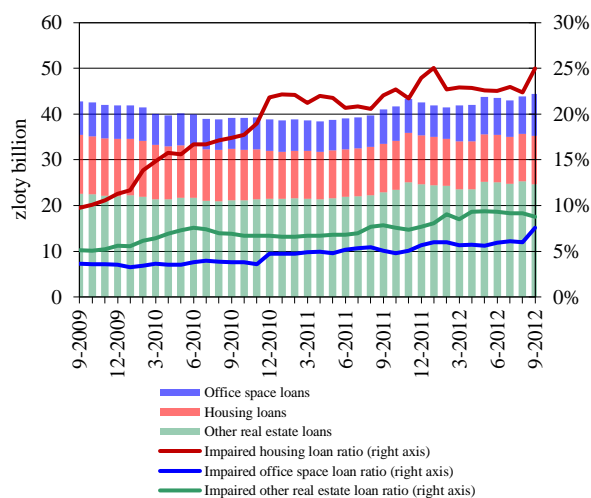
Note: values in column labels denote the value of all loans extended to a given sector of enterprises as at the end of September 2012.
Source: NBP.

Figure 3.18. Net quarterly charges to provisions for impaired corporate loans and their ratio to net value of loans



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

Figure 3.19. Structure and quality of real estate loans for enterprises



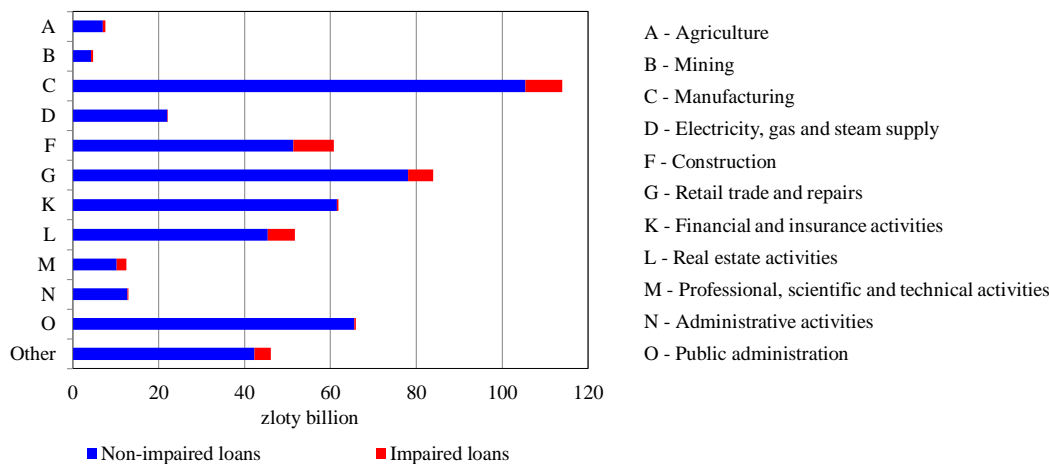
Note: data excluding BGK.
Source: NBP.

Table 3.2. Quality of large exposures by sections of the economy at the end of September 2012 (%)

Sekcja	Structure of total loans by section	Structure of impaired loans by section	Impaired loan ratio
A – Agriculture	1.4 (1.3)	1.5 (1.5)	7.8 (7.3)
B – Mining	0.9 (0.8)	1.4 (1.1)	11.2 (9.6)
C – Manufacturing	20.9 (22.0)	22.3 (24.6)	7.6 (7.4)
- Food processing	3.8 (3.8)	4.8 (5.4)	9.0 (9.3)
- Manufacture of coke and refined petroleum products	2.3 (2.5)	0.1 (0.1)	0.4 (0.3)
- Manufacture of rubber and plastic products	1.3 (1.3)	1.2 (1.0)	6.5 (5.0)
- Manufacture of other non-metallic products	1.3 (1.6)	1.8 (2.2)	9.5 (9.2)
- Manufacture of metal products (excluding machinery and equipment)	1.9 (2.0)	2.2 (2.1)	8.3 (7.1)
D – Electricity, gas and steam supply	4.1 (3.1)	0.4 (0.6)	0.7 (1.3)
E – Water supply, sewerage, waste management	0.9 (0.8)	0.3 (0.4)	2.2 (3.0)
F – Construction	11.2 (12.1)	24.4 (20.4)	15.5 (11.1)
G – Retail trade and repairs	15.4 (15.9)	15.3 (16.1)	7.0 (6.7)
H – Transportation and storage	2.1 (2.2)	2.8 (3.0)	9.8 (9.1)
I – Hotels and restaurants	1.6 (1.7)	4.5 (4.7)	19.6 (18.4)
J – Information and communication	2.2 (2.4)	0.6 (0.6)	2.0 (1.7)
K – Financial and insurance activities	11.3 (9.2)	1.3 (0.9)	0.8 (0.7)
L – Real estate activities	9.5 (9.7)	16.2 (17.5)	12.1 (11.8)
M – Professional, scientific and technical activities	2.3 (2.3)	5.9 (5.3)	18.0 (15.1)
N – Administrative activities	2.4 (2.5)	0.6 (0.7)	1.9 (1.8)
O – Public administration	12.1 (12.3)	0.9 (0.8)	0.6 (0.4)
P – Education	0.3 (0.3)	0.3 (0.4)	7.9 (9.1)
Q – Health care	0.9 (0.9)	0.5 (0.6)	4.2 (4.2)
R – Arts, entertainment and recreation	0.3 (0.3)	0.5 (0.6)	10.9 (15.1)
S – Other services	0.2 (0.2)	0.3 (0.2)	11.0 (4.6)
Total (zloty billion)	544.3 (510.3)	–	38.6 (33.6)

Notes: in brackets – data for end of March 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 – means exposure towards one enterprise in excess of 500,00 zlotys, and for an associated cooperative bank – exposure towards one client in excess of 50,000 zlotys. The value referred to do not include banks' claims on the NBP. In section C *manufacturing* data on 5 subsections with the largest share in total are presented. Values of the impaired loan ratio relate to claims defined above.

Source: NBP.

Figure 3.20. Quality of large exposures of selected sections of the economy at the end of September 2012

Note: as regards section K, data do not include banks' claims on the NBP.
Source: NBP.

The last half of the year saw changes in the hitherto stable structure of claims on enterprises, by PKD sections. There was a marked increase in the share of enterprises that conduct financial and insurance business and enterprises that produce and supply electricity, gas and steam/water; on the other hand, the share of construction companies and firms of the section of *manufacturing* fell (see Table 3.2).

Claims towards the majority of industries most indebted to banks continue to be of a relatively good quality. The impaired loan ratios of *manufacturing, retail trade and repairs, financial and insurance activities* are below or hover around the average value of the ratio calculated for all types of activities, except for claims towards construction enterprises.

Box 3. Loan quality in *construction*

In 2012, the financial standing of a number of construction companies that implemented public infrastructure projects, such as building roads and motorways, has deteriorated.¹ It was the result of an increase in the prices of building materials and defaults in payments from general project contractors.² In the second quarter of 2012, *construction* was the only PKD class that made losses, and only slightly over a half of companies from the sector generated profit.³

The value of the banking sector's exposure to enterprises from the *construction* section as at the end of September 2012 was 60.7 billion zlotys (see Table 1). The exposure included mainly loans (around 55%). Other significant components were guarantees (20%) and credit lines (19%). The exposures were concentrated in several banks. Three banks with the highest values of claims on construction companies had a 44% share in the sector's total debt, and six banks held a 60% share. At the same time, the share of claims on construction companies in the entire loan portfolio of these banks ranged from 5% to 12%.

The deterioration in the financial standing of the *construction* section resulted in lower quality of loans for the section. The impaired loan ratio in *construction* increased from 11.1% in March

2012 to about 15.5% in September 2012 (see Figure 1) and it is currently one of the highest in all sections of the economy (see Table 3.2 in the body text).

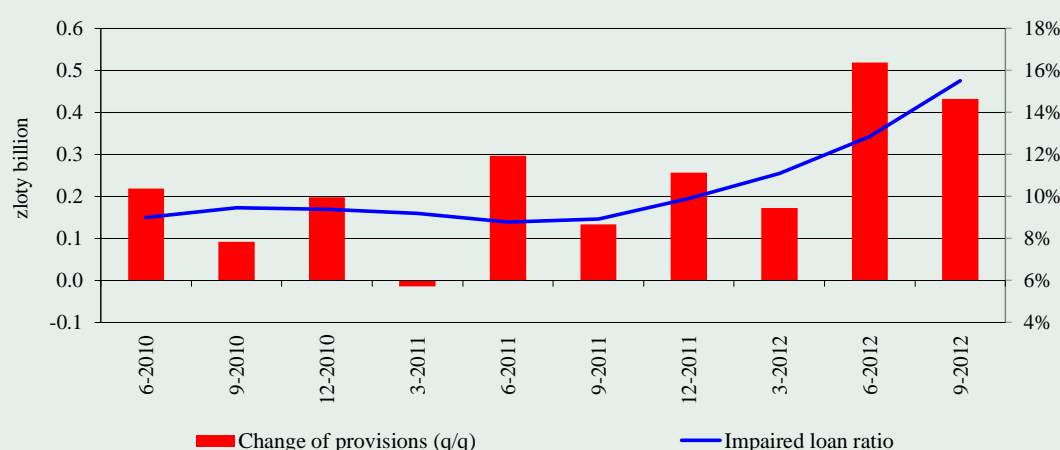
Table 1. Large exposures in the *construction* section as at the end of September 2012

Division/Class	Total receivables (zloty billion)
41 – Construction of buildings	40,7 (42,6)
42 – Civil engineering, of which:	13,6 (15,0)
42.11 – Construction of roads and railways	8,6 (9,5)
43 – Specialist activities	6,4 (6,5)

Note: In brackets, data as at the end of March 2012.

Source: NBP.

Figure 1. Impaired loans ratio and changes in provisions (q/q) for claims on *construction*



Note: Calculations for the so-called large exposures to the banking sector.

Source: NBP.

Survey data show that in the third quarter of 2012 the capacity to service non-credit liabilities of enterprises from the *construction* section deteriorated.⁴ Construction companies may also have difficulties in obtaining and rolling over bank loans due to tighter standards for the sector.⁵ Due to the difficult situation of the construction sector, the percentage of refusals covered 43% of companies applying for a loan in the third quarter of 2012.

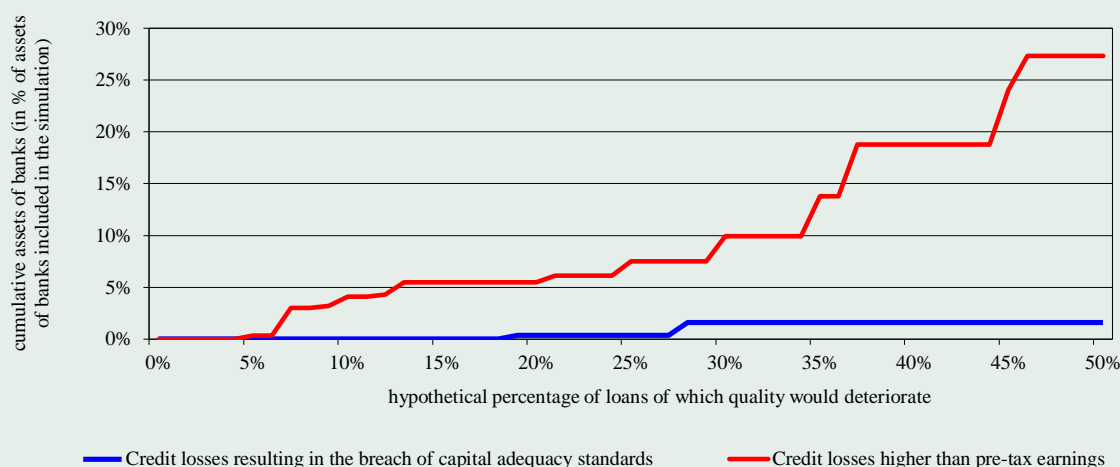
It can be expected that liquidity problems of companies involved in the implementation of public infrastructure projects will continue. The quality of loans to the *construction* section may deteriorate further. On the other hand, the effects of payment gridlocks on the part of general contractors were partially mitigated by the Act of 28 June 2012 *on the Repayment of Certain Dues to Enterprises Resulting from Implementing Awarded Public Contracts*.⁶

To estimate the risk associated with possible further deterioration in the condition of construction enterprises, a simulation of banks' resilience to an increase in the value of impaired loans for the section was performed. The simulation examines the scale of deterioration in the quality of performing loans that banks could absorb while not exhausting their entire pre-tax earnings

generated by the end of September 2012 and not breaching the capital adequacy standards.⁷

The results of the simulation show that even a deterioration in the quality of 18% of performing loans would not result in a breach of the capital adequacy standards by any bank (see Figure 2). At the same time, in the case of banks whose share in the sector's assets is 5% loan losses would exceed their pre-tax earnings. It may be assessed that a only deterioration in the quality of over 35% of performing loans would have a significant effect of the profitability of the entire sector, but it would not affect its capital adequacy – only banks with a slight (approximately 2%) share in the sector would fail to meet the standards. It should be emphasised that the assumed scenario does not allow for the impact of the hypothetical deterioration in the financial condition of companies from the *construction* sector on enterprises from other sectors (the so-called domino effect).

Figure 2. Simulation of the effects of deterioration in loan quality in *construction*: impact on the pre-tax profit and capital adequacy of domestic commercial banks



Note: Simulation assumptions: 1. Deterioration in loan quality means 50% impairment is recorded for these loans; 2. Hypothetical charges to impairment provisions fully decrease the bank's (a) pre-tax profit, or (b) in the first place, current net profit not classified as regulatory capital, and secondly its regulatory capital; 3. Impaired loans carry a 100% risk weight; 4. No release of impairment provisions.

Source: NBP.

¹ The analysis presented in this Box concerns large exposures. See Notes to Table 3.2 in the body text.

² In section *construction*, the Polish Classification of Activities (PKD) provides divisions, groups and classes that describe business conducted by enterprises in detail. Practice shows that they conduct business in many areas and a given PKD section or class may not reflect their activities in full. Therefore, further analysis covers not only exposures in class *Construction of roads and motorways*, but also bank exposures in the entire *construction* class.

³ See "Sytuacja finansowa sektora przedsiębiorstw w II kwartale 2012 r.", NBP, 2012.

⁴ See "Information on the condition of the enterprise sector, including with the economic climate in 2012 Q3 and forecasts for 2012 Q4", NBP, 2012.

⁵ See "Senior loan officer opinion survey – on bank lending practices and credit conditions (fourth quarter 2012," NBP, 2012.

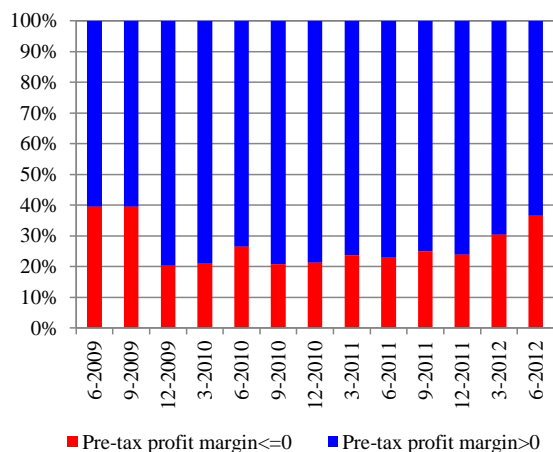
⁶ In accordance with the new provisions, SMEs and microenterprises may request their overdue remuneration from the General Directorate for National Roads and Motorways if the contractor defaults on payment for works completed and approved for at least 30 days or if a court declares the contractor bankrupt.

⁷ Pursuant to Article 128 of the Banking Act, banks are required to simultaneously meet the following conditions: (1) maintain their regulatory capital at no less than 5 million euros (associated cooperative banks – 1 million euros), (2) maintain regulatory capital and ancillary capital amounting to no less than the higher of the two amounts: total capital requirement and internal capital, (3) maintain capital adequacy ratio at the level of at least 8% (in the first year of operation – 15%, in the second year – 12%).

Enterprises' debt servicing capacity

In the period covered by the *Report*, the financial condition of the whole corporate sector as deteriorated. Profits and profit margins declined (see Chapter 2.1). Financial result on all operations and profit margin deteriorated mainly in the sector of large enterprises.²⁹ Changes in the distribution of corporate debt by enterprises' profit margin indicate that the prospects for them to service their liabilities deteriorate further (see Figure 3.21).

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



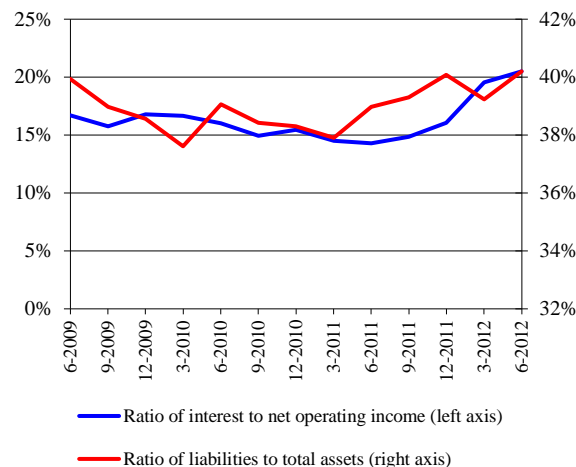
Note: data from F-01 reports (enterprises with employment of 50 and over); until the end of 2011, data without advances and loans from associated entities, and from 2012 – together with associated entities and other entities. Source: NBP calculations based on GUS data.

The level of financial leverage of enterprises and the maturity structure of liabilities remain relatively stable. The ratio of liabilities to total assets slightly rose, and so did the ratio of interest to net operating income. It should be pointed out, however, that the relative changes of the ratios' are not big (see Figure 3.22) and the share of short-term and long-term debt did not change significantly. Moreover, around 1/3 of enterprises have no liabilities arising from advances and loans.

²⁹ See "The financial condition of the enterprise sector in 2012 Q2", NBP, 2012.

³⁰ See "Information on the condition of the enterprise sector...", op.cit.

Figure 3.22. Corporate burden related to liabilities



Note: data from F-01 reports (enterprises with employment of 50 and over).

Source: NBP calculations based on GUS data.

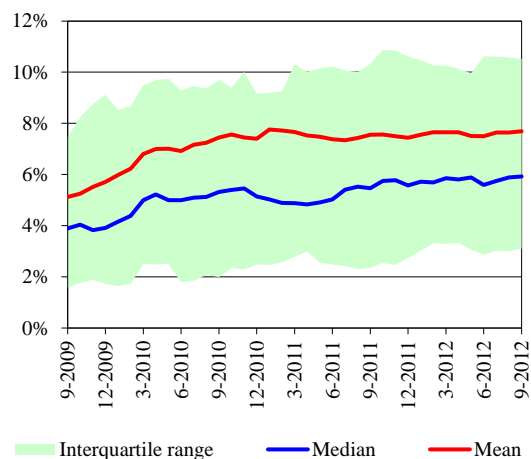
Due to subdued external and internal demand resulting from bleaker macroeconomic outlook, the forthcoming quarters may be expected to see a deterioration in the financial condition of a majority of industries. In addition, own funds of enterprises dwindled on diminishing profits, and worse financial results may also translate into lower availability of credits (which is already indicated by the survey-responding enterprises). That is why, *Inter alia*, businesses expect their investment activity to remain low in the nearest quarters³⁰. The more difficult financial condition enterprises are facing is likely to translate into higher charges to provisions for impaired loans created by banks.

3.3.2. Credit risk of loans to households

From March 2012, the impaired loan ratio for households remained unchanged and amounted to 7.5% at the end of September 2012 (see Figure 3.23). Impaired loan growth was relatively

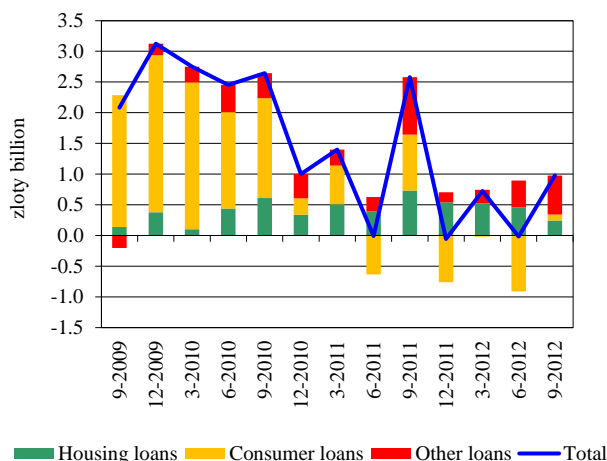
low and was concentrated in the portfolio of housing loans and so-called other loans to households (see Figure 3.24), while the value of impaired consumer loans decreased.

Figure 3.23. Impaired loan ratio for households



Source: NBP.

Figure 3.24. Quarterly changes in the value of impaired loans to households

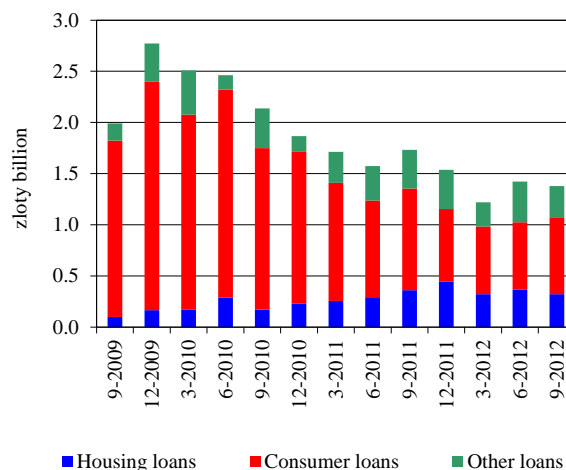


Notes: data after excluding the impact of foreign exchange rate changes. Category *Other* includes, Inter alia, (non-housing) loans to entrepreneurs and individual farmers. Source: NBP.

In the period analysed, net charges to provisions for impaired loans to households (see Figure 3.25) also did not change significantly. At the same time, they were substantially lower than in 2009–2011, which was supported by the fall in

credit losses on consumer loans.

Figure 3.25. Quarterly net charges to provisions for impaired loans to households



Source: NBP.

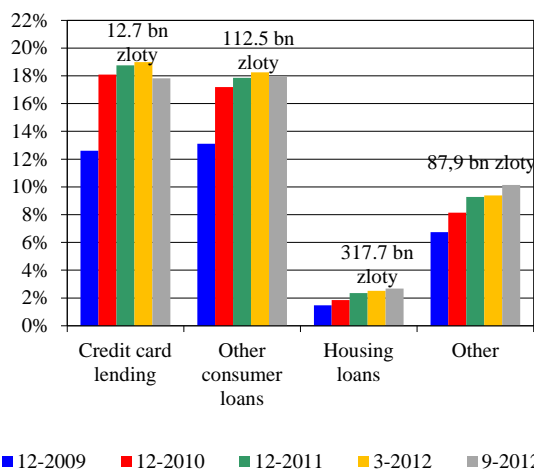
Housing loans

The quality of housing loans was worsening in the second and third quarter of 2012 (see Figure 3.26). The rise in value of impaired loans, net charges to provisions for impaired loans and the ratio of net charges to value of loans were, however, lower than in the period covered by the previous edition of the *Report* (see Figure 3.24, 3.25 and 3.27). These developments were driven by factors not associated with the improved capacity of households to service loans, i.e. the change in the method of loan impairment assessment applied by two banks.

Data on arrears in loan repayment also show a deterioration in the quality of housing loans. The value of loans in arrears in the period covered by the *Report* rose for all past due categories, except for shortest (1 day–30 days), (see Figure 3.28). The increase in the value of loans in 31–90 day past due category observed currently may contribute to increasing impaired loan growth and increase in credit losses in the upcoming quarters. For loans in this past due category, banks

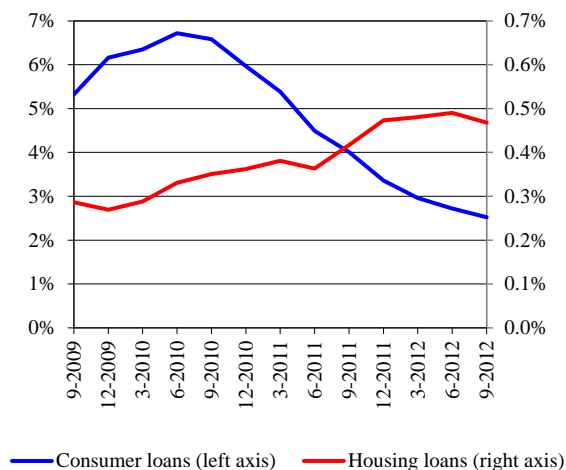
– in most cases – do not identify loan impairment and do not, therefore, make relevant provisions.³¹

Figure 3.26. Impaired loan ratios for main types of loans to households



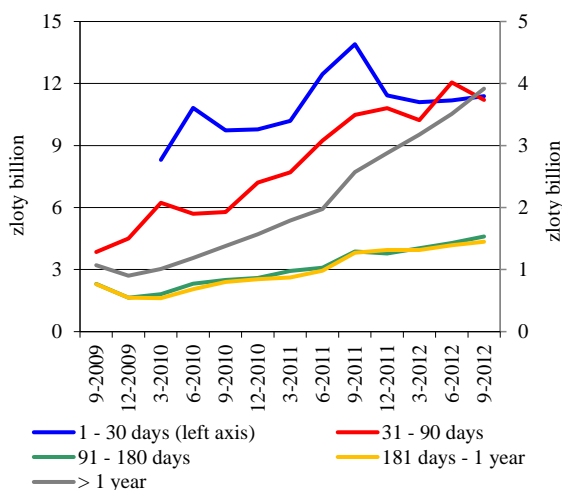
Note: values placed above the bars denote a total value of each type of loan at the end of September 2012.
Source: NBP.

Figure 3.27. Ratio of net charges to provisions for impaired loans to net value of loans



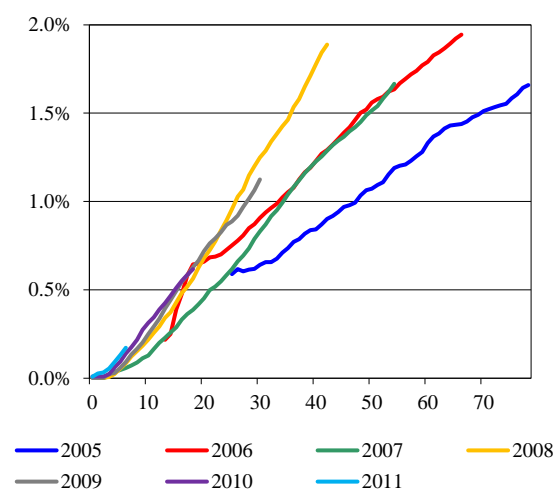
Note: annualised data.
Source: NBP.

Figure 3.28. Value of housing loans in arrears in particular past due categories



Source: NBP.

Figure 3.29. 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. Data only for months for which data on arrears from all months of a given year are available.
Source: BIK.

³¹ At banks that apply IAS, (a 98% share in the market of housing loans) loan impairment was identified for only 16% of housing loans in the 31-90 day past due category. Loan impairment in a dominant portion of the loan portfolio (96%) was only identified for the 91-180 day past due category.

The deterioration in the macroeconomic environment and ageing of the portfolio of housing loans contributed to a deterioration in their quality in the period covered by the *Report*. The quality of the 2008 portfolio is deteriorating most rapidly (see Figure 3.29). The bulk of the portfolio are Swiss franc-denominated loans (an 82% share in the portfolio of 2008 vintage as at the end of June 2012), originated at a time of a lenient lending policy, a strong zloty and high property prices. The quality of loans taken out in 2009–2011 is deteriorating at a faster pace than the quality of loans taken out in 2005–2007, despite a strong tightening of lending policies by banks after the start of the global financial crisis. In the case of borrowers who contracted loans in 2005–2007, the macroeconomic environment had a more favourable influence on their capacity to service loans in the initial period after loan origination (high GDP, wage and employment growth, and a fall in unemployment) than for borrowers from the years 2009–2011.

The relatively persistent high CHF/PLN exchange rate exerted an adverse influence on the servicing costs of Swiss franc-denominated housing loans. In line with simulations, the rise in instalments of Swiss franc-denominated loans against the loan origination date can be assessed as moderate, which is supported by a low level of market interest rates in the Swiss franc.³²

An estimated average increase in instalments of Swiss franc-denominated loans extended in the successive months of 2005–2010 currently stands at around 19%, and a maximum increase at –29% (see Figure 3.30)

Loans with high LtV ratios had a substantial share in the loan portfolios of banks. It can be estimated that at the end of September 2012, housing loans with LtV ratio in excess of 100% and 80% accounted for, respectively, slightly more than 1/4 and 1/2 of the housing loan portfolio.³³ A high CHF/PLN exchange rate is one of the main reasons behind the substantial share of housing loans with high LtV ratios in banks' loan portfolios. The highest increase in the LtV ratio from the loan origination date applies to loans extended in 2007–2008 (see Figure 3.31).

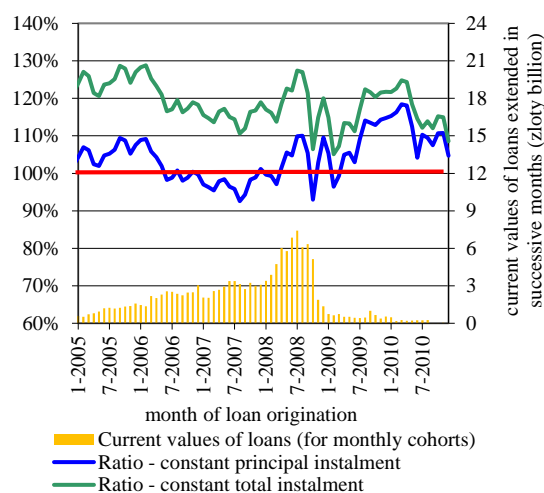
As pointed out in the previous edition of the *Report*³⁴ loans with high LtV ratios may generate losses for banks in the event of a deterioration in the condition of borrowers and in their capacity to service loans and of the need to recover loans by liquidating collateral. In order to assess risk related to a high share of loans with high LtV ratios in loan portfolios, estimates of the distribution of LtV ratios at banks were used in a simulation performed to examine banks' resilience to a deterioration in the quality of housing loans (see Box 4).

³² Almost all housing loans in the Swiss franc carry a variable interest rate, calculated typically as the LIBOR CHF rate increased by a fixed spread.

³³ The estimates based on UKNF end-of-2011 data on the structure of a loan portfolio by range of value of the LtV ratio. See "Report on the condition of banks in 2011", UKNF, 2012.

³⁴ See Box 3 in "Financial Stability Report. July 2012", NBP, 2012.

Figure 3.30. The ratio of loan instalment to instalment at loan origination against current values of Swiss franc-denominated housing loans

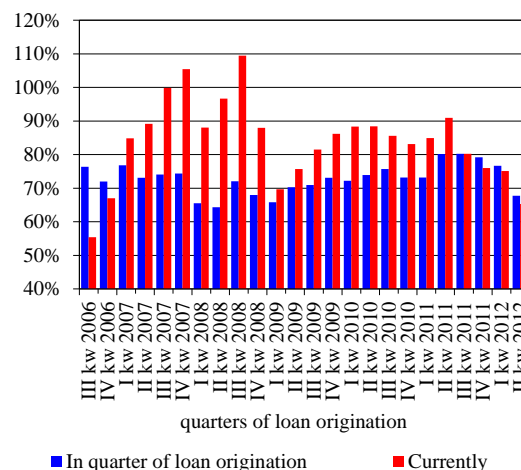


Assumptions: a Swiss-denominated housing loan with maturity of 25 years, repaid in constant total instalments or constant principal instalments (a decreasing interest instalment), current instalments calculated on the basis of the Swiss franc exchange rate and the LIBOR 3M rate of 31 October 2012 and the average spread on Swiss franc-denominated loans at loan origination. Points on a horizontal axis mark a month of loan origination.

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

Source: NBP, BIK.

Figure 3.31. Average LtV of Swiss franc-denominated housing loans extended in a given quarter



Assumptions: estimates of the current average value of LtV were made on the basis of average Swiss franc exchange rates, and average LtV on the loan origination date, average maturity of loans taken out in specific quarters of the period under analysis and changes in average transactions prices of dwellings in the period under analysis. The value of a loan translated into the zloty at the Swiss franc exchange rate as at 31 October 2012.

Source: NBP estimated based on survey data.

Box 4. Banks' resilience to deterioration in housing loan quality and a fall of property prices

In order to assess the risk associated with large shares of loans with high LtV ratios in loan portfolios of Polish banks, a simulation of banks' resilience to an increase in the value of impaired housing loans was performed. The simulation estimated the scale of a deterioration in the quality of performing loans that banks could absorb while not exhausting their pre-tax earnings generated by the end of September 2012 and not breaching the capital adequacy standards.¹ An additional estimate was made to find what impact would a decline in residential property prices have on the vulnerability of banks to a deterioration in the quality of the housing loan portfolio.

The simulation assumed that in the case of loan impairment, the bank would only recover the money obtained from selling the property used as loan collateral. Property is sold during the second auction in the enforcement proceedings at the minimum price equal to two-thirds of the current property price. It also includes the enforcement officer's fee of 15% of the enforced amount.² The simulation assumed no releases of loan impairment provisions.

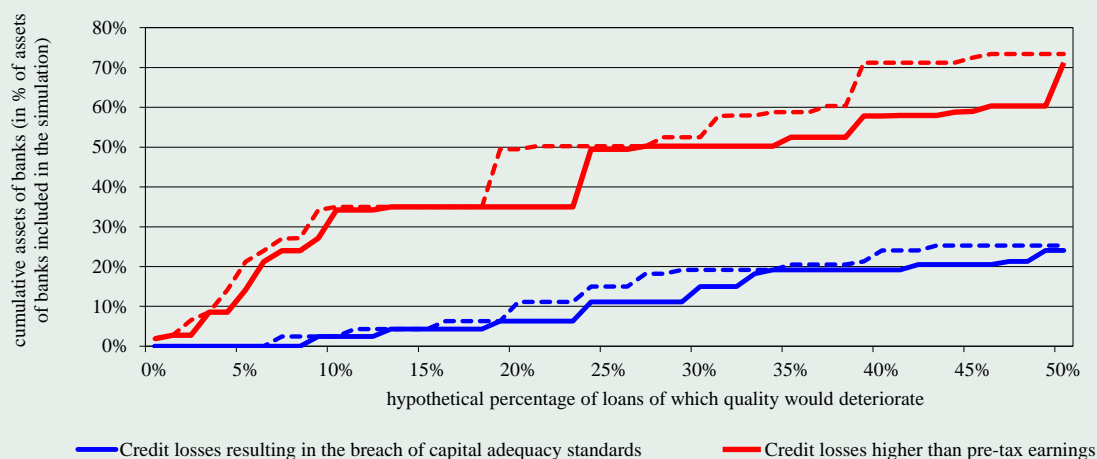
Distribution of loan values by LtV was estimated on the basis of data from the UKNF³ and NBP

survey data. The estimates were made separately for zloty- and foreign currency-denominated housing loans.⁴

At the first stage of the simulation, it was assumed that property would be sold at two-thirds of the *current* market price, i.e. the price from the third quarter of 2012. The simulation results show a relatively high vulnerability of banks' earnings to a deterioration in the quality of housing loans (see Figure 1). This is related to a considerable share of housing loan portfolios in certain banks' assets and a high share of loans with high LtV ratios. Loan losses arising from the deterioration in the quality of 5% of housing loans, currently classified as not impaired, would exceed pre-tax profit generated by the end of September 2012 in the case of domestic commercial banks with an around 14% share in total assets of the banking sector. In this scenario, all banks would nonetheless meet the regulatory requirements on the value of regulatory capital. On the other hand, a deterioration in the value of approximately 10% and 20% of housing loans would result in losses exceeding pre-tax profit in the case of banks accounting for about one-third of the sector's assets. With the above assumptions, the capital adequacy standards would be breached by banks having a share in the sector's assets of about 2% and 6%, respectively.

At the second stage of the simulation, estimates were made of a change in banks' vulnerability to a deterioration in the quality of housing loans on the assumption that residential property prices would decline by 10% (see: dotted line in Figure 1). The differences in banks' resilience compared to the simulation that assumed the current price level are not substantial, especially when the assumed percentage of loans which would become impaired is not high. The results of the simulation show, therefore, that even a relatively strong further decline in residential property prices⁵ would not result in significantly increased vulnerability of banks to a deterioration in the quality of the housing loan portfolio.

Figure 1. Simulation of the effects of deterioration in housing loan quality: impact on the profit and capital adequacy of domestic commercial banks



Note: Hypothetical charges to impairment provisions fully decrease the bank's (a) pre-tax profit, or (b) in the first place current net profit not classified as regulatory capital, and secondly its regulatory capital. Dotted lines mark values of a given category at an additional assumption that residential property prices would decline by 10%. Source: NBP.

¹ See footnote 7 in Box 3.

² More information on the terms of liquidation of collateral on housing loans is available in Box 3 in “Financial Stability Report July 2012”, NBP, 2012.

³ Data on the LtV distribution in loan portfolios of domestic commercial banks and branches of credit institutions by LtV value ranges. The data were presented by the UKNF in “Raport o sytuacji banków 2011”, UKNF, 2012.

⁴ Aggregated distributions of the values of loans in the whole banking sector granted until the end of 2011 were estimated on the basis of the said UKNF data, taking into account repayment of loan principals, changes in residential property prices and changes in foreign exchange rates in the first three quarters of 2012. Aggregated LtV distributions for loans granted in the first half of 2012 were estimated on the basis of data from ZBP Sardin database. It was assumed that LtV distributions in each bank are equal to aggregated distributions increased by the difference between the average LtV in the bank and the sector’s average. The difference was estimated on the basis of NBP survey data.

⁵ The decline in property prices assumed for the purpose of the simulation seems high as compared to actual price changes – since mid-2008 residential property prices in the primary and secondary market have declined by about 15% and 11%, respectively; more on the subject in Chapter 2.3.

Consumer loans

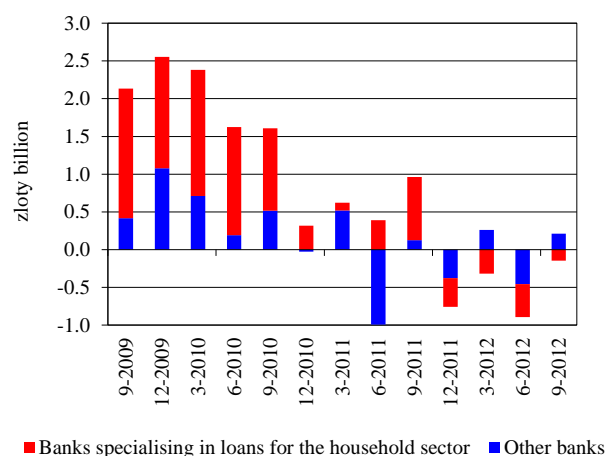
The quality of consumer loans improved in the second and third quarter 2012 (see Figure 3.26). The value of impaired loans decreased (see Figure 3.24). Whilst as in the period covered in the previous edition of the *Report*, this improvement was the result of three large debt sale transactions, however, after excluding their impact, the pace at which consumer loan quality was deteriorating would also have been substantially lower than in 2009–2011.

Impaired loan increases were particularly low in banks that specialise in providing loans to households³⁵ (see Figure 3.32). Consumer loan growth at these banks declined to a larger extent than at other banks. The value of consumer loans in the group of banks specialising in providing loans to households fell by 9.3% in the past 12 months, while other banks registered a 0.4% drop. It seems that the two developments result from a tightening of lending policies in 2009–2010 owing to heavy losses on consumer loans.

Net charges to provisions for impaired consumer loans were similar to amounts from the period analysed in the previous edition of the *Report* and substantially lower than net charges in 2009–2011 (see Figure 3.25).

³⁵ Banks that specialise in providing loans to households are 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 in 2005–2008 and in early 2009 rapidly increased lending to households (at a much faster pace than other banks). These banks have a particularly high share in consumer loans (43% at the end of September 2012).

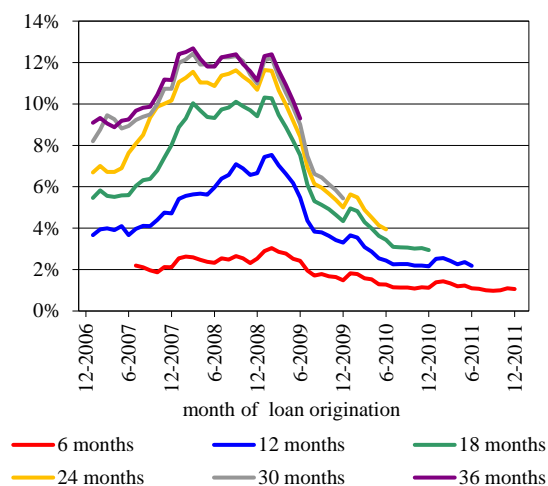
Figure 3.32. Quarterly changes in the value of impaired consumer loans



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

The decline in loan losses and in the rate at which consumer loan quality was worsening is mainly connected with a better quality of new loans, extended from the end of 2009 (see Figure 3.33). A strong tightening of banks’ lending policies in 2008–2010 is behind the good quality of these loans.

Figure 3.33. Shares of consumer loans in arrears of more than 90 days after 6, 12, 24, 30 and 36 months from loan origination by the month of loan origination



Note: points on a horizontal line mark the month of loan origination. The smaller the distance between particular lines for a given month, the slower the pace the quality of loans extended in a given month is worsening in the course of time.
Source: BIK.

A deterioration in the macroeconomic situation projected for the forthcoming quarters (see Chapter 2.1) will be unfavourable from the credit risk point of view.

A decline in GDP growth and a deteriorating situation in the labour market as well as the ageing of loan portfolios will be contributing to higher loan losses on housing loans.

As regards consumer loans, charges to provisions for impaired loans may be expected either to stabilise or rise slightly. The scale of loan losses on the consumer loan portfolio should be substantially lower than in 2009–2011, owing to good quality loans extended in the past 3 years, which is a result of conservative lending policies of banks in this market segment.

The planned amendments to Recommendations S and T (see Chapter 3.2) may have some impact on the quality of new loans to be extended

³⁶ After excluding the impact of foreign exchange rate changes.

in the coming quarters. It is difficult to assess now whether banks will take this opportunity to ease their lending policies when the macroeconomic situation is deteriorating. However, it seems that consumer loans extended according to simplified rules of clients' creditworthiness assessment will generate higher credit risk costs.

The loan repayment performance will depend on the path of future economic growth in Poland. As long as the decrease in the pace of economic growth is short-lived, credit risk materialisation costs for banks will be limited, and a portion of the loans would be repaid when economic growth picks up. However, should a decline in economic growth be of a long-term nature, the situation of borrowers and lenders may worsen significantly.

3.4. Liquidity risk and market risk

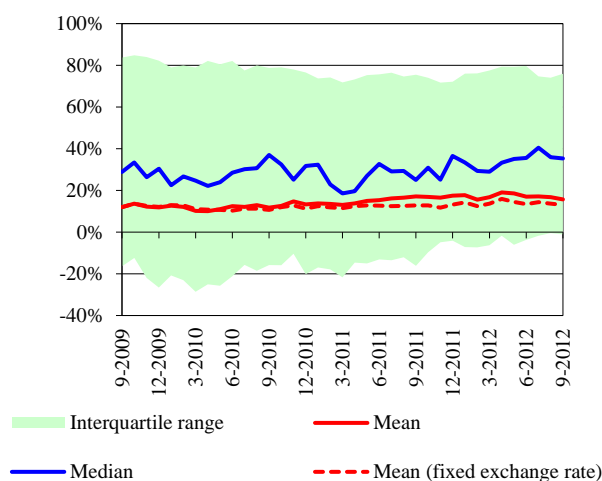
3.4.1. Liquidity risk

The average funding gap in the sector of commercial banks decreased slightly in the period analysed (see Figure 3.34). Banks' liabilities towards the non-financial and general government sectors increased faster than claims on these sectors. At the same time, banks reduced the scale of funding obtained from foreign financial institutions. The majority of domestic commercial banks reported a decrease in the funding gap, at the same time it widened for branches of credit institutions. As these entities mostly do not have a strong deposit base, they hold a high funding gap, which is also characterized by high volatility.

The increase in liabilities related mainly to household deposits (on average by over 10% y/y³⁶ in the period analysed). At the same time, banks' policies aimed at increasing the value of the deposits led to an increase in the costs related to attracting them. This is indicated by a decrease in the spread between the interbank

market rates and the interest rate of new term deposits (see Figure 3.35). The increase in costs might have also been associated with the withdrawal of the capital gains tax-free deposits and with the move to partially compensate the decrease in savers' income.

Figure 3.34. 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)* values of foreign currency claims and liabilities were converted into zloty according to a fixed exchange rate as at the end of September 2009. Source: NBP.

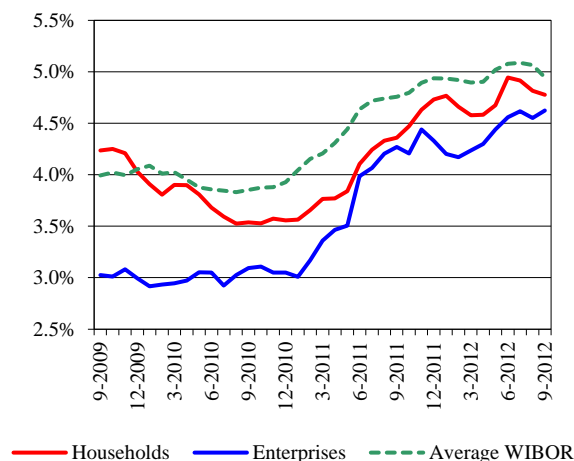
A nearly two year-long strong rise in corporate deposits was markedly halted. In the period analyzed, except for May, the monthly changes in corporate deposits were negative.³⁷ Moreover, interest rate statistics does not indicate that banks were trying to increase the value of new corporate term deposits by raising the interest rates offered (against market rates). This may result from the fact that corporate deposits are perceived as less stable (with lower share of core deposits) than household deposits.

In the period analysed, the downward trend in the value of liabilities towards foreign financial institutions, mostly loans and deposits obtained from parent entities, continued (see Figure 3.36). This decline concerned majority of banks, however its reasons seem to be discrepant. In the case of some of banks, it was related to the pro-

³⁷ After excluding the impact of foreign exchange rate changes.

cess of consolidation and changes in their business strategies. On the other hand, there are no indications that banks curbed their lending due to the withdrawal of foreign funding. Despite the decrease in foreign liabilities, the majority of banks increased their balance sheets by raising the deposit base. A positive albeit not too strong interdependence between a change in the stock of loans and a change in foreign liabilities can only be seen in the case of foreign currency housing loans. As the majority of banks ceased to extend new foreign currency housing loans and loans granted prior to that date were gradually repaid, banks' demand for foreign currency funding dropped.

Figure 3.35. Interest on new zloty term deposits



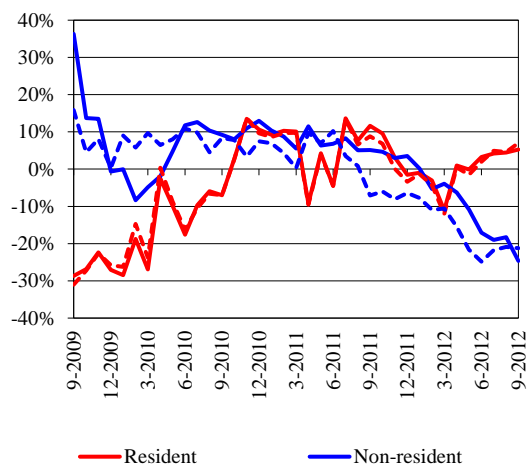
Notes: data based on a sample of 19 banks that report interest rate information to the NBP; the average monthly WIBOR rate was calculated as a monthly average of WIBOR 1M, 3M, 6M, 1Y rates weighted by the shares of deposits with respective maturities in new deposits total in a given month. Source: NBP.

Some banks raised funding to finance their portfolios of FX assets through issuance of bonds in foreign currency. For example, in July and September 2012, Bank PKO BP issued new tranches under its 3 billion EUR Eurobonds programme started in 2010 and a USD bond issue for the US market; in October 2012, BRE Bank issued the first tranche of its 2012 2 billion EUR

Eurobonds programme.³⁸

The decline in banks' dependence on foreign funding should be considered as favourable for financial stability. A high share of funding raised within the capital group makes banks exposed to concentration risk and makes them directly dependent on the condition of their foreign parent banks. However, it is essential that these liabilities are reduced in a gradual manner – as it has been done so far – together with the portfolio of foreign currency-denominated loans, so that it poses no risk to the liquidity position of banks.

Figure 3.36. Annual growth rate of liabilities from banks and branches of credit institutions



Notes: data relate to loans and deposits. Dotted lines mark growth rate after excluding the impact of foreign exchange rate changes.
Source: NBP.

In order to estimate potential risk related to substantial foreign funding a simulation was per-

formed as part of the 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 value of the buffer of liquid assets. The results of the simulation performed according to these restrictive assumptions showed that for nearly 16% of the banks (in terms of assets) a liquidity shock related to the outflow of foreign capital would pose a serious risk to their stable operation due to the lack of sufficient buffers of liquid assets (see Chapter 3.7.2).

Funding structure at banks with particular funding strategies³⁹ did not change significantly in the period analysed (see Figure 3.37) However, at the same time the reduction of foreign liabilities contributed to the decrease in the share of banks that follow a foreign funding strategy (to 12% at the end of September from 17% at the end of March 2012), which are most exposed to concentration risk, in the sector of commercial banks.

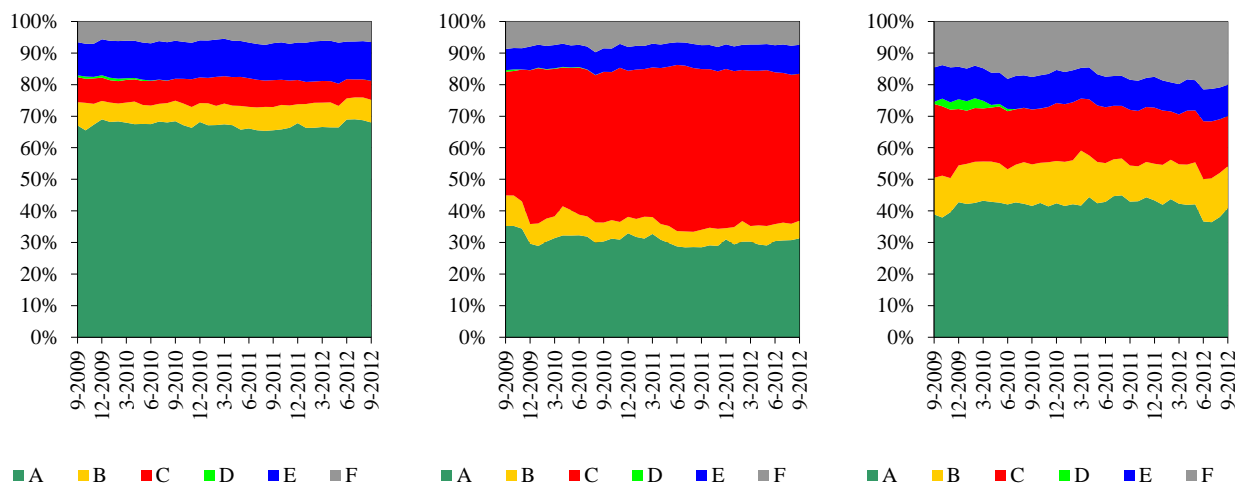
Effective interest that illustrates costs related to the whole portfolio of banks' zloty and foreign currency liabilities rose (see Figure 3.38). This growth resulted primarily from increased interest on deposits from the non-financial sector. A fall in the share of liabilities towards foreign financial institutions in funding structure had also a certain impact on the increase of costs. Most of them are taken out in foreign currency (mostly in the euro and Swiss franc), and – as a result – at lower nominal interest.

³⁸ On 25 July 2012, PKO BP issued Eurobonds with a nominal value of EUR 50 million, on 21 September – with a nominal value of CHF 500 million and on 26 September – with a nominal value of USD 1 billion. On 4 October 2012, BRE Bank issued Eurobonds with a nominal value of EUR 500 million.

Source: <http://www.pkobp.pl/grupa-pko-banku-polskiego/relacje-inwestorskie/instrumenty-dluzne/>, http://www.brebank.pl/Relacje_Inwestorskie/Komunikaty_gieldowe/?id=23230.

³⁹ For more details on the specific funding strategies of Polish banks, see Chapter 3.4.1 in “Financial Stability Report – June 2009”, NBP, 2009.

Figure 3.37. Funding structure in banks following a deposit strategy (left-hand panel), foreign funding strategy (central panel) and a mixed strategy (right-hand panel)



Legend: A – deposits of non-financial and general government sectors, B – liabilities towards financial entities-residents, C – liabilities towards financial entities-nonresidents, D – liabilities on repo operations with the NBP, E – capital, F – other liabilities.

Notes: banks were classified to particular groups on the basis of their funding structure at the end of September 2012. The share of banks with individual strategies in the assets of the sector of commercial banks amounts to: a deposit strategy – 51%, a foreign funding strategy – 12%, a mixed strategy – 27%.

Source: NBP.

The supervisory liquidity ratios that domestic banks are required to meet⁴⁰ show that their position with regard to liquidity risk is good. All domestic commercial and cooperative banks⁴¹ meet the supervisory long-term liquidity M4. The average ratio for domestic commercial banks remained relatively unchanged and at the end of September 2012 it amounted to 1.17, i.e. above the required minimum level of 1.00. The share of banks with lowest ratios diminished.

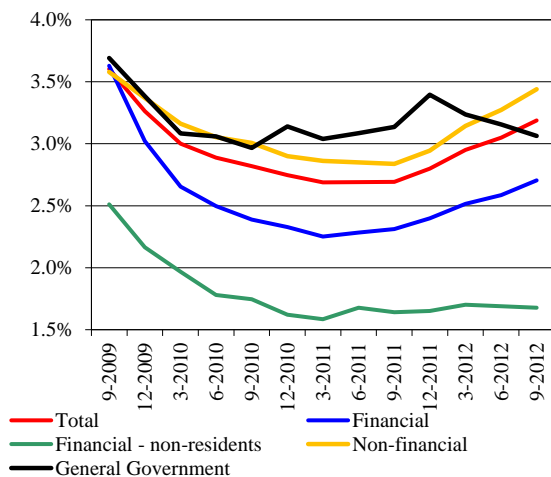
For short-term liquidity, commercial banks are bound to meet M1 and M2 liquidity ratios, i.e.

to maintain liquidity reserve above the level of unstable external funds. In the period analysed, all domestic commercial banks maintained M2 ratios above the required minimum of 1.00, and the average ratio for the sector of domestic commercial banks remained relatively stable (see Figure 3.39). The majority of cooperative banks and branches of credit institutions⁴² met the ratios for short-term liquidity – at the end of September 2012 only one cooperative bank and one branch of a credit institution failed to meet them.

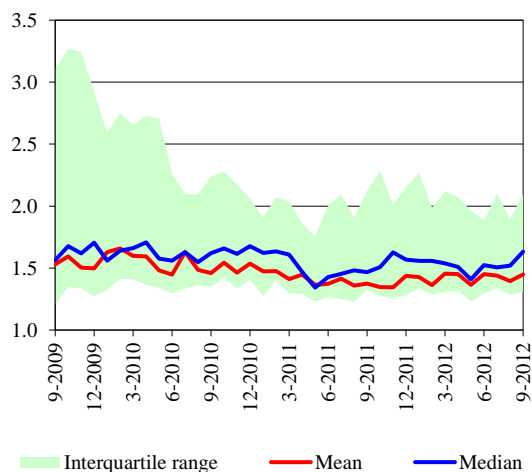
⁴⁰ For more details on the KNF supervisory liquidity standards, see Box 2 in “Financial Stability Report – December 2009”, NBP, 2009.

⁴¹ The supervisory long-term liquidity M4 has to be met only by domestic commercial and cooperative banks with balance-sheet total of over 200 million zlotys.

⁴² Depending on their size, banks and branches of credit institutions are bound to meet M1 and M2 ratios or are bound to meet a simplified ratio of the share of liquidity reserve in total assets.

Figure 3.38. Effective interest on liabilities by sectors

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.

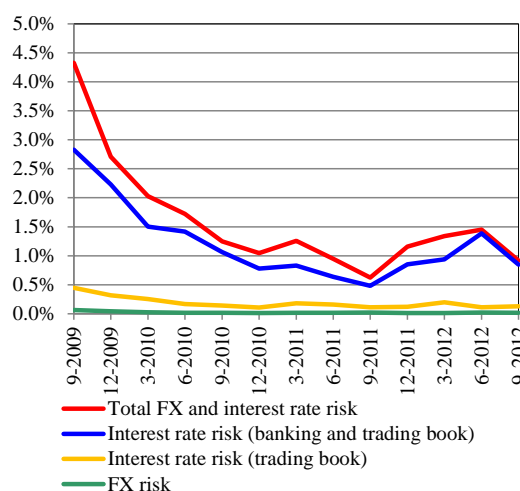
Figure 3.39. Supervisory M2 liquidity standard in commercial banks

Source: NBP.

3.4.2. Market risk

The fall in the value of FX foreign liabilities contributed to an increase in the long FX balance sheet position in the banking sector. The portfolio of housing loans, the largest item of FX assets, decreased albeit to a lesser extent than

FX liabilities. However, this did not translate into an increase in the open FX position, which is below 1% of banks' regulatory capital. In consequence, a risk that substantial losses arise as a result of changes in the valuation of the FX position is limited. Value at risk (VaR) for FX risk does not exceed 0.1% of the regulatory capital of commercial banks (see Figure 3.40).

Figure 3.40. Median of Value at Risk for FX risk and interest rate risk

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

Value at Risk for FX risk is calculated under the assumption that the market for hedging instruments is liquid and that banks are capable of rolling over maturing hedges. This estimate does not encompass other aspects of risks banks are, in practice, exposed to: an increase in transaction costs, incapability of rolling over maturing hedges and counterparty default. Moreover, a number of Polish banks hedge an open FX balance-sheet position by concluding fx swap and CIRS transactions with foreign banks. This implies that risk related to foreign funding is not only limited to balance-sheet liabilities in the form of loans and deposits received from parent entities.

A potential rise in market spreads on transactions hedging 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 that extended housing loans denominated in foreign currency at very low spreads (100–150 basis points) in the period when market competition was at its height, and at the same time competed actively for new deposits. At the end of September 2012, the estimated profitability of the portfolio of housing loans was negative for around 30% of banks (see Figure 3.7). However, at the same time the FX hedging costs significantly decreased in the period analysed (see Chapter 2.2.2).

A 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 involve liquid funds for the margin calls related to FX position-closing transactions. This risk was accounted for in the stress scenario of stress tests (see Chapter 3.7.2). The results of the simulation show that for some banks (with an approximately 13% 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 the 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 currencies.

Interest rate risk in Poland's banking sector relates primarily to the portfolio of fixed-rate securities.⁴³ The vast majority (around 87%) of the portfolio are domestic government bonds and NBP bills. Interest rate risk related to NBP bills is negligible due to their short maturity (usually 7 days). Around 84% of government bonds are held by banks in portfolios that are valued according to market prices. The average duration of this portfolio is, however, relatively small and amounts to 1.4 years. The risk of their price

⁴³ Approximately 94% of the loan portfolio carry a variable interest rate.

movements is mostly hedged by derivatives. In consequence, an estimated VaR for interest rate risk in banks' trading books does not exceed 0.2% of their regulatory capital (see Figure 3.40).

Banks may also be exposed to risk related to volatility of spread between bond yields and the interest rate on swaps that hedged the bonds. This risk is not included in VaR estimates, but was taken into account in the stress scenario of macro stress tests (see Chapter 3.7.2). The results of these simulations indicate that the risk is not high, which largely results from the short duration of portfolios of Treasury debt securities held by Polish banks.

The liquidity position of the banking sector remains favourable. Banks reduced the gap between loans and deposits, and some of them also increased a share of funding via issue of long-term debt instruments. The scale of foreign funding was also reduced. At the same time, stronger competition for deposits led to the rise in the cost of obtaining them. A rise in funding cost against market rates may be expected to continue in the upcoming period.

The average value of a buffer of liquid assets remains high, which is reflected by the supervisory liquidity ratios. In parallel, the liquidity position of individual banks is fairly discrepant, and some of them show high concentration of liabilities, particularly towards foreign parent entities. For some banks, the rolling over of a portfolio of FX assets may also pose a potential risk.

It can be assessed that the risk of an abrupt withdrawal of funding by parent entities is currently low, however, should disturbances in the functioning of global financial markets intensify, one may not exclude a possible outflow of funds from Polish banks. The simulations showed that such a situation would be a challenge to Poland's banking sector. Some domestic banks hold no

sufficient liquidity buffers that could cover a potential outflow of funds under the scenario of foreign capital withdrawal.

It can also be assessed that the gradual downward trend in funding from foreign parent entities will continue in the upcoming quarters. Some domestic banks are already modifying their funding strategies seeking to increase local market funding with clients' deposits. The reduction of the scale of dependence on foreign funding should be welcomed, however in the short term it may push up funding costs, in particular in an environment of a relatively low household savings rate and a negative outlook for the labour market.

In the context of changes in the funding structure of banks, it is important that the structure is appropriately diversified, and the maturity mismatch of assets and liabilities – possibly limited. Development of the market of debt securities issued by banks would be favourable.

3.5. Market assessment of Polish banks

Since the publication of the previous *Report*, the share prices of Polish banks have improved, recouping losses incurred in the second quarter of 2012. Throughout 2012, shares of Polish banks listed on the Warsaw Stock Exchange outperformed shares of their parent banks on European stock exchanges. Only after major world central banks had announced new programmes of expansionary monetary policies, did risk appetite increase, which translated into, inter alia, a rise in share prices of euro area banks (see Figure 3.41).

The “price to book value” for the majority of Polish banks remains stable and above 1. The high “price to book value” ratio shows that investors positively assess Polish banks (see Figure 3.42). At the same time, market analysts' expectations about earnings per share of Polish

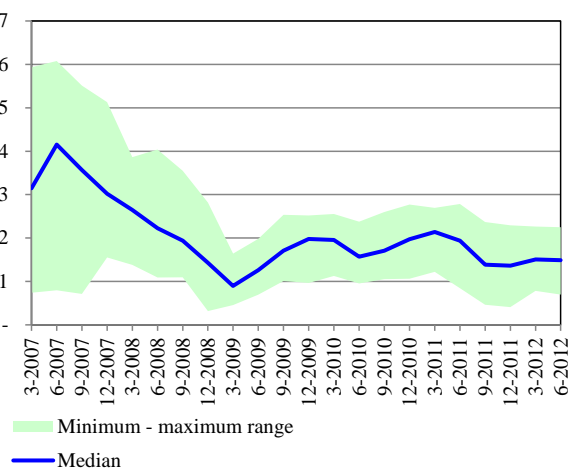
banks remain stable (see Figure 3.43).

Figure 3.41. Index prices of Polish and European banks



Note: index prices rescaled to 100 at the start of September 2009.
Source: NBP calculations based on Thomson Reuters.

Figure 3.42. Price to book value ratio of Polish banks



Note: the ratio based on data of banks included in the WIG Banki index and, additionally, Bank Zachodni WBK, excluding foreign banks (Unicredit and Nova Kreditna Banka Maribor) and Getin Noble bank.
Source: NBP calculations based on Thomson Reuters.

In the period analysed, the ratings assigned to Polish banks remained unchanged (see Table 3.3). One exception was Moody's downgrad-

ing of the rating outlook for PKO BP from stable to negative. In Moody's opinion, the downgrade followed the July 2012 sale by the State Treasury of an over 7% stake in the bank, and the medium term plans of a further reduction of the State's share in the bank.⁴⁴

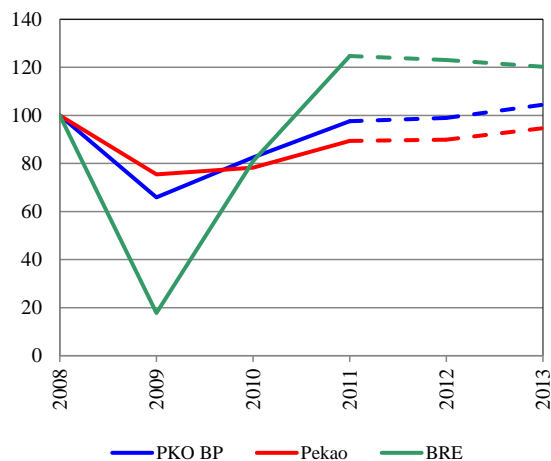
Table 3.3. Ratings of Polish banks by Moody's and Fitch

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 (STA)
Pekao	C- (C-)	A2 (A2)	P-1 (P-1)	NEG (NEG)
BRE Bank	D (D)	Baa2 (Baa2)	P-2 (P-2)	NEG (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)	RUR (RUR)
Bank Millennium	D (D)	Baa3 (Baa3)	P-3 (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)	NEG (NEG)
BRE Bank Hipoteczny	E+ (E+)	Baa3 (Baa3)	P-3 (P-3)	NEG (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)	STA (STA)
BZ 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)
Kredyt Bank	bb+ (bb+)	BBB (BBB)	F3 (F3)	POS (POS)
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 Poors only on the basis of publicly available data are not included in the Table. SACP - *stand-alone credit profile*.

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

⁴⁴ After the transaction, the share of the State Treasury in the bank's shareholding was, directly, 33.39% and, indirectly, an additional 10.25%, including stocks held by the state-owned Bank Gospodarstwa Krajowego.

Figure 3.43. Historical and forecasted earnings per share of selected banks

Note: earnings per share forecasts for 2012–2013 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.

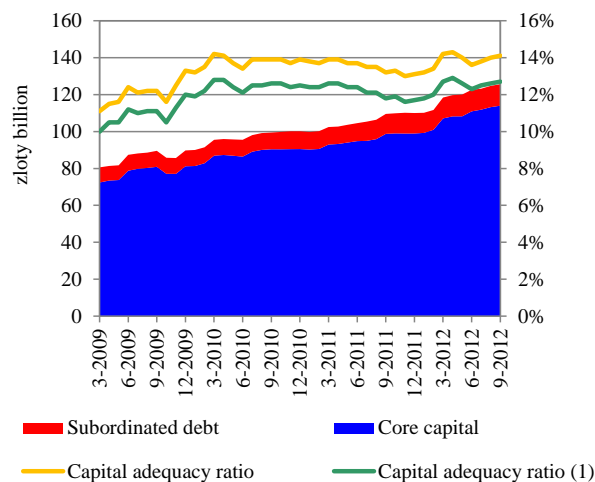
3.6. Banks' capital position

From March to September 2012, the regulatory capital of the domestic banking sector rose by 12.4%, mainly due to retention of 2011 profits. The structure of regulatory capital was favourable, in terms of its capacity to absorb potential losses, as it was largely composed of core capital (see Figure 3.44).

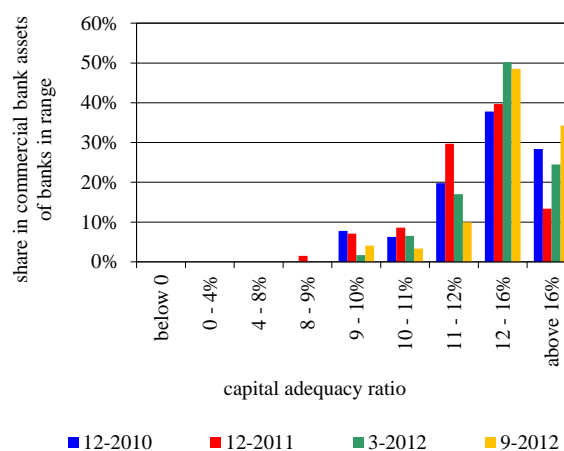
The average capital adequacy ratio of the banking sector slightly decreased to 14.1% (see Figure 3.44). The capital adequacy ratios of the majority of commercial banks were high – banks with capital adequacy ratios above 12% held an 82.8% share in the assets of domestic commercial banks (see Figure 3.45).

The financial leverage ratio is an additional measure that indicates the capital position of banks without taking into account the assets' risk weights. In the period analysed, the average financial leverage ratio declined from 12.0 to 11.6 (see Figure 3.48).

⁴⁵ Resolution No. 153/2011 of 7 June 2011 of the KNF took force on 30 June 2012. According to this Resolution, the risk weight for the fully and completely secured part of FX mortgage loans was raised from 75% to 100%.

Figure 3.44. Selected items of the regulatory capital and the capital adequacy ratio of domestic banks

Source: NBP.

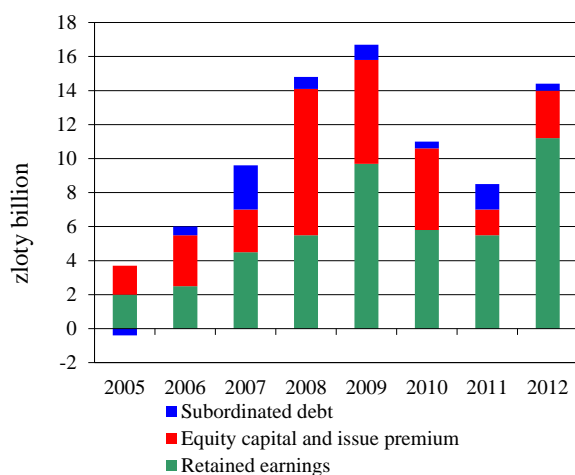
Figure 3.45. Assets of domestic commercial banks by the capital adequacy ratio

Source: NBP.

The capital adequacy of commercial banks slightly decreased as a result of the raising of risk weights to 100% for FX retail exposures from June 2012.⁴⁵ It can be estimated that in June 2012 the average capital adequacy ratio in the banking sector declined as a result by approximately 0.7 percentage points and the cap-

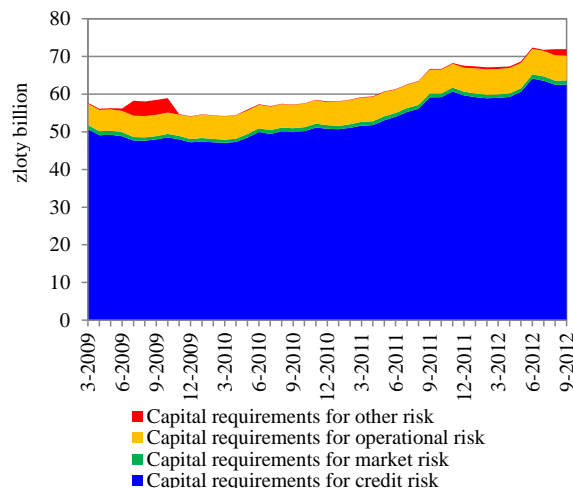
ital requirements grew by around 3 billion zlotys. In the case of a few banks that are active in the market for foreign currency housing loans and hold a substantial part of the portfolio of foreign currency-denominated housing loans, capital adequacy ratios declined by 1.2-1.9 percentage points, however the majority of these banks maintained their capital adequacy ratios at above 10%.

Figure 3.46. Changes (y/y) in selected items of the regulatory capital of domestic banks



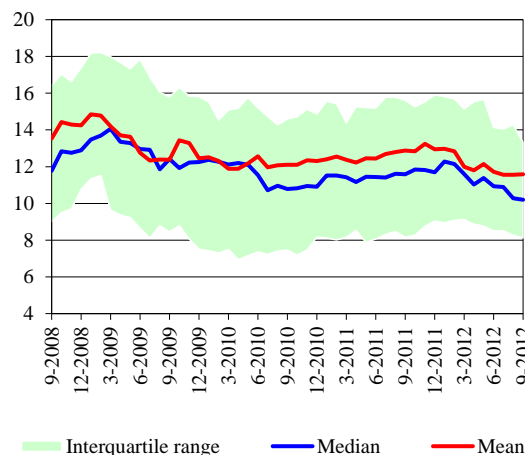
Notes: data do not include: in 2007 – the share issue of Pekao SA related to the take-over of part of the BPH bank; in 2009 – 3.9 billion zlotys in funding provided by the government to the state-owned Bank Gospodarstwa Krajowego; in 2011 – data for Polbank (the increase in capital after the branch was turned into a subsidiary). Data for 2012 concern first 9 months of the year. Source: NBP.

Figure 3.47. Capital requirements for selected types of risk in domestic banks



Source: NBP.

Figure 3.48. The financial leverage ratio in commercial banks



Source: NBP.

3.7. The banking system's resilience to shocks

3.7.1. Simulations of loan loss absorption capacity

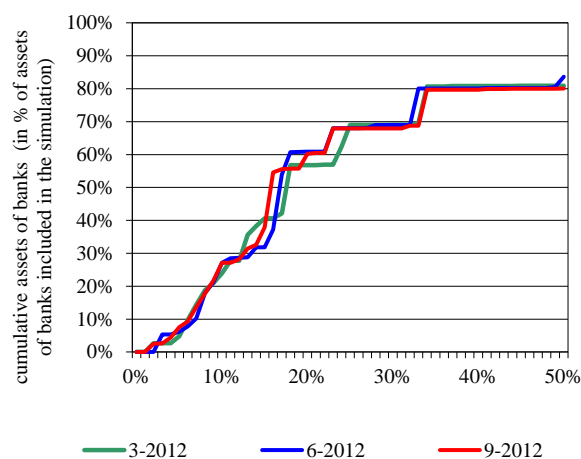
Four simulations were performed to determine whether banks' capital was sufficient to absorb potential losses arising from credit risk materialization.⁴⁶ The purpose of a separate simulation was to analyse the risk of the domino effect to banks' mutual exposures in the market for inter-bank unsecured deposits.⁴⁷

The results of the first simulation (see Figure 3.49) indicate the scale of a deterioration in the quality of performing loans that individual banks may absorb without breaching the capital adequacy standards.⁴⁸ The results of this simulation permit to rank these banks by their resilience to a deterioration in the quality of their loan portfolios. The simulation performed on September 2012 data indicates no changes in the significance of a group of banks that would be able to absorb only a minor deterioration in loan portfolio quality. A deterioration in the quality of 5% of loans would result in a breach of the capital adequacy standards at banks with a 2.5% share in the banking sector's assets. In March 2012, an identical shock would have caused a breach of these standards at banks with a 2.7% share in the sector's assets.

The purpose of the second simulation 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 bank's capi-

tal adequacy. The results of the simulation show that in the period analysed the significance of the portfolio of impaired loans for banks' capital adequacy did not change (see Figure 3.50). Banks that register a fall of their capital adequacy ratio below 8% in this 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 amounts to around 8% (see Figure 3.51), which represents the same figure as at the end of the first quarter of 2012.

Figure 3.49. Simulation I: assets of commercial banks ranked by percentage of loans without identified impairment whose deterioration in 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 to impairment provisions decrease firstly the bank's current net profit not included in 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.

The third simulation was designed to examine the significance of the concentration risk of loan

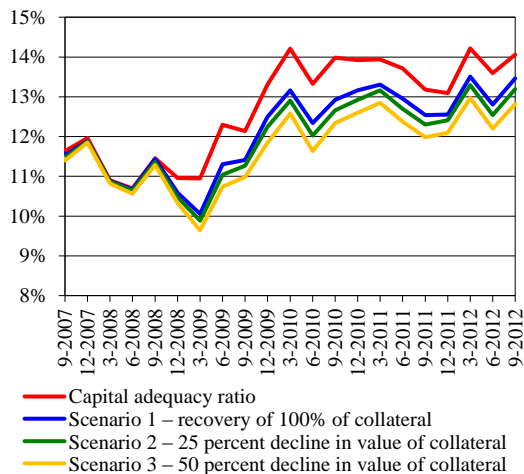
⁴⁶ The simulations were performed on data of commercial banks with a total share of around 90% in the banking sector's assets. Neither branches of credit institutions nor cooperative banks were included in these simulations. A change was made in comparison with the simulations performed for the previous editions of the Report – namely the inclusion in banks' loss absorption capacity of the value of that part of the current financial year's net profit that is not included by banks in regulatory capital.

⁴⁷ The simulation examined the impact of the primary insolvency of commercial banks on commercial banks and cooperative banks.

⁴⁸ See footnote 7 in Box 3.

exposures in the banking sector. The simulation assessed the impact of a parallel bankruptcy of three largest non-financial borrowers (*in the sector as a whole*) on the banking sector. 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 these enterprises and that the costs of provisions decrease banks' regulatory capital. The effects of a hypothetical bankruptcy of three largest financial (non bank) borrowers were examined in a similar way. This simulation did not take into account exposures towards subsidiaries and affiliates.

Figure 3.50. Simulation II: average capital adequacy ratio of commercial banks in scenarios that assume a deterioration in the quality of impaired loans



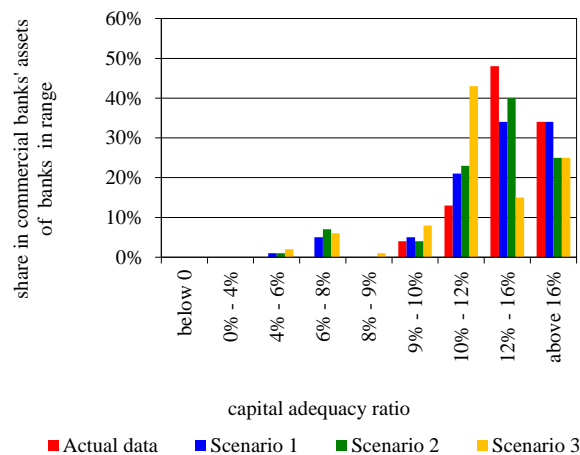
Assumptions of the simulation:

1. In all scenarios, banks sustain costs of credit risk (that firstly decrease the bank's current net profit not included in 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 and 3 charges to impairment provisions are increased by the value of a decrease in collateral value (25% of collateral value in Scenario 2 and 50% in Scenario 3).
- Source: NBP.

The fourth simulation examined the concentration of loan exposures in individual commercial banks by the impact assessment of a hypothetical bankruptcy of three largest non-financial borrowers *of each bank* (see bottom part of in Table 3.4).

The results of the third and fourth simulations 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) slightly increased as compared with March 2012. At the same time, potential losses for the majority of banks would not be high enough to jeopardize their capital adequacy. Moreover, the total shortfall of regulatory capital, given such restrictive assumptions of the simulation, would be relatively small and would not exceed 33% of the value of the regulatory capital of the banks, which register a shortfall of capital in the simulation, and 2.2% of the value of the regulatory capital of the sector as a whole.

Figure 3.51. Simulation II: distribution of assets of commercial banks in scenarios of the deterioration in the quality of impaired loans according to data as of March 2012



Note: the scenarios are defined in Explanatory notes below Figure 3.50.
Source: NBP.

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

Table 3.4. 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	11	8
Share of these banks in banking sector's assets	27.0%	18.6%
Credit risk cost (zloty billion)	7.7	3.2
Share ¹ of banks with capital adequacy ratio below 8% or with own funds lower than internal capital	0.4%	0%
	Three largest borrowers of each bank	
Credit risk cost (zloty billion)	20.7	
Share ¹ of banks with capital adequacy ratio below 8% or with own funds lower than internal capital	6.1%	

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 then the bank's regulatory capital.

Source: NBP.

The fifth simulation showed that the domino effect resulting in the secondary insolvency of banks would be triggered by the primary insolvency of 3 out of 46 commercial banks operating at the end of September 2012.⁴⁹ In the event of their bankruptcy, secondary insolvency would affect from 1 commercial and cooperative bank to 14 commercial and cooperative banks with a share in the whole banking sector's assets below 1.2%.

The low risk of the domino effect arises from a relatively small scale of transactions between domestic banks. A dominant part of interbank deposits are transactions between cooperative banks and affiliating banks, and between domestic and foreign banks. The value of deposits placed between domestic commercial banks is low when compared to their regulatory capital.

3.7.2. Stress tests

Stress tests that take account of a macroeconomic shock, a market shock and a liquidity shock were used to assess the resilience of banks⁵⁰ to external negative shocks. The central path of the NBP macroeconomic projection from "Inflation Report – November 2012", developed under the assumption of fixed interest rates, was used as the reference scenario. The purpose of this analysis was a quantification of the effects of hypothetical shocks to banks, during the period from the fourth quarter of 2012 to the end of 2014. It was assumed that the value and structure of the balance sheets of banks⁵¹ would be constant and that banks had retained all profits earned in the first three quarters of 2012 and in the simulation period. The analysis takes into account neither the possibility of changing the

⁴⁹ The simulation examined the consequences of a bankruptcy of each individual commercial bank. For more details on the methodology of the examination of the domino effect, see Box 4 in "Financial Stability Report. July 2011", NBP, 2011.

⁵⁰ The simulation involves domestic commercial banks.

⁵¹ Except for changes described explicitly, such as a deterioration in loan quality, a fall in the value of bonds due to a market shock, etc.

size and structure of the loan portfolio nor any changes in external funding to banks. Due to these assumptions, the result of the simulation for the reference scenario or 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 process. In the first stage, the analysis covered the impact of two macroeconomic scenarios (reference and shock scenarios) on credit risk materialisation costs, on banks' net interest income and on their capital adequacy. The shock scenarios used in the stress tests was developed using the NBP's macroeconomic model. Thanks to this, the scenario, to the extent possible, takes into account the total impact of investigated shocks on the economic conditions. In contrast to single-factor simulations (see Boxes 3 and 4 and section 3.7.1), which depict the sensitivity of banks to single, isolated shocks, the stress tests allow to estimate a more complete impact of multiple simultaneous shocks on the financial position of banks.

In the second stage, the analysis of 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 analysed.⁵²

The hypothetical capital needs of banks in the two scenarios were calculated under the assumption that banks had to hold sufficient core capital to keep the capital adequacy ratio calculated on the basis of core capital at the level of 9% and that core capital had to be higher than capital requirements internally estimated by banks under the ICAAP. The criterion adopted for the value of the capital adequacy ratio is more restrictive than prudential regulations now in force. It is, however, consistent with the standard set by the EBA stress tests and it also corresponds to one

of the conditions mentioned by the KNF in its recommendations in the area of banks' dividend policy.⁵³

The macroeconomic shock scenario assumed a recurrence of recession in the euro area economy caused primarily by the reduction in debt levels by the private sector, coupled with lower consumer demand ensuing from consumer uncertainty. In addition, excessive government debt that makes it impossible to implement stimulus measures and even prompts a tightening of fiscal policy will contribute to prolonging and worsening the recession. Boosting lending by easing monetary policy by central banks will not lead to lending growth due to banks' high risk aversion and weakening demand.

Given such assumptions, Poland would see a substantial slowdown in the pace of economic growth (see Table 3.5), further increased by a likely pro-cyclical fiscal policy response. A tightening of fiscal policy would be prompted by the risk of exceeding the prudential thresholds of the public debt to GDP.

Table 3.5. Major economic indicators in macro stress test scenarios (%)

	2012	2013	2014
GDP growth y/y			
Reference scenario	2,3	1,5	2,3
Shock scenario	2,3	0,4	-1,0
LFS unemployment rate, yearly average			
Reference scenario	2,3	1,5	2,3
Shock scenario	2,3	0,4	-1,0
CPI inflation y/y			
Reference scenario	2,3	1,5	2,3
Shock scenario	2,3	0,4	-1,0
WIBOR3M			
Reference scenario	2,3	1,5	2,3
Shock scenario	2,3	0,4	-1,0

Source: NBP.

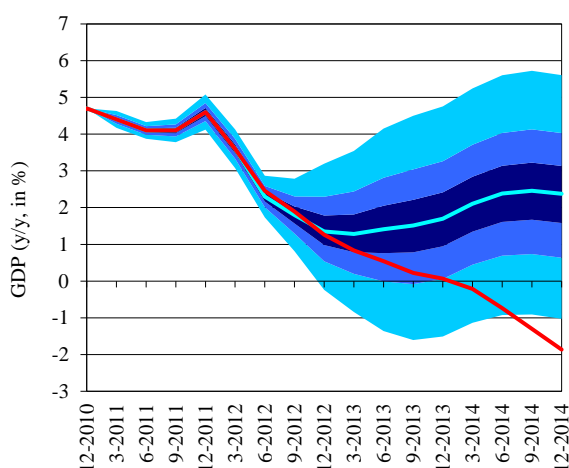
The likelihood of such a severe and long slowdown in the GDP growth rate in Poland, as the

⁵² More information on the methods applied to perform the stress tests can be found in Box 6 in "Financial Stability Report. December 2011", NBP, 2011.

⁵³ 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).

one resulting from the shock scenario, can be assessed as minor (see Figure 3.52).

Figure 3.52. Shock macroeconomic scenario against the fan chart of GDP from “Inflation Report – November 2012”



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

In order to assess the potential impact of a decline in foreign investor confidence in the Polish economy, which would result in capital flowing out from Poland, on the capital position of banks, the macroeconomic shock scenario was accompanied by a market shock. The outflow of capital would be reflected in an increase in Treasury debt securities' yields and a depreciation of the zloty. Such developments would prompt further fiscal adjustments aimed at avoiding a breach of the prudential thresholds and regaining credit worthiness by the Polish government. A depreciation of the zloty would also bring about an increase in the capital requirements for banks and a deterioration of their loan portfolio quality through an increase in the value of foreign currency-denominated loans and the related rise in burden of loan repayment on borrowers. The simulation assumed a 300 basis points rise in yields and 30% depreciation of the zloty against the euro, lasting for 1 year.⁵⁴

⁵⁴ Against bond yields and the zloty exchange rate as of the end of September 2012.

⁵⁵ The following were assumed: withdrawal of 100% of deposits, 10% of loans and 25% of other liabilities towards foreign financial institutions; outflow of an unstable part of (not classified as core deposits) deposits of households, the non-financial and general government sectors and, additionally, 5%, 10% and 10% their other deposits, respectively.

The impact of a liquidity shock on banks' liquidity was analysed separately. The purpose of the simulation was to assess whether banks had an adequate buffer of liquid assets in the event of the shock scenario assuming a depreciation of the zloty, a rise in domestic government bond yields and, additionally, outflow of some foreign funding, a fall in confidence from both other domestic financial institutions and entities of the real sector resulting in the withdrawal of some of their deposits.⁵⁵

Analysis of the impact 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.

The estimated value of a hypothetical increase in core capital by banks, which would be required if the shock scenario were to unfold, would amount to 4.3 billion zlotys and be around 4 times higher than in the case of the reference scenario (see Table 3.6). In addition, due to losses arising from interbank exposures, the capital needs of banks would grow by an additional 6 million zlotys. The share of banks, which would have to raise the level of their core capital to meet the criteria adopted for the analysis, in the banking sector's assets would be 15.5% in the shock scenario and 5.4% in the reference scenario.

In the case of the reference scenario, in the group of banks, which would have to raise their core capital levels, the most important ones are institutions, which currently – while meeting the regulatory capital adequacy minimum – do not meet the more restrictive criterion adopted for the analysis. The majority of banks that do not meet the capital requirement in the reference scenario or in the shock scenario posted a positive net profit in the first three quarters of 2012, however if all the profits were earmarked for capital increase, the move would not provide them with

Table 3.6. Results of macro stress tests

	Historical data for the period Q4 2011 – Q3 2012	Simulation results for the period Q4 2012 – Q4 2014	
		reference scenario ¹	shock scenario
	On average per year (as % of assets)		
Charges to loan impairment provisions	-0,7	-0,9	-1,3
Net interest income ²	2,2	2,0	1,7
Net earnings	1,2	0,9	0,3
	Capital needs ³ (zloty billion)		
Macroeconomic and market shocks	n/d	1,0	4,3
Domino effect	n/d	0,0	0,01
	Additional information – market shock in the simulation period (zloty billion)		
Change in bond value recognized in profit and loss account	n/d	n/d	-0,5
Change in bond value recognized in capital	n/d	n/d	-4,2
Zloty depreciation (impairment charges for FX loans to households) recognized in profit and loss account	n/d	n/d	-0,7

¹ Scenario based on the central path of the NBP macroeconomic projections from “Inflation Report – November 2012”.

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, when taking into account core capital, exceed 9% and to keep core capital at the level not lower than internal capital at the end of the simulation period.

Notes: Data for domestic commercial banks.

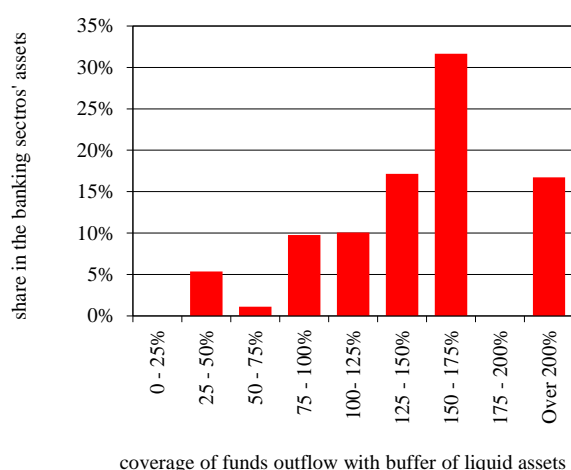
The following were assumed: a fixed size and value of loan portfolio and banks' external funding in the simulation, all profit generated by the end of September 2012 which was undistributed and profit generated within the simulation period was earmarked for increasing banks' capital. **Due to these assumptions, the result of the simulation for the reference scenario or other simulations included in this chapter should not be regarded as a forecast of the condition of the banking sector.**

Source: NBP.

a sufficient buffer to absorb hypothetical losses.

The simulation of liquidity risk showed that in the event of materialisation of a very restrictive shock scenario a group of banks with an approximately 16% share in the sector's assets would not have sufficiently high buffers of liquid assets to cover liabilities related to foreign capital outflow, depreciation of the zloty and a fall in customer confidence (see Figure 3.53). The majority of these banks are, to a large extent, financed with foreign funds or hold substantial portfolios of foreign currency-denominated loans. A shortfall of liquid funds in these banks would total around 38 bn zlotys.

Figure 3.53. Assets of domestic commercial banks by coverage of outflow of funds with the buffer of liquid assets in the shock scenario



Source: NBP.

Comparison between the results and the simulation performed in the previous *Report* (a 59 bn zloty shortfall of liquid funds at banks with a 24% share in the sector's assets) shows a significant rise in the resilience of banks and a decrease in the value of the potential shortfall of liquid funds. This results primarily from the reduction in the size of foreign funding and a small decrease in the portfolio of foreign currency-denominated loans.

The results of the simulations and stress tests show that the majority of domestic commercial banks hold sufficient capital to safely operate and absorb the effects of a minor economic slowdown and the resulting moderate deterioration in loan portfolio quality and a pick-up in credit risk costs. At the same time capital buffers are discrepant among banks, and some of them exhibit 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 will materialize and market turmoil will intensify. The results of the stress tests indicate that a large portion of banks hold capital and post earnings that allow them to absorb the effects of such a restrictive scenario.

The results of the stress tests and loss absorption capacity simulations show that the resilience of banks to shocks is relatively high and has slightly improved. In consequence, additional capital needs for the whole sector would not be substantial, however some of the banks would have to significantly increase their capital. These are mostly banks whose capital position and earnings are already relatively weaker.

Given high uncertainty about future development in the economy, it is essential for these banks to continue to pursue a prudent dividend policy that will provide them with a buffer to cover a potential pick-up in credit risk costs. Moreover, banks that play a particularly important role should – in line with recommendation of the Financial Stability Board (FSB) – have an elevated capacity to absorb potential losses (see Box 5).

The results of the liquidity shock simulation pointed to a certain rise in banks' resilience, however they prove that to ensure a stable operation of the domestic financial system it is desirable that banks run diverse funding structure and do

not rely too heavily on short-term financing from their foreign parent banks.

The simulation has also proven that a considerable portfolio of foreign currency-denominated loans may pose relevant liquidity risk to banks that have no stable funding sources in foreign

currency. This confirms the necessity for domestic banks to further limit lending denominated in foreign currency, especially housing loans to households so as to enable to gradually reduce the currently high share of foreign currency-denominated loans in the portfolio of loans to the non-financial sector (32%).

Box 5. Systemically important financial institutions

Global systemically important banks

A strong deterioration in the financial condition of a number of international financial institutions, banks in particular, was the first sign of the current economic and financial crisis. Due to the scale of their activities and their impact on financial markets and the real economy, they were financially supported by domestic authorities. The significant financial costs of the State aid have highlighted the threats related to the operation of institutions that are colloquially termed as *too-big-to-fail*. The crisis has triggered regulatory measures aimed at containing the risk of their bankruptcy. Leaders of the states centered around G20 have asked the Basel Committee on Banking Supervision (BCBS) to develop a method that can be used to identify global systemically important banks (G-SIBs), and offer supervisory measures aimed at containing risk related to their functioning.

The Basel Committee on Banking Supervision has proposed measures aimed to reduce the likelihood of the bankruptcy of a bank regarded as a G-SIB mainly by imposing the obligation to keep an additional capital buffer and, consequently increasing its loan loss absorption capacity. In addition, in order to diminish the impact of a bankruptcy of a G-SIB may have on the financial system and the economy, the Financial Stability Board has commenced work on developing an effective G-SIB resolution mechanism.¹

The first stage shall be identification of G-SIBs.² The method proposed by the BCBS takes into account the following factors: size of a bank, its interconnectedness with other financial institutions, complexity of business and instruments, including derivatives, the bank holds, lack of substitutability of services offered by the bank (which may result from the important role the institution plays in financial markets) and cross-jurisdictional activity measured by its presence outside the country the bank's headquarters is located. When identifying a G-SIB, the whole consolidated group is analysed, and the global economy is used as a appropriate reference.

Based on the results of applying the methodology, BCBS has identified 28 global systemically important banks³, using end-of-2011 data. The list will be updated annually.

The second stage will consist in imposing additional loss absorbency requirement on the identified G-SIBs. The BCBS expects this additional requirement for banks identified as G-SIBs in November 2014 (based on end-of-2013 data) to take effect starting from 2016.

Domestic systemically important banks

In November 2011, G20 leaders gathered at a summit meeting in Cannes asked the BCBS and the FSB to start work on extending the G-SIB framework in order to identify domestic systemically important banks. Banks that are not global systemically important banks may still have a strong impact on the functioning of domestic financial systems, and therefore it may be necessary to impose additional capital requirements. The BCBS document⁴ gives national authorities an appropriate degree of national discretion in the assessment and application of policy tools aimed at identifying a domestic systemically important bank (D-SIB). This represents a major difference as compared to the G-SIB framework, that includes a set of specific indicators and weights aimed at setting one method that would qualify a given bank to a group of systemically important institutions. Domestic systemically important banks should be identified using four out of five areas used in the G-SIB methodology, i.e. size, interconnectedness, complexity of financial instruments held by a bank, lack of substitutability. Locally operating banks, including subsidiaries of international financial groups, should be assessed at consolidated level to include any of their own downstream subsidiaries operating in other countries.

Identification and imposition of additional capital requirements on institutions systemically important in the European Union is likely to be defined in the provision of the so-called CRD IV/CRR package.

Dilemmas

Identification of systemically important banks, publication of the list of the banks and imposition of an additional capital requirement involves a number of dilemmas. The additional capital requirement in the proposed amount will probably not prevent banks from becoming too large, but may reduce the probability of the need to use taxpayer money to bail out the banks and the related costs.

Banks placed in the released list of G-SIBs/D-SIBs may, according to market participants' view, have an additional (implicit) guarantee that national authorities will not allow them to go bankrupt, should any problems arise. A G-SIB/D-SIB may be perceived "safer", which as a result may translate into a permanent reduction in its funding costs. That situation would result in creating further competitive distortions among banks. The fact that a bank is put in the G-SIB/D-SIB list may also increase the moral hazard in institutions regarded as systemically important. Therefore, institutions regarded as G-SIBs/D-SIBs should be subject to particularly intensive supervision.

This additional capital requirement for banks identified as G-SIBs/D-SIBs may affect the form in which the banks operate in the European market. Maintaining an additional capital buffer is costly (decreases ROE for stockholders). Considering a subsidiary of a bank from another member state as D-SIB in the host country may trigger its transformation into a branch, especially when a parent bank in the home country has not been regarded as a D-SIB or G-SIB. Turning a subsidiary into a branch would result in negative implications for the efficient exercise of micro- and macroprudential supervision by the host country, and would also entail complications for the deposit guarantee scheme. In view of the above, it seems justified to require that entities whose activities are regarded in the host country as systemically important should conduct business as

a locally incorporated company.

Summary

Current crisis experience shows that the impact of bank bankruptcy on financial and macroeconomic stability in times of the serious financial market turmoil is significant. It is, therefore, necessary for banks to maintain at all times a sound capital position that will enable them to independently obtain funding should the availability of traditional market funding be lower.

The results of analyses performed according to the BCBS guidelines and aimed at developing a list of domestic systemically important banks depends, to a large extent, on the parameters adopted for analysis. Selection of these parameters is discretionary. In view of this, preparation of the list of D-SIBs has to follow accurate and deeper analyses and should be done as part of macroprudential policy.

¹ "Resolution of Systemically Important Financial Institutions – Progress Report", FSB, November 2012.

² "Global systemically important banks: assessment methodology and the additional loss absorbency requirement – Rule text", BCBS, November 2011.

³ "Update of group of global systemically important banks (G-SIBs)", FSB, November 2012.

⁴ "A framework for dealing with domestic systemically important banks", BCBS, October 2012.

Chapter 4.

Non-bank financial institutions

Due to the minor degree of connections of 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. 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.

Open pension funds (OFEs), investment funds (FIs) and insurance companies make up a significant part of Poland's financial system (see Table 4.1). However, these institutions have little impact on the banking sector through the credit, financial and ownership channels, and mutual ties are mostly indirect as they participate in the same capital group.⁵⁶

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

	NBFIs			Banks	NBFIs / Banks
	OFEs	ZUs	FIs		
2009	178.6	139.0	93.4	1 056.7	38.9%
2010	221.3	145.2	116.5	1 158.5	41.7%
2011	224.7	146.2	114.8	1 293.9	37.5%
2012	252.5	156.9	133.0	1 334.7	40.6%

Note: for OFEs and FIs - net assets at the end of September 2012, for ZUs - at the end of June 2012, NBFIs – ZUs, OFEs and FIs.

Source: Analizy Online, UKNF, NBP.

Investment funds, pension funds and insurance companies are of little significance for bank funding. At the end of September 2012, deposits placed by these institutions accounted for only 5.0% of the total amount of deposits with the majority of them held in a few biggest banks. The ratio of loans granted to these entities to total banks' loans was 0.7 (see Table 4.2).

Banks were direct shareholders in several insurance companies and several PTEs and TFIs. Moreover, they are the sole owners of four TFIs, one PTE and one insurance company. Net assets of funds managed by these management companies did not exceed 10% of assets of the investment fund sector and 4% of assets of the pension fund sector, respectively. Insurance companies are the sole owners of six PTEs (an over 50% share in net assets of the OFEs sector) and seven TFIs (a share of around 20% in assets of the investment funds sector).⁵⁷ Assets of insurance companies connected to banks were of little

⁵⁶ Due to their seasonality, data on financial flows presented in this chapter are compared to data for the corresponding period of the preceding year, and balance-sheet data – to data as at the end of the reporting year.

⁵⁷ Data provided by UKNF and Analizy Online.

importance.

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

Loans and other banks' receivables from insurance companies (ZUs), pension funds (FEs) and investment funds (FIs)					
	ZUs	FEs	FIs	Total	NBFIs loans / Total loans
2010	0.2	0.4	6.9	7.5	0.9%
2011	1.0	0.7	2.2	3.9	0.4%
2012	1.4	1.5	4.7	7.6	0.7%
Deposits and banks' liabilities to insurance companies (ZUs), pension funds (FEs) and investment funds (FIs)					
	ZUs	FEs	FIs	Total	NBFIs deposits/ Total deposits
2010	19.3	9.7	7.7	36.7	3.6%
2011	21.6	12.0	10.4	44.0	3.9%
2012	26.0	18.5	13.5	58.0	5.0%

Note: data as at the end of September 2012. Data on pension funds include both open pension funds and occupational pension funds.

Source: NBP.

4.1. Insurance companies

The financial situation of the insurance sector in the first half of 2012 improved as compared to the first half of 2011, primarily on the back of the better performance of the non-life insurance sector.

Insurance premium and earnings

In the first half of 2012, the life insurance and non-life insurance sectors posted positive technical results and earnings (see Table 4.3), and

the gross written premium (hereinafter referred to as premium) was higher than in the first half of 2011.

The improvement of the technical result of the non-life insurance sector deserves particular attention. The result was considerably affected by price rises of automobile third party liability insurance OC (OC premium accounted for 33.2% of non-life insurance premium) and a fall of the ratio of insurance claims to the sector's premium. Due to a smaller number of traffic accidents and lower financial consequences they generated, earnings arising from auto casco insurance and automobile third party liability (AC and OC) improved substantially.

Earnings of the non-life insurance remain largely dependent on earnings of the PZU Group. In the first half of 2012, a dividend paid out by PZU Życie to PZU was smaller than in the first half of 2011, therefore the first half of 2012 earnings of the non-life insurance sector (despite an increase in technical result) were lower than earnings for the first half of 2011.

A high increase in life insurance premium was driven primarily by stronger sales of anti-tax insurance⁵⁸ (total premium growth in group no. 1 amounted to 2 billion zlotys) and unit-linked insurance (premium growth by 0.8 billion zlotys).

Anti-tax insurance (including investment insurance instruments) is basically low-income insurance and features low risk borne by the insurance offering company. Depending on a business strategy, life insurance companies from time to time increase or reduce the sale of this product. However, this strategy has no major impact on their financial earnings, because premium revenue growth is mitigated by a rise in costs related to a change in gross insurance provisions by the

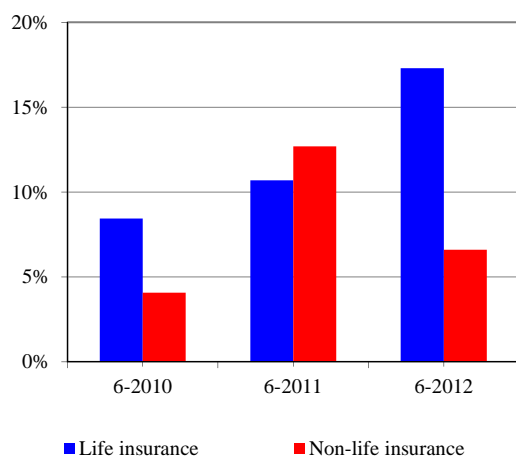
⁵⁸ Anti-tax insurance is single premium endowment insurance (group no. 1 of life insurance), written mostly for 12 months. The so-called investment insurance instruments and certain structured insurance products written in the form of endowment insurance are classified into this product group. In the case of the investment insurance instruments, the sum insured is equal to a premium increased by a contractually defined interest, and in the case of structured insurance products (endowment insurance), the sum insured (payout) depends on investment performance of an insurance company. The payout of the insurance is exempt from taxation, therefore it is called anti-tax insurance. Anti-tax insurance is offered in the form of individual or group insurance.

Table 4.3. Earnings of insurance companies

	6-2010 (in mil- lion zloty)	6-2011 (in mil- lion zloty)	6-2012 (in mil- lion zloty)	Change 6-2012/6-2011 (in %)
Life insurance (Sector I)				
Gross written premium	15 115	16 738	19 637	17.3
Technical result	1 806	1 754	1 715	-2.2
Net profit	1 891	1 745	1 702	-2.5
Non-life insurance (Sector II)				
Gross written premium	11 318	12 757	13 596	6.6
Technical result	-788	257	624	42.8
Net profit	3 106	2 652	2 479	-6.5
<i>including PZU Życie dividend to PZU</i>	<i>3 120</i>	<i>1 987</i>	<i>1 177</i>	-
ROE (in %)	22.1	20.3	18.8	-7.4 pp.

Note: annualised ROE.
Source: UKNF, PZU.

value of premiums invested. The sale of these products have an influence on, inter alia, a bigger market share of individual insurance companies, in terms of premium written, and increase their provisions, which in turn serve to set statutory solvency parameters.

Figure 4.1. Growth rate of gross written premium in the insurance sector

Source: UKNF.

Although the first half of 2012 saw high premium

⁵⁹ Investments of insurance companies without taking into account unit-linked insurance investments, where investment risk is borne by client.

growth, the technical result of life insurance companies declined slightly (see Table 4.3), which resulted mainly from the decrease in insurance provisions (an increase by 1.8 bn zlotys in group no. 1; 2 bn zloty increase of unit-linked insurance) and acquisition expenses (including insurance fees and commissions), which are primarily borne at the start of the insurance period.

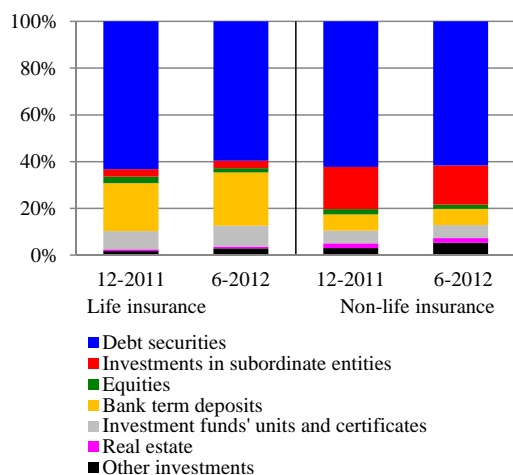
Investments of insurance companies

At the end of the first half of 2012, investments of insurance companies⁵⁹ amounted to 97.9 bn zlotys (92.7 bn zlotys at the end of 2011). Debt securities (mainly bonds issued, warranted or guaranteed by the State Treasury) had the largest share in the investment portfolio of insurance undertakings. The share of corporate shares quoted on the regulated market and investment funds' participation units accounted for an insignificant share of this portfolio (see Figure 4.2).

The value of unit-linked insurance investments, where investment risk is borne by clients, amounted to 40.8 bn zlotys at the end of the first half of 2012 (it was 37.8 bn zlotys at the

end of 2011). The largest share in the investment (63.7%) was that of investment funds' participation units and certificates of investment funds and debt securities (21.5%). Equities and deposits accounted for 3.9% and 6.8%, respectively, of unit-linked insurance investments.

Figure 4.2. Structure of investments of insurance companies



Note: Unit-linked insurance investments were taken no account of in life insurance.
Source: UKNF.

Solvency and capital position of insurance companies

At the end of the first half of 2012, the requirement to cover the solvency margin with own funds was met by all insurance companies, and the insurance sector's investments were higher than its net insurance provisions. The sector had sufficient own funds to cover the statutory solvency margin and investments to cover liabilities arising from insurance contracts.

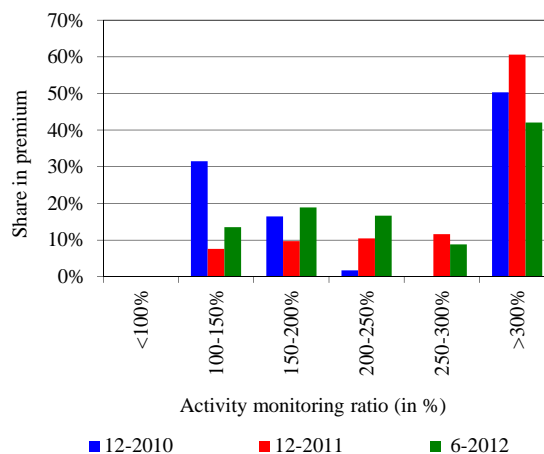
At the end of the first half of 2012, the activity monitoring ratio in the life insurance sector declined to 306% (321% at end of 2011), and in the non-life insurance sector it rose to 391% (385% at end of 2011). The provisions coverage ratio in the two sectors was 109% and 126%, respectively (108% and 124%, respectively, at end of 2011), and investments accounted for 117.6%

⁶⁰ Total insurance provisions in the first half went up 5.4 bn zlotys.

and 144.3%, respectively, of insurance provisions (net of reinsurance).

The share of entities with lower activity monitoring ratio, in the range of 100%-250%, increased in the life insurance sector (see Figure 4.3), which is tied to the rise in insurance provisions⁶⁰ arising from premium growth in anti-tax insurance and from unit-linked investments, which resulted in an increase in the solvency margin (it is determined in relation to insurance provisions).

Figure 4.3. Distribution of activity monitoring ratio in life insurance sector



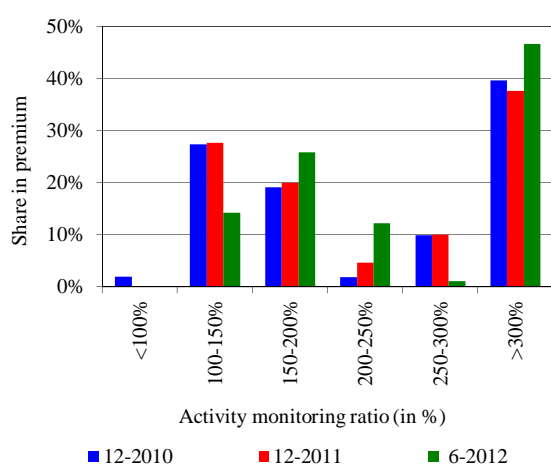
Source: UKNF.

In the period under analysis, the increase in own funds in the non-life insurance sector was higher than that of the solvency margin, which led to the rise of the monitoring ratio (see Figure 4.4). Own funds of non-life insurance companies rose from 13.5 bn zloty at the end of the first half of 2011 to 15.1 bn zlotys at the end of the first half of 2012, including by 1.0 bn zlotys in this sector's five largest companies (82.4% of the premium), and the solvency margin edged up from 3.6 bn to 3.8 bn zlotys.

The major risk insurance companies may be exposed to is market risk, including the risks of a fall in equity prices, of a rise of interest rates, and to a lesser extent, cat risk. The size of individual types of risk is monitored on an annual basis

by insurance supervision authority on the basis of stress tests⁶¹ carried out by insurance companies. Based on aggregate financial data, no major change should be expected with regard to the impact assessment of shocks on solvency of the whole insurance sector. It can be said that the financial condition of insurance companies is stable.

Figure 4.4. Distribution of activity monitoring ratio in non-life insurance sector



Source: UKNF.

Credit insurance may be a potential threat to individual insurance companies as it is concentrated in a few entities. If the quality of the credit insurance portfolio deteriorates significantly, their solvency ratios (including the provisions coverage ratio and the ratio of solvency margin coverage with own funds) may decline significantly. However, the share of premium of this insurance group in the gross written premium of the whole non-life sector was small (2%) in the first half of 2012.

In the first half of 2012, insurance guarantees, including the guarantee of diligent performance of a contract, granted to building companies accounted for 1.0% of the premium, and gross

⁶¹ Stress tests are performed in line with the guidelines developed by the UKNF, "Metodyka przeprowadzania testów stresów zakładach ubezpieczeń i w zakładach reasekuracji za 2011 rok", UKNF, 2012.

⁶² Since 2011, stress tests for credit risk also include the scenario of the insolvency of the largest reinsurer (measured by the reinsurer's share in provisions for unpaid claims and benefits and in receivables, assuming that half of the receivables arising from reinsurance are recovered).

claims paid – 0.8% of non-life insurance claims. Due to reinsurance cover of this insurance portfolio, these amounts (net of reinsurance) are almost lower by half. Insurance guarantees were primarily granted by large insurance companies with relatively high own capital. As the ratio of guarantees granted to own funds of insurance companies remained low, this market segment posed no threat to the solvency of individual non-life insurance companies.

Reinsurance schemes help improve the stability of the non-life insurance sector. Besides large risks, reinsurance cover is also provided for cat risk. Retrocession, i.e. the further transfer of risk from a reinsurer to another reinsurer, limits the vulnerability of insurance companies to the reinsurer's insolvency risk.⁶²

4.2. Pension fund management companies and open pension funds

Investment risk associated with the investment policy of open pension funds is mainly borne by participants in the capital part of the pension system. Nevertheless, a shortfall in an open pension fund arising from a lower rate of return attained by this fund than the minimum required rate of return may generate the insolvency risk of a pension fund management company that manages a given fund. The present condition of the pension sector indicates such a threat does not exist.

Financial results of pension fund management companies

In the first half of 2012, the profits and technical profitability of the sector of pension fund management companies rose as compared to the first

Table 4.4. Financial results and profitability of PTEs

	6-2010 (in mil- lion zloty)	6-2011 (in mil- lion zloty)	6-2012 (in mil- lion zloty)	Change 6-2012/6-2011 (in %)
Revenues from funds' manage- ment:	868	948	734	-22.6
- contribution fee	376	393	141	-64.3
- management fee	432	490	504	2.8
Funds' management costs:	588	594	356	-40.0
- obligatory costs	253	262	185	-29.1
- other costs:	334	332	171	-48.6
costs of acquisition	214	222	69	-68.9
Technical profit on funds' man- agement	280	354	378	6.8
PTEs net profit	292	328	357	8.8
Technical profitability on funds' management (in %)	32.3	37.4	51.5	14.1 pp.
ROE (in %)	21.3	19.2	20.1	0.9 pp.

Note: annualised ROE. Technical profitability – technical profit to revenues from pension funds management.
Source: GUS, UKNF.

half of 2011 (see Table 4.4). The improvement of financial results, reported especially by those pension fund management companies that conducted acquisition activities on a large scale in the past, stemmed from a prohibition of acquisition services prompted by a law.

In the analysed period, there was a significant decline in PTEs revenues arising from contribution fees resulted from a reduction of the contribution rate from 7.3% of its base to 2.3%.⁶³ Consequently, the structure of PTEs revenues has changed – the share of revenues from pension fund management grew from 52% in the first half of 2011 to 69% in the first half of 2012.⁶⁴ Moreover, pension fund management costs declined considerably on the back of the prohibition of acquisition for OFEs from 1 January 2012. So far, the costs of acquisition services had consti-

tuted a significant part of PTEs costs associated with OFEs management (38% in 2010 and 37% in 2011.). As a result of the above mentioned reduction of the contribution rate, there was a decrease in costs of commissions for the Social Security Institution (ZUS).

At the end of June 2012, all pension fund management companies posted a positive technical profitability on pension fund management (see Figure 4.5). Technical profitability improved in three PTEs whose technical profitability in 2011 was negative after their acquisition costs had been reduced.⁶⁵

Analysis of profit and loss accounts of individual pension fund management companies shows interdependence between the technical profitability of PTEs and the value of OFEs net assets. As assets of pension funds rise, so does techni-

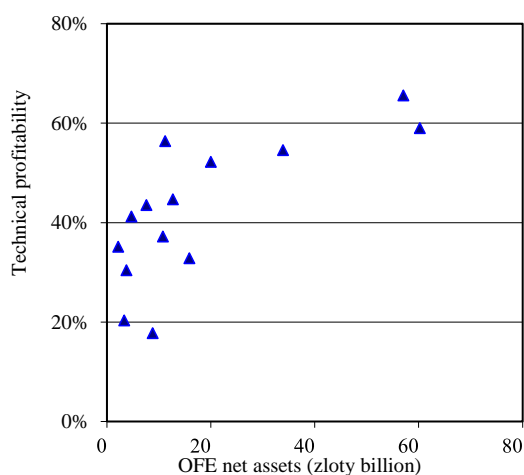
⁶³ Article 21 of the Act of 25 March 2011 on Amending Certain Acts on the Operation of the Social Insurance System (Journal of Laws of 2011, No. 75, item 398, as amended).

⁶⁴ From 1 January 2012, pension fund management companies can also set up and manage – apart from open pension funds – voluntary pension funds (DFEs). DFEs offer Individual Retirement Accounts (IKEs) or Individual Retirement Security Accounts (IKZEs).

⁶⁵ End of June 2012 data for acquisition expenses relate to OFEs and DFEs. Although acquisition services can be provided only for DFEs as of 1 January 2012, costs of acquisition services are settled by some PTEs over time.

cal profitability of companies that manage them. This correlation results from the economies of scale in the area of PTEs activity costs, which is associated with a relatively high share of fixed costs in costs related to OFEs management. It can be noted, however, that as assets of pension funds grow, the rise in technical profitability is increasingly diminishing. This is because the OFEs management fee rate decreases as assets increase and cannot exceed 15.5 million zlotys a month.

Figure 4.5. Technical profitability of pension fund management companies vs. the value of open pension funds' assets



Note: net assets of open pension funds as at the end of September 2012; profitability in the first half of 2012
Source: NBP calculations based on UKNF data.

Equity capital of pension fund management companies

Capital requirements of pension fund management companies are of particular importance for the stability and solvency 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 a pension fund than the minimum required rate of return (MWSZ).⁶⁶ As at the end of September 2012, all pension funds

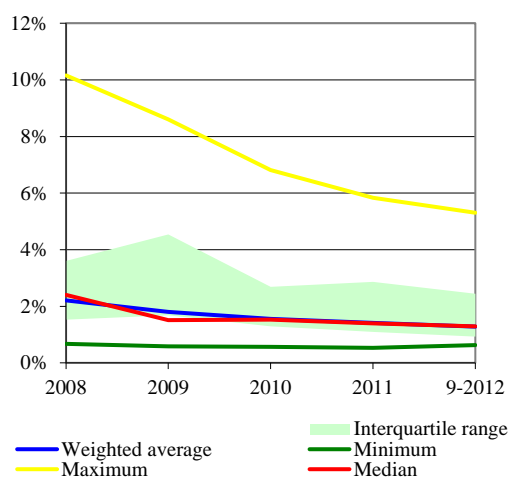
⁶⁶ A shortfall at OFE is covered from PTE equity capital, when funds accumulated on the reserve account and in the additional section of the Guarantee Fund are insufficient to adequately increase the value of an accounting unit of the fund.

⁶⁷ The weighted average rate of return for the period from 30 September 2009 to 28 September 2012 amounted to 19.3%.

generated 36-month rates of return which were higher than MWSZ.⁶⁷

In accordance with binding legal regulations, PTEs are not required to increase their equity capital when the value of assets of OFEs they manage is rising. Nevertheless, when the shortfall occurs, an amount that has to be covered depends on the value of net assets of a given OFE. Determining PTE equity capital in relation to the OFE assets would limit the insolvency risk of PTE when the need arises to cover the shortfall. Consequently, it would have a positive impact on the stability of the capital part of the pension system.

Figure 4.6. Ratio of pension fund management companies' capital to the value of open pension funds' net assets they manage



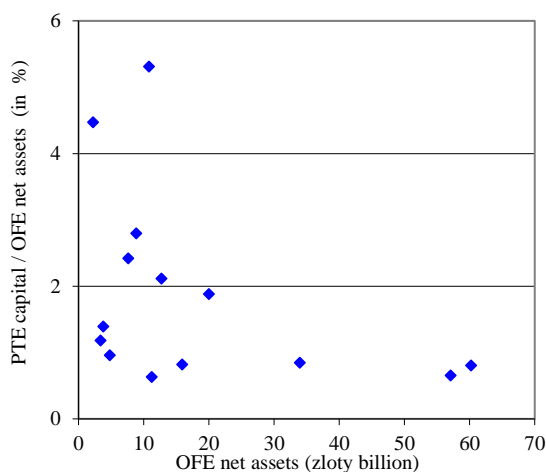
Note: equity capital as at the end of June 2012; net assets of open pension funds as at the end of September 2012
Source: NBP calculations based on UKNF data.

As at the end of June 2012, the value of PTEs equity capital amounted to 3.2 bn zlotys, which represents an 11.8% rise as compared to the end of June 2011. The increase in equity capital of the whole sector was connected with positive financial results posted by the majority of PTEs. Just one PTE reported a decline in equity capi-

tal.

Two pension fund management companies that manage funds with the largest asset value in the sector held relatively low equity capital (see Figure 4.7). However, due to their significant impact on the value of a minimum required rate of return, resulted from the construction of the presently binding internal benchmark, the risk of a shortfall in OFEs managed by these PTEs seems minor.

Figure 4.7. Ratio of pension fund management companies' capital to the value of open pension funds' net assets they manage, and the value of OFEs net assets



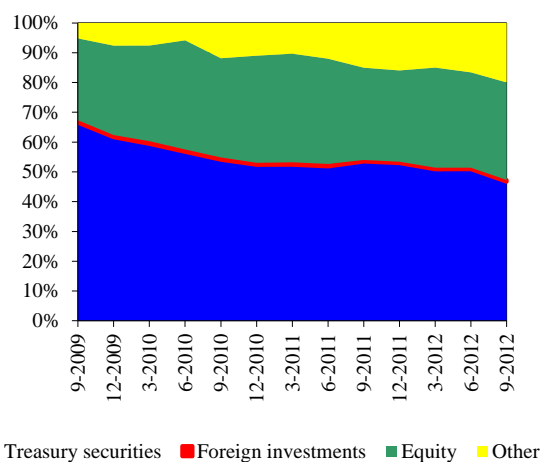
Note: equity capital as at the end of June 2012; OFEs net assets as at the end of September 2012.
Source: NBP calculations based on UKNF data.

Structure of OFEs investments

The structure of the OFEs investment portfolio is determined by binding limits on investment and the situation in financial markets. Since the publication of the previous *Report*, the investment strategy of PTEs has not significantly changed (see Figure 4.8). Domestic Treasury securities remained the dominant component of OFEs portfolios, although their share was slightly smaller (46.7% at the end of September 2012).

As at the end of September 2012, the average share of equities in the portfolio of open pension funds amounted to 32.7%, while the regulatory limit was 45% of total assets. It seems that PTEs decisions on equities purchase are, to a greater extent, determined by the situation in the domestic financial market than the increase in the limit on these categories of investments.

Figure 4.8. Structure of investment portfolios of open pension funds



Source: UKNF.

Deposits and bank securities accounted for 8.1% of the OFEs investment portfolio. From March 2012 to September 2012, OFEs exposure to these categories of investments rose by 8.8 bn zlotys. This may have resulted from the decrease in government bond yields with a simultaneous increase in the interest of deposits in zlotys. There was a steady rise in the share of non-Treasury debt securities in the OFEs investment portfolio (to 11.3% at the end of September 2012). Bonds issued by BGK for Toll Motorways and the National Road Fund were a dominant component of this category of investments. Open pension funds invest assets in these debt securities due to their slightly higher interest rate than that of government bonds, and similar credit risk.

4.3. Investment fund management companies and investment funds

The sector of investment funds generates no risk to financial system stability. Investment fund management companies and the funds they manage are separate legal entities. A potential deterioration in the financial condition of TFIs should not have any negative influence on investment funds, because their assets are separated from the TFIs estate.

In accordance with the Act on Investment Funds⁶⁸ investment funds also do not guarantee that the investment goal they defined will be achieved. Market risk associated with the funds' investment policy is borne by their participants.

Changes in asset value and net inflow to investment funds

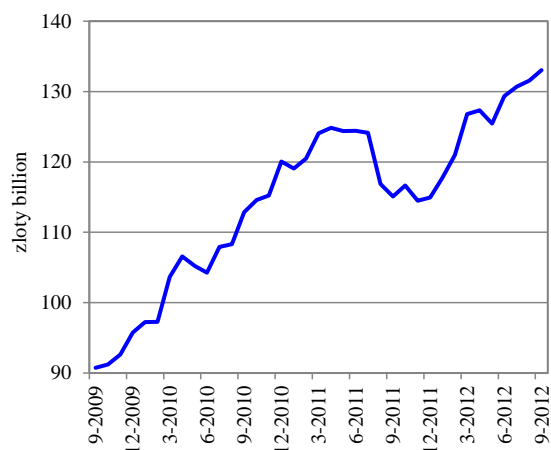
At the end of September 2012, the value of investment funds' net assets amounted to around 133 bn zlotys (see Figure 4.9). This increase was driven by both high net inflows as well as favourable changes in prices of financial instruments.

Since January 2012, net inflows to investment funds have amounted to 9.7 bn zlotys (0.4 bn zlotys in 2011) (see Figure 4.10). As in 2011, most funds were paid to non-public asset funds addressed to selected clients. These entities are often used to offer tailor-made investment solutions for affluent persons and enterprises, also to build capital structures designed for tax optimisation. Around half of the amount paid to non-public asset funds in the first three quarters of 2012 was addressed to two entities.

High net inflows were also recorded by domestic debt securities funds, with funds being mainly paid to entities open to a broad group of investors.

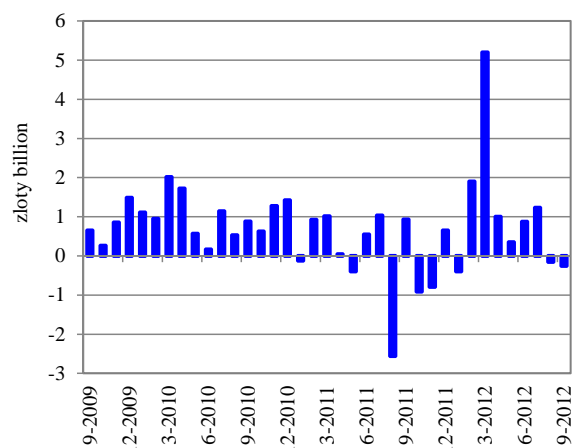
⁶⁸ Article 19 of the Act of 27 May of 2004 on Investment Funds (Journal of Laws of 2004, No. 146, item 1546, as amended)

Figure 4.9. Net assets of investment funds



Source: Anality Online.

Figure 4.10. Monthly net inflows to investment funds



Source: Anality Online.

On the other hand, most funds were withdrawn from money market funds. This may have been associated with lower returns of some entities that held loss-making corporate bonds in their portfolios.

Financial results of investment fund management companies

The financial condition of investment fund man-

agement companies worsened in the first half of 2012 (see Table 4.5). The amount of investment fund management fees, which constitutes the main source of TFIs revenues (97.1% of operating revenues in the first half of 2012), declined although the average value of funds' assets increased. This may have been associated with changes in the investment funds market structure regarding the value of assets accumulated by entities that conduct various investment strategies. In comparison with the first half of 2011, in the first half of 2012 the market share of funds that invest all or a portion of assets in equities (equity funds, balanced and stable growth funds) diminished, while the significance of entities that invest in debt securities (debt securities and money market funds) increased. The level of management fees charged by funds investing in equities is substantially higher than by entities that invest mainly in the money market and debt securities market.

At the end of the first half of 2012, equity capital of TFIs was lower than at the end of the first quarter of 2011, by 7% , and amounted to around 1 bn zlotys. This decrease was related to the lower profits of the sector⁶⁹ Lower profits in the first half of 2012 than in the first half of 2011 translated into a substantial fall in ROE for the TFIs sector.

Aggregate value of TFIs equity capital was

⁶⁹ Equity capital of TFIs is composed of: share capital, called up share capital, own shares, supplementary capital, revaluation reserve, other reserve capital, profit/loss from previous years, net profit/loss of the financial year and write-off on net profit during the financial year.

⁷⁰ As provided in Article 50 (1) of the Act of 27 May 2004 on Investment Funds, an investment fund management company shall maintain its shareholder's equity at a level not lower than 25% of the difference between the value of total costs and the value of variable cost of distribution incurred in the previous financial year.

⁷¹ In accordance with Article 89 (4 and 5) of the Act on Investment Funds, an investment fund may suspend the repurchase of participation units for two weeks, if in the preceding two weeks the aggregate value of the units repurchased and requested to be repurchased by the fund, exceeds 10% of the value of the fund's net assets or if it is not possible to make a reliable valuation of a material part of the fund's assets for reasons beyond the fund's control. The repurchase of participation units may be suspended for a period longer than two weeks, but not longer than two months, only with the consent of and on the terms and conditions specified by the KNF.

⁷² Under Article 89 (5) (2) of the Act on Investment Funds, with the consent of and on the terms and conditions specified by the KNF, an investment fund may repurchase participation units in instalments over a period of up to six months by proportional reduction or by paying the redemption proceeds in instalments. In the case of Idea Premium SFIO, participation units will be repurchased in two instalments: 20% of units whose redemption was demanded will be repurchased within the time frame specified in the fund's information prospectus at current value, and the remaining 80% of units will be repurchased on 15 March 2013 at their actual value on that day.

around 4.5 times higher than their minimum level defined in the provisions on the Act on Investment Funds⁷⁰

In July 2012 the repurchase of participation units of Idea Premium Specialised Open-End Investment Fund was suspended. For the first time in the domestic investment funds market, the repurchase was suspended not because a credible valuation of the fund's assets and setting the value of its participation units proved unfeasible, but due to a high level of withdrawals made by investors.⁷¹ Corporate bonds were a material part of Idea Premium SFIO assets. Due to their low liquidity, the fund lost the possibility to execute, on an ongoing basis, investors' requests to redeem their participation units.

The suspension of the repurchase of participation units of Idea Premium SFIO was prolonged to two months. However, the KNF requested the fund's managing company to review the value of its assets and liabilities. The KNF also consented for the first time to the repurchase – after the suspension period – of participation units in instalments for six months by proportional reduction.⁷² During the suspension period, the value of Idea Premium SFIO participation units declined by 18.5%.

Table 4.5. Basic financial data of the investment fund management companies sector

	6-2010 (in million zloty)	6-2011 (in million zloty)	6-2012 (in million zloty)	Change 6-2012/ 6-2011 (in %)
Revenues on operational activity:	1 091	1 240	1 001	-19.3
- management fee	1 038	1 193	972	-18.5
Costs of operational activity	857	983	866	-11.9
Pre-tax profit	260	312	207	-33.7
Net profit	209	254	168	-33.6
Average monthly value of net assets	102 378	122 881	124 617	1.4
Pre-tax profit margin on operational activity (in %)	23.8	25.2	20.7	-4.5 pp.
ROE (in %)	39.4	41.5	29.2	-12.3 pp.

Note: annualised ROE. Due to the change of a source, 2010 H1 data are not fully comparable with data for subsequent periods.

Source: GUS, UKNF, Analizy Online.

Isolated incidents of suspension due to the lack of investment funds participation units' valuation should not pose a threat to financial system stability. However, the prolonged inability to re-

deem participation units may have an adverse impact on investor confidence in entities operating in the investment funds market.

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

Annualised data – in the case of data on flows – the value of cash flow in a year; in the case of data on balance (stock) – average value of balance in a year.

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 non-life insurance sector according to the Law on insurance activity.

Automobile third party liability insurance OC – third party liability insurance for land vehicles with own drive – subsector no. 10 of non-life insurance sector according to the Law on insurance activity.

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

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) 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 in possession of bank, intangible assets, prior period losses, loss pending confirmation and current period net loss. Other balance sheet positions 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 the 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.

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 and potentially also at its inception. Interest payments are denominated in different currencies and are calculated on the basis of interest rates agreed for each currency.

Cross Currency Interest Rate Swap (CIRS) basis – CIRS transaction, for which interest rates set for both counterparts are floating and one of them is adjusted with 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 capacity of a financial institution to repay its liabilities with a maturity of 1 year or longer. 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 capacity of a financial institution to repay its liabilities with a maturity of less than 1 year. It reflects the risk of default and the scale of possible losses in the case of default of a financial institution.

Domestic banking sector – domestic commercial banks and cooperative banks.

Domestic commercial banks – domestically incorporated banks operating in the legal form of 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.

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 organisation, which 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, have a maximum lending capacity of EUR 700 billion.

Financial leverage – for the banking sector the ratio of assets to core capital before regulatory deductions.

Financial Stability Board – the body established in 2009 on the G-20 summit in London. The aim of this body is to promote the international level effective regulatory and supervisory measures concerning the financial sector.

Financial Stability Committee – the body established under the Act on Financial Stability Committee to ensure effective cooperation in promoting and maintaining the stability of the domestic financial system. Committee members are: Minister of Finance, President of the National Bank of Poland and the President of the Polish Financial Supervision Authority.

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) – 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 – 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.

Guarantee capital – higher of the two values: one-third of the solvency margin or amount of minimum guarantee fund determined by law.

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.

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) – 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.

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 ordinance of the Finance Minister regarding principles for creating provisions for the risk of banking activity (in banks applying Polish accounting standards).

M2 liquidity ratio – according to the Resolution No. 386/2008 of the KNF 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 the Resolution No. 386/2008 of the KNF 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 limited liquidity assets. The minimum value of the ratio is 1,00.

Modified Duration – 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 – 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.

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

Outright Monetary Transactions (OMT) – 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 program will primarily cover bonds with maturity of one to three years.

Overnight Index Swap (OIS) – 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.

Pre-tax profit margin on operational activity (TFI) – the ratio of gross financial result and revenues on operational activity.

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.

Provisions coverage ratio – ratio of assets to gross insurance provisions.

Securities Market Programme (SMP) – programme of euro area sovereign bonds purchase by the ECB operating from May 2010 to September 2012. Its aim was to improve these instruments' secondary market liquidity and the ECB monetary transmission mechanism.

Single Supervisory Mechanism (SSM) – 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, 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 capitals.

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 – difference between the revenues and the costs of managing pension funds.

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

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 – Warsaw Stock Exchange Index of large companies. The index consist of 20 biggest in terms of market value and most liquid companies listed on the Warsaw Stock Exchange.

Abbreviations

AC	Auto Casco
BCBS	Basel Committee on Banking Supervision
BFG	Bank Guarantee Fund
BGK	Bank Gospodarstwa Krajowego
BIK	Credit Information Bureau
CDS	Credit Default Swap
CIRS	Cross Currency Interest Rate Swap
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
D-SIB	Domestic systemically important bank
DFE	Voluntary Pension Fund
DtI	Debt-to-income-ratio
EBA	European Banking Authority
ECB	European Central Bank
EFSSF	European Financial Stability Facility
ESM	European Stability Mechanism
ESRB	European Systemic Risk Board
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	
FED	Federal Reserve System
FI	Investment fund
FRA	Forward Rate Agreement
FSB	Financial Stability Board
G-SIB	Global systemically important bank
GDP	Gross domestic product
GPW	Warsaw Stock Exchange
GUS	Central Statistical Office
IFRS/IAS	International Financial Reporting Standards / International Accounting Standards
IKE	Individual Retirement Account
IKZE	Individual Retirement Security Account
IMF	International Monetary Fund

IRS	Interest Rate Swap
KNF	Polish Financial Supervision Authority
LFS	Labour Force Survey
LIBOR	London Interbank Offered Rate
LtV	Loan-to-value
MBS	Mortgage-backed Securities
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
NBFI	Non-bank financial institution
NBP	National Bank of Poland
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
PKD	Polish Classification of Activities
POLONIA	Polish Overnight Index Average
POS	Positive rating outlook – expected upgrade
PTE	Pension fund management company
ROA	Return on Assets
ROE	Return on Equity
RPP	Monetary Policy Council
RUR	Rating Under Review
S&P	Standard & Poor's
S&P 500	Stock index of US companies
SFIO	Specialised Open-end Investment Fund
SME	Small and medium-sized enterprise
SMP	Securities Market Programme
SORBNET	System for Banks' Accounts Servicing
SSM	Single Supervisory Mechanism
STA	Stable rating outlook
sWIG80	Warsaw Stock Exchange index of small companies
TFI	Investment fund management company
UFK	Insurance investment fund
UKNF	Office of the Polish Financial Supervision Authority
VaR	Value at Risk
WIBOR	Warsaw Interbank Offered Rate
WIG	Main index of the Warsaw Stock Exchange
WIG20	Warsaw Stock Exchange index of large companies
WIG-Banki	Warsaw Stock Exchange index of banks

WIG-	Warsaw Stock Exchange index of construction industry companies
Budownictwo	
ZBP	Polish Bank Association
ZU	Insurance company
ZUS	Social Insurance Institution