Financial Stability Review

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The aim of this *Review* is to assess financial system stability in Poland. Financial system stability is a situation when the system performs all its functions in a continuous and effective way, even when unexpected and adverse disturbances occur on a significant scale.

The stability of the banking system is of particular importance for financial system stability. This is due to the role of banks in financing the economy and in the settlement of payments. Banks also perform another important function, i.e. they provide products that allow other entities to manage their financial risk. Therefore, a special emphasis is put on the analysis and assessment of banking system stability.

Maintaining the stability of the financial system is of particular importance from central banks' perspective. This is due to the fact that 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. The instability of the financial system may hamper the efficient implementation of the monetary policy. 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 conditions for the efficient operation of payment systems is the stable functioning of financial institutions that are the integral components of these systems. Financial system stability is also the object of the NBP's particular interest due to its task to establish the necessary conditions for the development of the banking system.

The "Financial Stability Review" is primarily addressed to financial market participants as well as other persons and institutions interested in the subject. The aim of the report is to present the conclusions from analytical and research work on financial system stability, including the assessment of its resilience to potential disturbances. The dissemination of 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 increases the probability of a spontaneous adjustment of the behaviour of these 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 National Bank of Poland presents the results of its analyses in extensive annual "Financial Stability Reports" as well as shorter "Financial Stability Reviews", published in the second half of each year.

The analysis conducted in this *Review* covers the period from the end of first quarter of 2008 and is based on data available up to 16 October 2008. The *Review* was adopted by the Management Board of the National Bank of Poland at a meeting on 16 October 2008.

Contents

Chapter 1.

Assessment of financial stability and risk outlook

The Polish financial system is in good condition at present. However, the persisting crisis in global markets caused an increase of risk to the functioning of the financial system in Poland

In the short-term the main source of risk is the decrease in the domestic interbank market liquidity resulting from a fall in banks' mutual confidence. The fall has been driven by developments in the global financial market. The deterioration in the financial condition of some of the Polish financial institutions' strategic investors also leads to the fact that their subsidiary companies are exposed to the negative effects of the fall in confidence towards their parent companies, despite the subsidiary companies being in good financial condition. This may be particularly relevant for companies funding their activities with funds acquired from financial institutions. The decreased confidence in the interbank market and the associated cuts in credit limits and reduced turnover in markets of derivative instruments may cause difficulties for some banks in hedging their positions against market risk.

On the other hand, in the medium term the risk to the financial system stability in Poland has increased owing to deteriorated outlook for economic growth resulting from economic slowdown among Poland's main trade partners. Lower economic growth entails the possibility that credit risk materialises, as credit risk exposures have increasingly cumulated in banks' balance sheets. Despite good current performance of banks, in the first half of 2008 the first symptoms of the materialisation of the risk taken by banks in the period of dynamic growth in lending activity can be observed. This was visible in the increase in charges to impaired loans. Another challenge for the preservation of the financial system stability is the decrease of the capital buffer of banks that serves as a safeguard against adverse developments of unexpectedly large scale.

The current condition of the financial system in Poland is good. In the period analysed in the *Review* financial institutions, in particular banks, posted good earnings. The position of financial institutions managing funds was also good despite a continuing decrease in assets of investment funds and negative returns from pension funds investments that resulted from a fall in share prices and an increase in bond yields. The global markets crisis is conducive, however, to a rise in risks to Poland's financial system functioning.

Poland's macroeconomic situation had a positive impact on the financial system stability. Banks' good performance was fuelled by rapid economic growth, including a high growth rate of individual consumption in this period, and dynamic growth in investment demand.

In the analysed period, the impact of the crisis in global financial markets on the Polish financial system increased considerably. The crisis influenced the domestic financial system stability in a number of ways [1]. The macroeconomic risk connected with the scale of the expected economic slowdown among Poland's main trade partners has increased. The possibility of this risk materialising is important for financial stability owing to the increase in medium-term risk connected with lending. At the same time, short-term risks to financial system stability have increased, in particular the risk connected with funding acquired from foreign sources, the impact of the crisis in global markets on the valuation of domestic assets and (since September) also the risks related to the fall in confidence between financial institutions. There has been a fall in market participants' confidence in subsidiary companies of global financial institutions with deteriorated financial standing, irrespective of the favourable financial standing of subsidiary companies.

A more difficult acquisition of funding on the domestic interbank market poses a short-term risk to the domestic financial system stability. After the American investment bank Lehman Brothers filed for bankruptcy, the liquidity of the domestic interbank money market has dropped considerably as a result of a decrease in market participants' mutual confidence. A factor that decreased market participants' confidence was the deterioration in the financial standing of some strategic investors of Polish financial institutions. The fall in confidence led to a rise in counterparty credit risk premium comprised in short-term interest rates. The risk premium was, however, three to four times lower than the premium in the US dollar and euro market. It cannot be ruled out that banks' mutual credit risk assessment remains under the influence of their participation in international banking groups. This may influence the ability of these banks to acquire funds or may impact the cost of these funds. Already the acquisition of funds may involve the need to pay a premium over WIBOR rates. Liquidity in the bond and stock markets also displays a downward tendency.

The rise in the cost of market funding and a decrease in its availability contributed to increased competition on the domestic market for deposits of non-financial entities, which resulted in a significant growth in interest rates paid on deposits in the analysed period. This factor may be conductive to a decrease in net interest margin posted by banks or to an increase in banks' credit spread. This limits banks propensity to increase lending, which may influence Poland's economic growth. A factor limiting this risk is the higher importance of enterprises' own funds as a source of funding their activity than in more developed countries.

The deterioration in global markets liquidity may also have a negative impact on the ability of domestic banks to hedge against market risk. As domestic banks typically have a similar (in terms of direction) foreign exchange and interest rate risk exposures (resulting from portfolios of foreign exchange loans and treasury bonds that

[1] A detailed analysis of possible transmission channels of the crisis in global financial markets to the Polish financial system is presented in chapter 3.7 of the Financial Stability Report. June 2008, NBP, Warsaw 2008

they hold), exposures are squared with foreign counterparties. The decline in the number of active participants of derivative instruments market and a reduction in mutual credit limits may hamper the rollover of existing or conclusion of new hedging transactions and may also increase their costs. Banks' potential difficulty in hedging foreign exchange positions is of particular significance owing to large portfolios of foreign exchange loans and an increase in the popularity of these loans in the analysed period. A potential absence of the possibility to hedge foreign exchange positions may lead, in addition to possible losses due to foreign exchange rate fluctuation, to a rise in capital requirements and a decline in banks' capital adequacy ratios.

Another short-term risk that may be pointed out is the possibility of a considerable deterioration in the financial condition of further parent entities of domestic banks, resulting from the deepening of turmoil in financial markets, including the fall of confidence in interbank markets. For domestic financial institutions that obtain a significant portion of funding from their parent companies such a situation may imply a need to reduce lending or acquire refinancing in the local market. Acquiring such refinancing would be difficult and expensive, particularly if confidence in the money market was to fall even more. In such a situation, failure of a domestic bank to receive liquidity assistance from the parent company under the contingency funding plan would pose another risk. The phenomenon of liquidity outflow from foreign institutions' subsidiaries to home countries cannot be excluded. However, it is difficult to assess the scale of this risk and its probability of materialisation. The risk may be mitigated through activities already undertaken by the Polish Financial Supervision Authority and through responsible activities of domestic companies' management boards. In the medium-term, the deterioration in parent companies financial position may also reduce the possibility for their subsidiaries in Poland to acquire capital, which would limit their growth possibilities.

In the medium-term, the risk to financial system stability is mainly connected with the ongoing high growth in lending, mainly to households. The rapid growth in loans which was accompanied by easing of banks' credit policies and strong competition among banks may raise concern about the correctness of credit risk assessment in some banks, bearing in mind the very low credit spreads charged by banks. The effective spreads obtained by banks may be lower in the future owing to a rise in financing costs. Moreover, a significant increase in housing loans indexed to foreign currencies has been noted again, which consequently leads to an increase in FX risks for borrowers and increases the dependence of the credit risk of banks on the fluctuations in the zloty exchange rate.

A fall in prices in the property market is a source of risk in many countries. In Poland, after a period of abrupt price rise, a stabilisation of residential property prices or moderate falls in some cities have been observed in recent months. Despite this, symptoms of increasing downward pressure on residential property prices have become clearer. With relatively high levels of LtV ratios, in particular for loans extended in the last two years, this may create a significant risk in the banking system, if the fall in property prices occurs in parallel with the worsening of borrowers' financial condition.

Owing to less favourable business environment expected in the future banks should maintain a higher level of capital buffer that serves as a safeguard against adverse developments of unexpectedly large scale. The average level of banks' capital adequacy ratios in Poland continues to be higher than the regulatory minimum. However, the ratio of capital buffers available to banks' risk present in their balance sheets went down compared to previous years, which may adversely impact the banking sector ability to finance the growth of the economy and absorb potential losses. The decline in the surplus of banks' capital over the regulatory minimum re-

sulted from increased lending, and, to a lesser degree, from accounting for additional capital requirement for operational risk beginning from January 2008. The acquisition of additional capital needed to maintain current growth of business in the medium-term may be difficult in the present situation of increased risk aversion in financial markets and a worse financial condition of some strategic investors. It is therefore desirable that banks conduct prudent dividend and credit policy so that their capital buffers allow the absorption of potential effects of economic growth slowdown.

The risk factors presented above that could trigger the process of a considerable worsening of the financial system stability allow to conclude that as a result of the crisis in global financial markets the probability of risk materialisation in the domestic financial system, both in the short and medium term, has increased. It cannot be excluded that a large-scale materialisation of this risk would have an adverse impact on Poland's rate of economic growth.

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The increase in risk to the financial system poses a significant challenge for public institutions acting to preserve financial system stability. The experiences of other countries point to the need for closer coordination of the activities of institutions participating in the financial safety net. On 21 December 2007, the Minister of Finance, the President of the NBP, and the Chairperson of the Polish Financial Supervision Authority, signed a Memorandum on the Cooperation to Support the Stability of the Domestic Financial System. The memorandum established the Financial Stability Committee. The aim of the Committee is to ensure efficient cooperation between the Parties to the memorandum, with the aim of supporting and preserving the stability of the domestic financial system, including the coordination of activities and information exchange. The Committee is a forum for exchanging views, opinions and evaluating the situation of the Polish financial system, as well as joint undertaking of actions aimed at maintaining financial stability in Poland.

Under the Memorandum, the Committee is composed of the Minister of Finance, who chairs its work, the President of the NBP, and the Chairperson of the Polish Financial Supervision Authority. Pursuant to the provisions of the Memorandum, the meetings of the Committee are held no less often than once in three months. In addition to regular meetings, every member of the Committee has the right to call a meeting as a matter of urgency when there is a threat to the stability of the domestic financial system. In 2008 the Financial Stability Committee held five regular meetings in the course of which its members, among others, exchanged information and evaluated the situation in the domestic financial system and international markets and developed principles for the cooperation of individual institutions should a risk to the domestic financial system occur.

It should be emphasised that the Parties to the Memorandum declared that they were willing to immediately regulate the rules of the Committee's functioning through statutory provisions. In parallel to the meetings of the Committee, work on a draft law regulating its functioning was under way. The draft was adopted by the Council of Ministers on 23 September 2008.

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On 13 October 2008, the Ministry of Finance and the National Bank of Poland proposed two comprehensive packages of activities aimed at restoring confidence and proper functioning of the financial market, as well as strengthening the banking sector stability and protecting individual

persons' deposits. The packages are in line with the conclusions of the ECOFIN Council of 7 October 2008.

Regulatory package for financial stability

The Ministry of Finance has announced the so called regulatory package which consists of the following draft laws:

- draft law on the Financial Stability Committee,
- draft law amending the law on the Bank Guarantee Fund,

The objective of the draft law on the Financial Stability Committee is to strengthen cooperation between the Ministry of Finance, the National Bank of Poland and the Polish Financial Supervision Authority.

The draft law amending the law on the Bank Guarantee Fund aims, among others, to increase the level of deposits protection from the present EUR 22,500 to EUR 50,000. In addition, the coinsurance principle has been abandoned and deposits are to be fully guaranteed (at present the full guarantee applies to the equivalent of EUR 1,000 and deposits between to EUR 1,000 and EUR 22,500 are guaranteed in 90%). In addition, pursuant to the draft, the Council of Ministers, following consultations with the NBP President and the Chairperson of the Polish Financial Supervision Authority will be able to temporarily determine, by way of a regulation, a higher ceiling for guaranteed deposits than the statutory ceiling and the percentage of the guaranteed deposit amount, bearing in mind the need to ensure the safety and stability of the banking system and the protection of depositors' interests.

The Minister of Finance has also announced that a draft law will be prepared on assistance of the State Treasury for financial institutions. The draft refers to potential financial assistance for institutions experiencing problems.

Confidence Pact

Taking into account the impact of the financial crisis on the fall of confidence between banks, the National Bank of Poland has announced a so called Confidence Pact. Measures included in the Confidence Pact will focus on meeting three practical goals:

1. providing banks with the zloty for periods longer than one day,
2. providing banks with foreign currencies,
3. expanding the possibilities for banks to obtain liquidity in zloty by broadening the range of collateral in operations with the NBP.

The following steps will be taken to accomplish these goals:

1. performing liquidity-providing open market operations in the form of repo transactions, with maturities of up to three months,
2. introducing FX swaps,

3. introducing FX deposits as collateral for refinancing credit
4. introducing modifications in the operational system of Lombard credit, comprising:
   (a) decreasing the "haircut" when determining the value level of Lombard credit collateral
   (b) expanding the range of assets that may serve as collateral of a Lombard credit with the NBP
5. maintaining issuance of seven-day NBP bills as the main excess liquidity absorbing instrument,
6. increasing, if necessary, the frequency of open market operations to enable flexible response to changes in liquidity, and to stabilise the POLONIA rate around the reference rate.

Chapter 2.

Financial institutions' economic environment

Despite a global economic slowdown, the Polish economy continued to grow at a relatively high rate and the situation in the labour market continued to improve. The turmoil in the international financial market affected the domestic market to a moderate extent. Property prices were subject to slight fluctuations.

The main risk factors in the environment of financial institutions are: potential strong impact of economic slowdown in the euro area on the Polish economy and contagious influence of the financial market turmoil on the Polish market.

2.1. Macroeconomic developments

Amid global economic slowdown, the Polish economy maintained a relatively high growth rate which was mainly supported by internal, both consumption and investment, demand. (see Figure 2.1). Since the fourth quarter of 2007 the GDP growth rate has been declining consistently and according to NBP forecast from June 2008, it will amount to 4.8% y/y in 2009[2]. Due to symptoms of a sharp slowdown in the economic growth across the euro area countries, the downside risks to central path of the projection currently prevail.

High economic growth was accompanied by a strong rise in employment and a fall in unemployment, which in the second quarter of 2008 stood at its record lows [3]. A dynamic rise in wages (by 11.7% y/y in nominal terms for the period January-August 2008) also contributed positively to the households' situation. The future situation of the most affluent households may also be influenced by income tax cuts projected for 2009. Leading consumer confidence indicators have declined. Moreover, the surveys on economic condition of enterprises show that enterprises are planning to curb growth of both employment and wages.

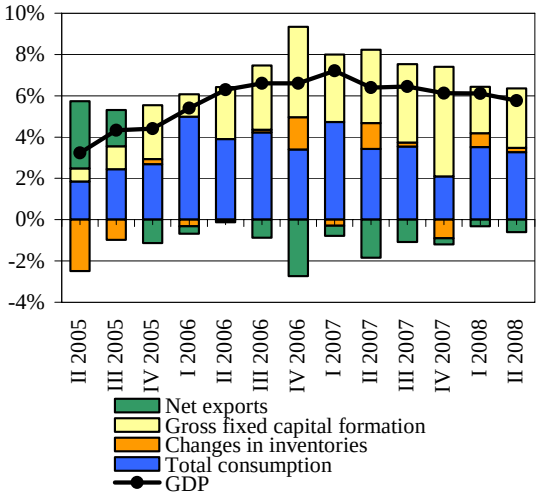
Rapid wage growth may adversely affect the competitiveness of Polish enterprises, because it ex-

[2] More information on current economic conditions and projections up to 2010 is available in "Inflation Report. June 2008", NBP

[3] In the second quarter of 2008, unemployment rate calculated on the basis of Labour Force Survey conducted by GUS reached the lowest level recorded since the survey was first conducted in the second quarter of 1992

ceeds the growth in productivity resulting in higher unit labour cost. Surveys on economic condition of enterprises also show a downturn in the present and expected economic climate, in particular among exporters. This is mainly caused by a declining profitability of exports and a fall in order books [4].

Figure 2.1. Decomposed GDP growth(y/y)



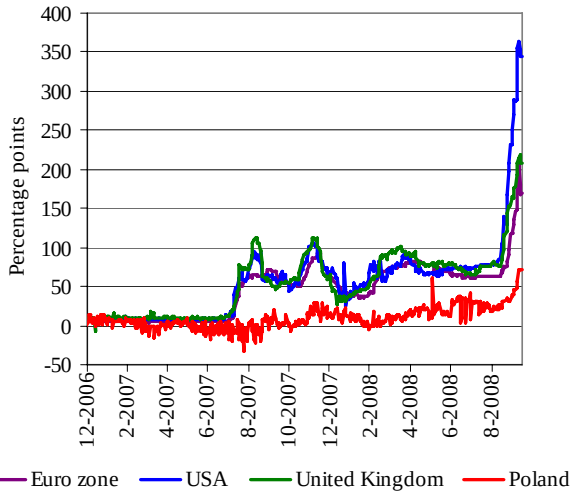
Source: NBP.

Economic slowdown of foreign economies, including euro area countries that are Poland's major trade partners, may have a negative impact on Poland's future macroeconomic situation. According to the September 2008 projection of euro area central banks, euro area GDP growth is forecasted within the range of 1.1%–1.7% in 2008 and 0.6%–1.8% in 2009 compared to a rise by 2.6% in 2007. The slowdown may impact the Polish economy both directly through a decline in demand for Polish exports, and also through a reduction in investment activity and deterioration in the labour market which would eventually have a negative impact on internal demand.

2.2. Developments in financial markets

The major turmoil in the international financial markets that started in August 2007 has persisted. It led to a decline in prices of risky financial instruments and a liquidity crunch in a number of financial market segments, including the market for interbank deposits in the United States and euro area (see Figure 2.2). Volatility of prices and investment risk premium have increased significantly. The sharp deterioration of liquidity and solvency of certain large financial institutions in mid-September 2008 forced the US government and the Federal Reserve System, as well as some European governments, to intervene and support financial institutions with public funds.

Figure 2.2. Spread between 3M interbank deposits and OIS 3M transactions



Source: Bloomberg, Reuters.

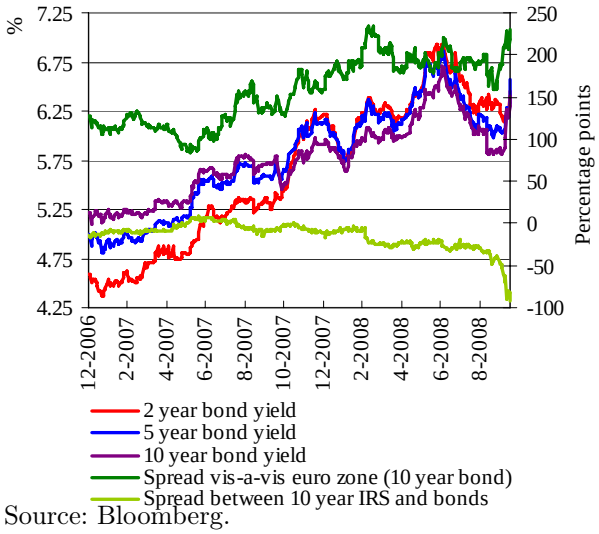
The impact of developments in the international market on the conditions on Polish money market was significant. Following a rise in uncertainty after Lehman Brothers filed for bankruptcy, transactions in the interbank market were limited to the shortest maturities, mainly

[4] „See: Informacja o kondycji sektora przedsiebiorstw ze szczególnym uwzglednieniem stanu koniunktury w III kwartale 2008 r. (The condition of the non-financial enterprises in Q3 2008), NBP, 2008, July 2008

overnight. Banks ceased to lend to each other long-term. The premium for counterparty credit risk comprised in short-term interest rates was however far lower than in the US dollar and euro market and amounted to around 20-30 basis points. Turnover in the interbank money market has slightly decreased.

Aggressive price competition of some banks for retail deposits and information from market participants show that some banks are borrowing funds in the interbank market at rates significantly exceeding WIBOR. Concern about counterparties' ability to meet their liabilities may negatively impact the situation in the domestic interbank market and may lead to a rise in the cost of funding for some banks, as well as an increase in the rollover risk.

Figure 2.3. Yields on Polish treasury bonds

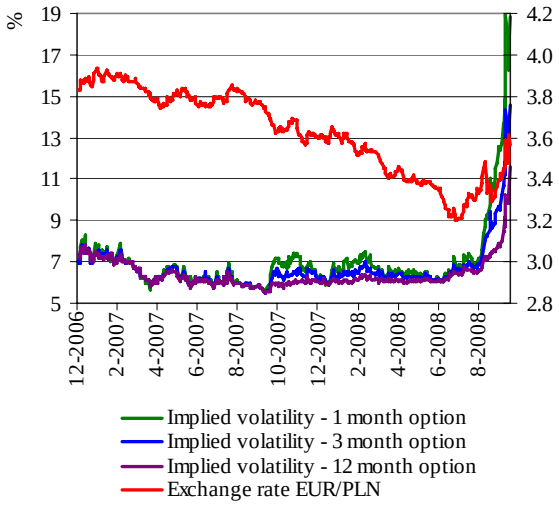


Source: Bloomberg.

In Poland, long-term interest rates depended largely on domestic factors, in particular the changing expectations of future inflation and the response of the monetary policy (see Figure 2.3). The yields on treasury bonds were also affected by the financial market turmoil. This is reflected in a rise in premium on credit default swaps linked Polish eurobonds and a negative swap spread[5]. This may reflect a declining willingness of investors to hold Polish bonds in their portfolios. The share of foreign investors in the government bond market fell (compared to April 2008 – by around 10%). The impact of this phenomenon on Polish government bond yields was in line with other countries of the region. At the same time, turnover in the bond market declined, which may result from banks' attempts to maintain stable portfolios of liquid assets.

The zloty appreciation trend persisted in the FX market until July 2008. Since then, the exchange rate has been depreciating and its volatility has increased. Exchange rates in other countries of the region display a similar trend. The rise in implied volatility in August and September 2008 (see Figure 2.4) may reflect the rising risk of the reversal of the trend in the zloty market. Such view is supported by a rise in implied volatility in a long-term horizon, which did not occur during temporary corrections in the period of the appreciation trend.

Figure 2.4. Zloty exchange rate volatility



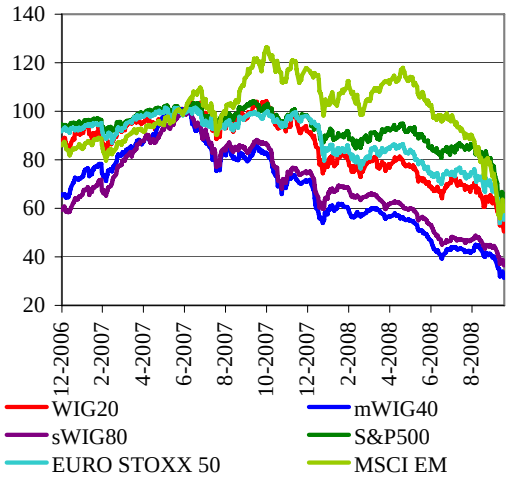
Source: Bloomberg.

Equity prices were strongly influenced by the developments in the international financial market. Despite the fact that no strong outflow of foreign

[5] Available IRS rates refer to transactions conducted between AA-rated banks (mainly London banks), in accordance with the market convention.

investors from the market was observed, changes in Polish stock indices displayed a strong positive correlation with movements in equity indices in the US and Europe. Falling stock prices were also connected with the withdrawal of funds deposited in investment funds by households, a process that has lasted since the beginning of 2008. The prices of mid- and small-cap stocks decreased more sharply than those of the large-cap stocks (see Figure 2.5). The scale of equity price falls in Poland was similar to decreases observed on the stock exchanges of the region and was larger than the average declines on developed markets.

Figure 2.5. Selected equity market indices



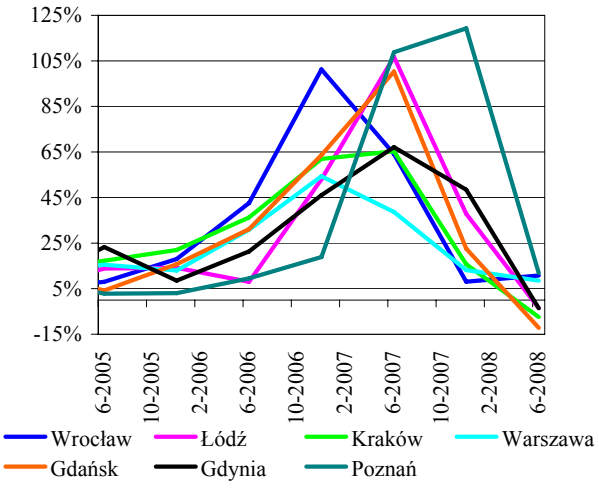
Note: indices normalised to 100 as at 30 June 2007
Source: Bloomberg.

Uncertainty about the situation in international financial markets continues to be a significant source of risk to the domestic financial market. In particular, if the propensity of global market participants to invest in emerging economies continues to decrease, the zloty could depreciate, domestic interest rates could rise and equity prices could fall further. Similar effects may be triggered by an unexpected deterioration in emerging markets, particularly in the markets which share a common investor base with the Polish market. In addition, persisting serious pressures in money markets of the developed countries may lead to a further increase in costs and a reduction in availability of funding obtained by domestic banks in foreign markets – including intra-group funding.

2.3. Residential property market

Since the beginning of 2008, prices of residential property have been stabilising or decreasing – depending on the city (see Figures 2.6 and 2.7). In 2008 a differentiation of prices depending on the flat's standard and location has been observed. It occurred after a period of significant price increases, when the value of most flats available in the market was rising. The largest price corrections are observed mainly in those urban areas where in the past few months price increases were very significant or where the level of property prices in relation to the mean household income was the highest.

Figure 2.6. Annual growth in residential property prices in the biggest cities – primary market

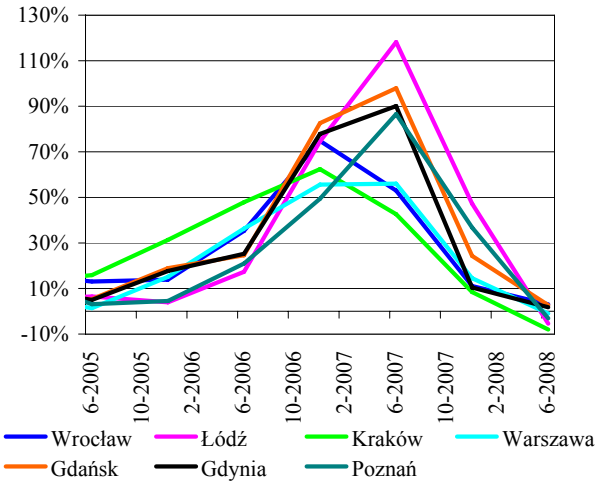


Source: NBP based on PontInfo.

Price corrections are visible both in the primary and secondary market. The slowdown of the growth rate of prices in the primary market may have been influenced, in addition to low credit

availability of flats, by a further increase in supply in the main urban areas. In the course of eight months more than 92 thousand new flats were completed, which represents an increase of 22% compared to the corresponding period of 2007. Flats completed in 2006-2007 but not yet occupied by residents add up to the volume of new flats. Some of these flats may have been purchased for investment purposes, therefore this market segment may be a source of additional supply, if the downward trend of residential property prices continues.

Figure 2.7. Annual growth in residential property prices in the biggest cities – secondary market



Source: NBP based on PontInfo.

Price adjustment in the property market was conducive to an increase in activity on the secondary market. The growth of housing loans (see chapter 3.2), which has remained at a relatively high level, and the diminishing difference between offer and transaction prices may confirm this claim.

Despite the growth in the volume of flats completed and constructed, GUS data still show that the number of households exceeds the number of existing flats[6]. This deficit, coupled with growth in real wages, may be the fundamental factor limiting a major countrywide decline in property prices in the long term. In the short term, it may be assessed that the probability of a decrease in residential property prices has increased considerably, owing to the expected economic slowdown and tightening of lending policies by banks.

2.4. Office space market

In 2008, the demand for office space has remained high in the commercial property market. High rent rates in central Warsaw resulted in the fact that the largest demand for office space is observed on the outskirts of Warsaw. The majority of office space under construction is also situated outside central Warsaw.

In the first half of 2008 a few new office blocks with the total area of 141 thousand square meters were completed [7]. Despite this, the vacancy rates have been declining and in Warsaw they do not exceed 3%[8]. These rates are expected to remain at a low level in Warsaw as most new construction projects have already been rented (based on pre-lease contracts). This indicates that the rent rates may remain high.

[6] In 2006 the ratio of the number of flats to the estimated number of households stood at 92%. Source: GUS: "Basic Urban Statistics 2005-2006" and "Household projection of Poland 2003-2030".
[7] Source: "Office space market in Poland - first half of 2008", Colliers International Poland.
[8] Source: as above.

Chapter 3.

Banking sector stability

The performance of the banking sector in the first half of 2008 was good. The scale of activity and earnings of the banking sector were growing at a fast rate. The current quality of loan portfolio also improved. Following the initial reduction of the banking sector's capital adequacy ratio in January 2008 due to the introduction of the capital requirement for operational risk, the average capital adequacy ratios stabilised at levels lower than in 2007. Banks will have to increase their capital in order to expand further.

Outlook for the nearest future is less favourable than that in the last issue of the Report. Some symptoms of growing pressure related to credit risk costs appeared, but they were still insignificant. Uncertainty with respect to the outlook of the global economy turbulences' impact on the Polish economy and the standing of borrowers increased as well. A greater impact of the crisis than assumed in current forecasts may negatively influence banks' performance as they would have to incur costs of establishing provisions for impaired assets.

In the short-term, the major challenges banks face include: financing of banks' activities and hedging open balance sheets' FX positions with operations with non-residents. The afore-mentioned challenges grow in importance as confidence on global markets is decreasing. Similarly as in 2007, the importance of funds obtained from the financial market is rising, which under conditions of decreased market confidence results in higher costs and risk of non-renewal of financing. Pressure on banks' earnings is growing as well as a result of competition for more stable sources of financing, i.e. household deposits.

3.1. Earnings

The earnings of the banking sector again reached their record highs, but their growth rate slightly weakened, which was reflected in the stabilisation of profitability ratios. A special mention has to be given to rising charges to impairment provisions for loans, which, coupled with the growing costs of obtaining funds, may reduce banks' future ability to report as good results as in the last two years.

In the first half of 2008, the earnings reported by the Polish banking sector were much better than in the corresponding period of 2007 (see Table 3.1). However, the growth rate of net income was lower [9], in particular in the first quarter of 2008, which caused the improvement of profitability ratios to halt (see Table 3.3).

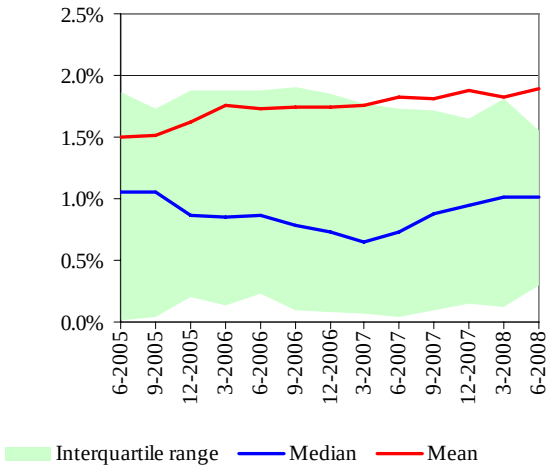
Decomposition of the ROE ratio (see Table 3.2) indicates that return on regulatory capital was negatively influenced by the decrease in return on earning assets. However, banks were able to generate high rates of return on capital due to an increase in financial leverage, i.e. assets to core capital (see Section 3.6). The income tax burden on earnings decreased, and the share of earning assets in assets slightly increased.

The number of commercial banks that posted a net loss decreased (from 14 to 11), and so did their share in the total assets of commercial banks (from 2.5% to 1.9%). This results primarily from the fact that some branches of credit institutions with a short operational history in Poland generated profits for the first time. It may be concluded that those institutions completed the stage of activity organisation and achieved 'operational capacity'.

The share of net interest income in net income from banking activity rose. This happened despite a dynamic increase (by over 50%) of interest expense, related to the growing competition for deposits of non-financial customers and a rising share of liabilities towards the financial sector in financing of lending. In nominal terms, interest income grew more than interest expense, and in terms of percentage, interest income grew stronger than assets. Part of this growth may be attributed to interest income on securities - in the first half of 2008, banks rebuilt portfolios of debts securities, reduced in 2007 (see Table 3.6).

Net fee income remained the second most important source of income from banking activity. Its fast growth observed in previous periods has however halted. It may have resulted from a decrease in banks' income related to intermediation in the distribution of participation units of investment funds (see Chapter 4).

Figure 3.1. Return on assets



Note: data annualised.
Figures of dispersions in Chapter 3 refer to commercial banks. At the end of August 2008, assets of commercial banks accounted for 94% of assets of the whole banking sector.
Source: NBP.

It is worth pointing out that despite difficulties in the financial markets none of the partial net results constituting income from banking activity was negative. This is related to a relatively small scale of the investment activity of Pol-

[9] Unless otherwise stated, the first half of 2008 is compared with the first half of 2007.

ish banks[10] and to their focus on conventional deposit-taking and lending activities. It may not be ruled out, however, that possible bankruptcies of large global banks with whom domestic banks concluded transactions to hedge positions in fixed interest rate instruments or other open positions in financial instruments (including options related to structured deposit products offered recently by some banks) would have a negative impact on banks' earnings due to costs arising from the need to renew hedging transactions under currently difficult market conditions.

Doubling net charges to provisions for irregular loans in the allocation of income from banking security should be noted here (see Section 3.2). The sector's average operating efficiency measured as operating costs to assets ratio, continued to improve. The trend of improvement of the operating efficiency at largest banks has been maintained[11]. The operational efficiency is improving despite mounting wage pressure, growing competition for employees among banks, as well as dynamic expansion of the branch network.

Any further increases of impairment provisions, coupled with the growth in pressure on costs of activity financing, may prevent the maintenance of the present earnings' growth rate in the coming quarters and lower the return on equity.

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

	First half of 2007 (zloty billion)	First half of 2008 (zloty billion)	Change in 2007 (in %)	Change in 2008 (in %)
Interest income	19.88	27.35	18.27	37.60
Interest expense	8.47	13.06	23.55	54.23
Net interest income	11.41	14.29	14.64	25.26
Net fee income	5.30	5.62	21.97	6.09
Income from equities and other securities	0.90	1.13	-9.41	25.18
Net income on financial operations	0.83	0.55	211.38	-32.07
Net FX income	1.89	2.58	6.37	36.23
Net income from banking activity	20.34	24.17	17.28	18.85
General expense	10.10	11.71	11.97	15.90
Depreciation	1.11	1.12	0.17	1.60
Net movements in provisions and valuation allowance	0.76	1.47	-8.22	92.28
- of which: net charges to provisions for irregular loans	0.48	1.04	-40.01	116.27
Pre-tax earnings	8.75	10.38	26.56	18.60
Net earnings	7.17	8.64	23.63	20.48

Source: NBP.

[10] At the end of August 2008, the share of securities issued by non-public entities in total assets of the banking sector amounted to 1.42%, of which 0.26% (a year earlier the figures were 1.56% and 0.44%, respectively) were securities issued by non-residents.

[11] The median of C/I ratio was higher than its average by around 8 percentage points, compared with around 11 p.p. a year earlier

Table 3.2. Components of decomposition of ROE of the banking sector

	ROE (net earnings)	=	ROEA[1] (pre-tax)	*	earning assets over assets	*	assets over core capital	*	net earnings over pre-tax earnings
First half of 2007	22.90%		2.35%		93.50%		12.86		81.17%
First half of 2008	22.94%		2.20%		93.98%		13.44		82.63%
2007 dynamics	1.0507		1.0618		1.0074		1.0159		0.9669
2008 dynamics	1.0014		0.9365		1.0051		1.0451		1.0180

[1] Return on earning assets.
Notes: data annualised.
Source: NBP.

Table 3.3. Selected operating ratios of the banking sector

	As % of average assets		As % of income[3]	
	First half of 2007	First half of 2008	First half of 2007	First half of 2008
Net interest income	1.62 (3.27)	1.71 (3.21)	56.11	59.14
Net non-interest income	1.27 (2.36)	1.18 (2.07)	43.89	40.86
Operating costs[1]	1.59 (3.29)	1.53 (3.07)	55.12	53.09
Net movements in provisions and valuation allowances	0.11 (0.24)	0.17 (0.29)	3.76	5.97
- of which: net charges to provisions for irregular loans	0.07 (0.13)	0.12 (0.20)	2.37	4.20
Income tax	0.22 (0.41)	0.21 (0.36)	7.79	7.22
Pre-tax earnings	1.24 (2.19)	1.24 (2.06)	43.04	42.96
Net earnings	1.02 (1.78)	1.03 (1.71)	35.24	35.74
ROE (pre-tax earnings)[2]	16.49 (28.22)	17.33 (27.76)	-	-
ROE (net earnings)[2]	13.51 (22.90)	14.42 (22.94)	-	-

[1] Operating costs = general expense + depreciation.
[2] As percentage of core capital.
[3] Net income from banking activity.
Note: data annualised in brackets.
Source: NBP.

3.2. Credit risk

In the analyzed period, the quality of loan portfolio slightly improved. At the same time, the upward trend in the value of irregular loans strengthened. Again, households showed a renewed interest in foreign currency housing loans, which resulted in an increase in borrowers' sensitivity to developments in financial markets, as well as in greater challenge for banks to hedge balance sheet positions in foreign currencies amid decreased confidence in global markets. Uncertainty with regard to the impact of the world economy turbulence on Polish economy contributes to the deterioration of the short-term loan repayment outlook in comparison with the last issue of the Report.

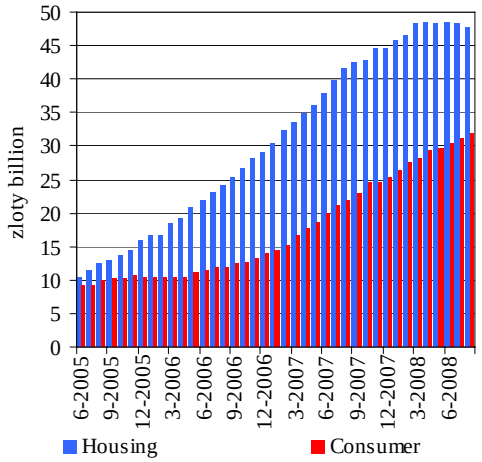
3.2.1. Credit risk of the loan portfolio to households

Lending to households grew at high, albeit diminishing, pace. The nominal increases in the value of loans reflect the continued high interest of households in housing loans and an increased interest in consumer loans. Over the past 18 months, the value of year-on-year growth in consumer loans doubled. (see Figure 3.2).

The irregular loan ratios continued to fall. However, the improvement was only insignificant and was statistical in nature, i.e. it resulted from the growth in the value of loan portfolio. The value of irregular loans was increasing, which was especially visible in the case of loans to individuals. The six-month increases in irregular zloty loans increased in each period starting from mid-2007, and the trend strengthened in the first half of 2008 (see Figure 3.3).

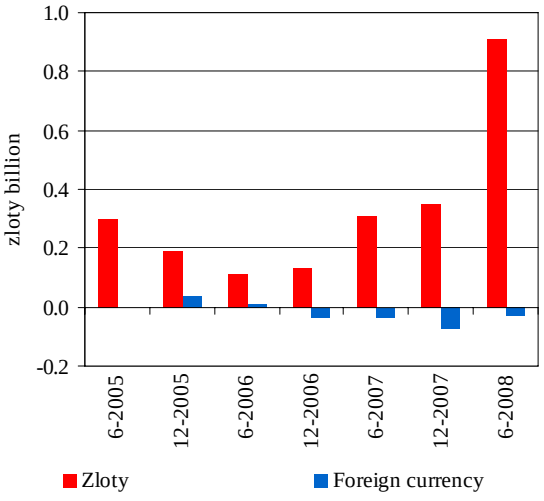
The quality of consumer loans was worse than that of housing loans (see Figure 3.4). This also applies to a special type consumer loans, i.e. credit card lending. Both utilisation of credit card lending as well as the value of irregular loans were increasing fast. Basing on available data, it is however not possible to verify the hypothesis stated in the media that some borrowers who are in a difficult financial situation repay housing loans with credit card loans.

Figure 3.2. Increases in housing and consumer loans to households (y/y)



Source: NBP.

Figure 3.3. Half-yearly changes of the value of irregular loans - individuals



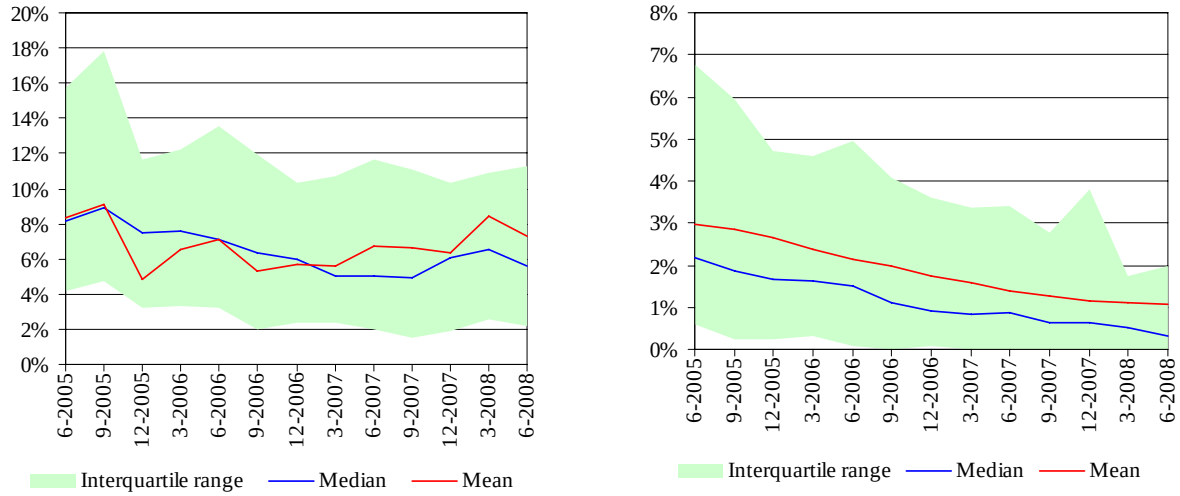
Source: NBP.

Table 3.4. Irregular loan ratios

	2006	2007	6-2008
Non-financial customers	7.4	5.2	4.8
1. Enterprises, of which:	9.7	6.8	6.3
Zloty loans	10.2	7.5	6.8
Foreign currency loans	7.7	4.6	4.1
2. Households, of which:	5.6	4.2	3.8
Zloty loans	7.4	5.3	5.2
Foreign currency loans	1.7	1.0	0.8
2.1. Individuals, of which:	4.6	3.5	3.4
Zloty loans	6.6	4.8	4.9
Foreign currency loans	1.3	0.9	0.7

Note: data refer to residents. The correct interpretation of irregular loan ratios is not straightforward as *irregular* loans include amounts regarded as unrecoverable that are shown on balance sheets for a long time, being already covered by provisions. These issues were thoroughly discussed in the previous issues of the *Report*. The irregular loan ratio, adjusted for the amount of specific provisions for loans classified as *loss* (or amount of impairment provisions in banks operating under IFRS), amounted to around 2% at the end of June 2008 (the amount of provisions by which the numerator and denominator were adjusted can be interpreted as loans to be written off and posted as memo items or to be sold to the so-called specialised securitisation funds that outsource their recovery to debt collection companies).
Source: NBP.

Figure 3.4. Irregular loan ratios for consumer (left-hand panel) and housing loans (right-hand panel)



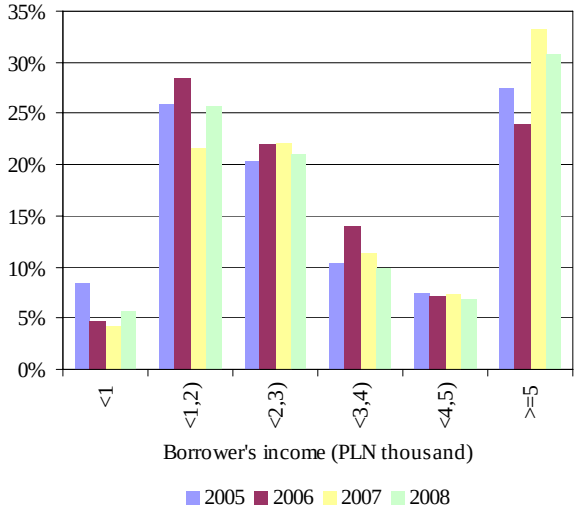
Source: NBP.

In 2008, most banks have tended to ease their lending policies with regard to consumer loans and have not changed their lenient lending policy with regard to housing loans. As the economic outlook is worsening, this may raise concerns about the correctness of credit risk assessment in some banks.

As a result of the rising debt of households, the average borrowing burden on households' disposable income is increasing. On macroeconomic

scale, the sector's burden is, however, not high in comparison with euro area countries: at the end of June 2008, the value of housing loans and consumer loans amounted to 11.2% and 9.7% of GDP, respectively (a year earlier the figures were 8.6% and 8.0%, respectively).

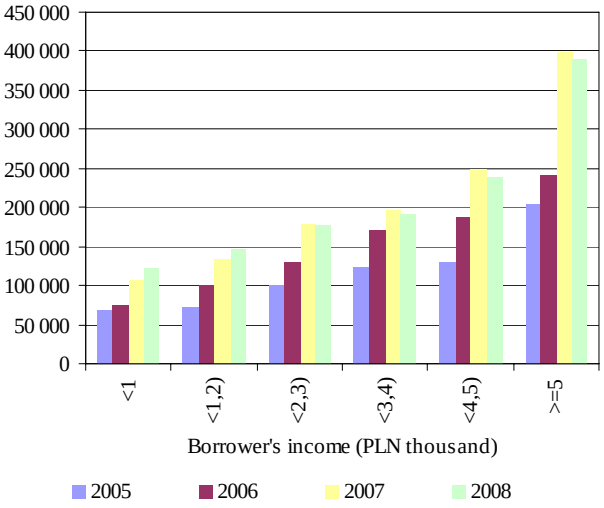
Figure 3.5. Composition of housing loans



Note: data refer to loans extended to households in a given year (in 2008 - over the seven-month period until July).
Source: BIK.

Survey data indicate that banks responded differently to developments in the financial markets since autumn 2007. Some banks that had so far applied a lenient lending policy decided to tighten it significantly (presently, the average loan service burdens of clients of these banks are lower), but some banks continue to accept high or – rarely – higher loan service burdens on borrowers' income. For a housing loan taken out in the first half of 2008, the loan service burden on households' net income was estimated at below 22% – at the time of taking out the loan (for a loan taken out in 2007 the figure stood at 25%, and in the second half of 2006 – at 21%[12]). These values mean that at the end of the second quarter of 2008, the typical borrower who was a client of one of the surveyed banks, had a big capacity to absorb shocks resulting in the increase in housing loan instalments. However, a group of large banks can be singled out (with a combined share in the assets of the banking sector amounting to ca. 30%) whose clients would display much lower-than-average income buffers. It may be assumed that the average income buffers of the clients of small banks (not included in senior loan officer opinion surveys) which rapidly increased their lending, were also not high.

Figure 3.6. Average housing loan values by borrower's income groups



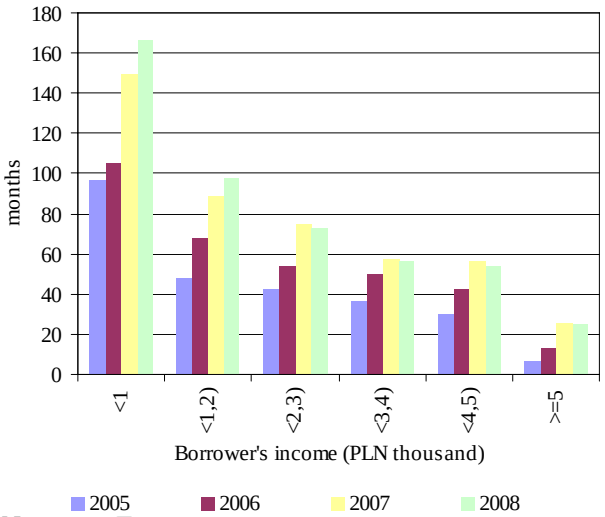
Note: see Figure 3.5.
Source: BIK.

Despite the safe average loan service burden level, there is a large group of households exhibiting high sensitivity to volatility of foreign exchange rate and interest rate. Individual data show that housing loan burden rose in a group borrowers with the lowest income (see Figure 3.7). In this context, it may be considered as positive that in 2008 the increase in the share borrowers with the lowest income in the composition of borrowers was relatively small. (see Figure 3.5). However, some attention should be paid to the increase in average loan value extended to borrowers with incomes of up to 1,000 zloty and from 1,000 to 2,000 zlotys (increase by

[12] The present burdens may vary due to wage increases, interest rate increases and exchange rate changes.

around 15% and 10%, respectively during the seven months of 2008) – see Figure 3.6. The data show that some banks continue to pursue a very lenient lending policy, which may negatively influence loan quality in the future.

Figure 3.7. Housing loan burden on borrowers' income



Note: see Figure 3.5.
Source: BIK.

In 2008, the average ratio of the amount of loan to the value of property on which security is established (LtV) in the group of surveyed banks has diminished. However, market participants' comments indicate that average loan principals remain high when compared with the price of flats: around half of extended loans display LtV ratios above 80%. Due to the relatively restrictive character of the regulations introducing the CRD in Poland, banks are required to maintain higher capital buffers to cover the so-called unexpected losses for both foreign currency loans and loans with high LtV ratios[13]. However, it is not clear whether the buffer would be high enough to absorb banks' losses in case of simultaneous deterioration of economic conditions (triggering foreclosures) and possible price falls on the property market.

Foreign currency loans, constituting a significant portion of the housing loan portfolio, were traditionally characterised by higher quality than loans extended in zloty. The continuing improvement of loan quality ratios can in part be accounted for by the high growth in foreign currency loans, which additionally accelerated in 2008. However, special mention has to be given to the fact that, unlike in the case of zloty loans, the value of irregular (i.e. with arrears over three months) foreign currency loans and of foreign currency loans with shortest arrears (the so-called special mention) is decreasing steadily. Survey data indicate that lower loan instalment burden is essential for the quality of the foreign currency loan portfolio. The improvement in the quality of foreign currency loans was also supported by the trends in the foreign exchange market.

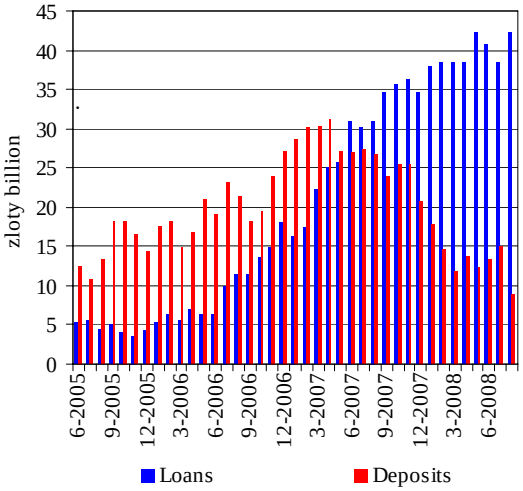
The capacity to repay loans will primarily depend on the situation of borrowers, the development of loan rates and the foreign exchange rate. Surveys of economic conditions show that both wage and employment growth has been limited. Simultaneously, high inflation and expected high volatility of the foreign exchange rate indicate that a decrease in loan instalment burden on borrowers' income cannot be expected. Therefore, it may be expected that the value of irregular loans will gradually rise, and, in consequence, loan quality will deteriorate. Easing, over a long period of time, the lending policy with respect to consumer loans indicates that a deterioration may in the first place apply to this group of loans.

[13] Under the standard method for calculating the capital requirements (in 2008, the method was used by all banks operating in Poland) the risk weight for efficiently property-secured loans is 35% for zloty-denominated loans and 75% for loans denominated in the currency other than the borrower's income; the increased risk weight for foreign currency loans is the exercise of the so-called country option. The loan or part of the loan not efficiently secured is assigned a weight of 100%. The loan is considered efficiently secured when LtV is below 50/60% (depending on the property valuation method). See Annex 4 to Resolution 1 of the Commission for Banking Supervision of 13 March 2007. Cf. in Great Britain, the loan is considered efficiently secured when LtV is not higher than 80%; in Ireland not higher than 75%; in Spain not higher than 80% and in Italy not higher than 80%.

3.2.2. Credit risk of loans to corporates

In 2008, the demand for loans from the corporate sector has remained high. In the eight months of 2008, the debt of the enterprise sector towards the Polish banking sector increased by 19%[14]. The growth rate of deposits from enterprises further dropped - in August 2008, it amounted to around 6%[15]. The increases of funds dropped both in the case of term deposits and current accounts.

Figure 3.8. Growth of loans and deposits of enterprises (y/y)



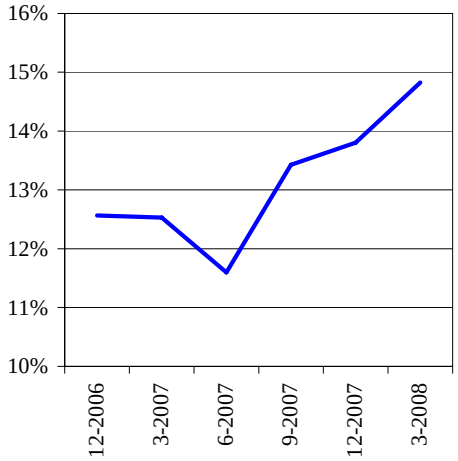
Source: NBP.

The decreasing growth rate of deposits may point to a deterioration of the liquidity position of enterprises. Cash liquidity and quick liquidity ratios dropped by 3.2 p.p. and 4.1 p.p. compared to their highest levels recorded at the end of 2006. Their levels remained, however, around their historical highs, which results from their considerable and gradual growth in the years 2001-2006.

A deterioration in the payment position of enterprises is also indicated in NBP's surveys of economic conditions[16]. The survey shows that the ratio of enterprises that timely settle their liabilities towards banks remains at its record high, but has not risen in recent quarters. At present, over 95% of surveyed enterprises report no problems with timely repayment of debt. However, some enterprises report worsening timeliness of repayment of trading obligations.

The continuing strong growth in loans to the enterprise sector does not considerably affect the relation of the value of liabilities to assets of enterprises. The borrowing burden and debt burden ratios remain unchanged, compared to the end of 2007, which results from high investments that in turn translates into a growth of fixed assets and an increase of the balance sheet total.

Figure 3.9. Interest burden on net operating income (3-period moving average)



Source: NBP.

Interest burden on net operating income is gradually increasing. This growth results from the fact that interest expenses grew faster than net operating income . These changes can be partially accounted for by rising debt and growing costs of credit.

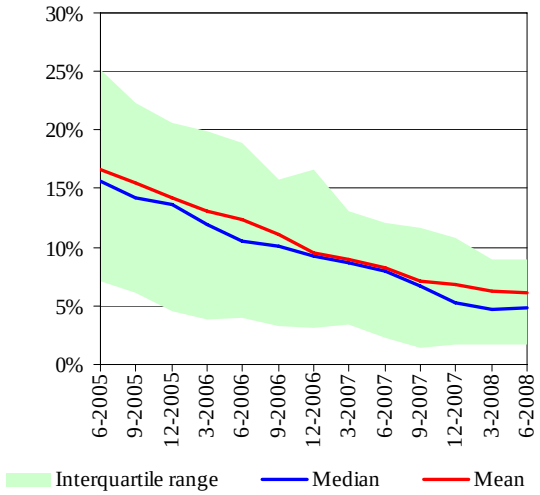
In the past six months, pre-tax profit margin ratios slightly decreased. Although the pre-tax

[14] Data adjusted for exchange rate movements.
[15] as above
[16] , Informacja o kondycji sektora przedsiebiorstw ze szczególnym uwzglednieniem stanu koniunktury w III kwartale 2008 r. (The condition of the non-financial enterprises in Q3 2008, NBP, July 2008

margin ratio in some industries decreased, the average profitability of enterprises remains at a historically high level.

Despite the growth in interest burden, the fall in the liquidity ratios and the decline of the pretax profit margin ratio, the quality of loan portfolio from enterprises did not worsen. In comparison with the end of 2007, the average ratios of the quality of portfolio of loans to enterprise improved (see Figure 3.10) and slightly deteriorated only in some industries (fishing, transport and communications). However, in June 2008 an increase in the amount of irregular loans was observed for the first time since the end of 2003 (an about 3.9% increase in the second quarter of 2008).

Figure 3.10. Irregular loan ratios for corporate loans



Source: NBP.

NBP surveys[17] and GUS surveys [18] show that an increasing number of enterprises expect the economy to slow down. According to the NBP research, in the 3rd quarter 2008 surveyed enterprises expected the number of orders to fall. Furthermore, the output forecast indicator fell for a second quarter in a row. The highest drop in production is expected by enterprises producing entirely for foreign markets. An expected decrease in output is also visible in the employment forecasts, with the employment forecast indicator falling for a second quarter in a row.

NBP senior loan officer survey indicates that banks tighten their lending policy towards large enterprises. In the segment of small- and medium-sized enterprises 1/3(loan-weighted) of banks plan to ease their lending policies. However, the comparison of expectations and their realisation shows that banks' declarations on easing the lending policy towards small- and medium sized enterprises are often not realised[19]. The tightening of lending policy consists, among others, in raising credit spreads. The main reasons why the lending policy towards large enterprises is tightened include unfavourable macroeconomic outlook and a deteriorating capital position of banks.

On the basis of expectations of enterprises and banks, loan credit growth is expected to diminish in the upcoming quarters. Should an economic slowdown materialize, the quality of loan portfolio may worsen.

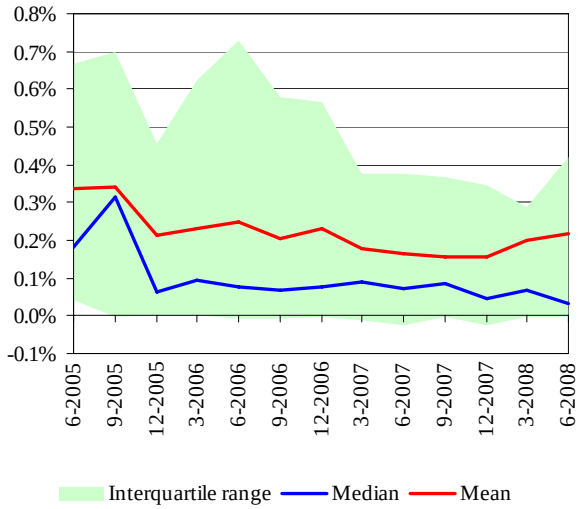
3.2.3. Credit risk premium

In the first half of 2008, banks incurred higher costs of materialisation of credit risk than in previous quarters. In comparison with the first half of 2007, charges to impairment provisions for irregular loans doubled (see. Table 3.1).

The ratio of net charges to assets is low in comparison to the long-term average. Nevertheless, in the first half of 2008 its value began to increase above the historically low level of 2007. (see Figure 3.11).

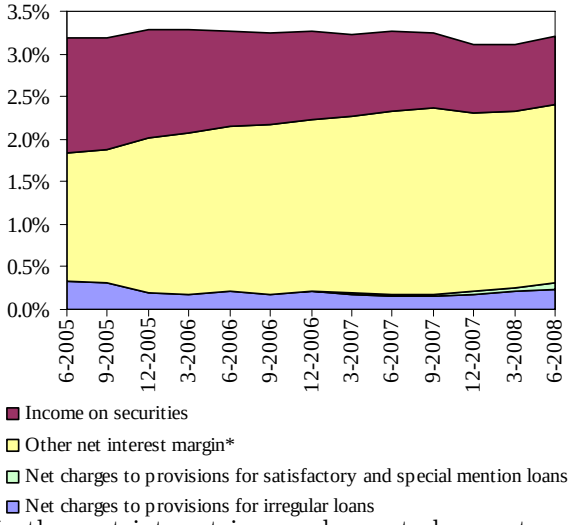
[17] See Informacja o kondycji sektora przedsiebiorstw ze szczególnym uwzglednieniem stanu koniunktury w III kwartale 2008 r. (The condition of the non-financial enterprises in Q3 2008, NBP, July 2008
[18] See "Koniunktura w przemyśle, budownictwie, handlu i usługach we wrześniu 2008 r.", Warszawa, 2008, GUS.
[19] See ,"Senior loan officer opinion survey - on bank lending practices and credit conditions", 2008 issues, NBP

Figure 3.11. Ratio of net charges to provisions for impaired loans to assets



Note: data annualised.
Source: NBP.

Figure 3.12. Net interest margin



* other net interest income less net charges to provisions for satisfactory, special mention and irregular loans.
Note: data annualised.
Source: NBP.

In the first half of 2008, the amount of net charges to provisions for loans classified as loss was the same as after three quarters of 2007. This is primarily related to the deteriorating quality of consumer loans. A few smaller banks specializing in extending consumer loans reported very high increases in amounts of net provisions. It seems that the data confirm that banks apply too lenient lending policy.

As a result of developments in net charges to provisions, the composition of net interest margin worsened (net interest income to assets) (see Figure 3.12). Bank have to earmark a slightly higher portion of interest generated from their deposit-taking and lending activities for creating provisions. However, the remaining portion is still high and amounts to over 90% (a year earlier it was 93%). A probable further strengthening of the trend, which reflects the deterioration of loans' quality, will be unfavourable for banks' profits.

3.3. Market risk

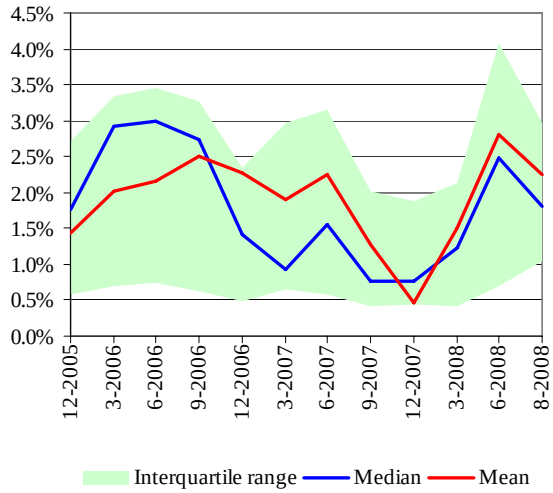
Banks' exposure to market risk remains low. Reduction of mutual credit limits of financial institutions may impede market risk management and increase its costs.

As in previous years, banks' exposure to market risk was very low. Due to the low value of open FX positions, potential direct foreign exchange risk-related losses in the case of nearly all banks constituted less than 0.1% of their regulatory capital. Banks' exposure to joint foreign exchange and interest rate risk (in the banking and trading books), was also low and did not generate a significant risk to the stable operation of banks (see Figure 3.13).

In the first half of 2008, banks' income on financial operations was lower than in the corresponding period of 2007. This was the consequence of the falling Treasury bond prices, the major source of market risk of banks' trading activity. In addition, the fixed interest rates on swaps, which are used to hedge the bond portfolio against the interest rate risk, did not fully follow the yield of bonds. Therefore, banks could

have incurred basis risk-related losses[20].

Figure 3.13. *Value at risk* for joint foreign exchange risk and interest rate risk



Source: NBP.

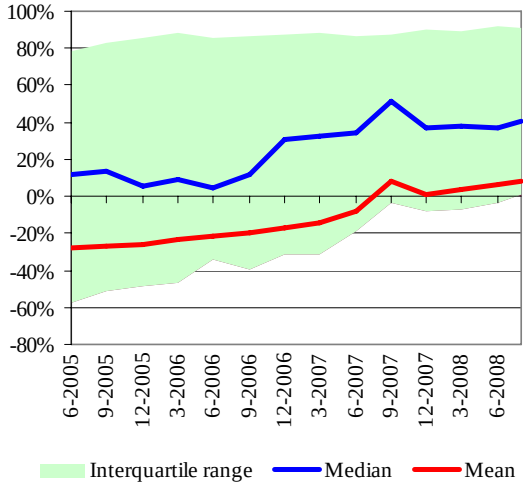
The financial problems of big foreign financial institutions leading to reduction of mutual credit limits, may impede market risk management in banks, as well as increase its costs. The decreasing number of active participants on the derivatives market may hamper rollover of hedging transactions that have either expired or been closed early due to financial problems of foreign counterparties. Due to the reduction of credit limits for mutual exposures of Polish and foreign banks, the risk of inability to hedge exposures to market risk (in particular, foreign exchange risk and interest rate risk) by Polish banks increased. The possible lack of ability to hedge foreign exchange positions may also lead to an increase in capital requirements and the fall of the capital adequacy ratios.

3.4. Liquidity risk

The share of market sources and funds obtained from parent entities in financing banks' lending activity is increasing. In 2008, the role of deposits from non-financial customers was also increasing. The short-term refinance risk is increasing at some small and medium-sized banks that obtain financing mainly from other financial institutions. There is still a surplus of banks' one-month liabilities over assets with maturity of up to one month.

In 2008, a positive funding gap in the banking system (surplus of loans over deposits[21]) was increasing, although the pace of the growth slowed in comparison with 2007. It has to be pointed out that the shrinking surplus of deposits over loans for non-financial customers also concerned some banks that have traditionally displayed a negative funding gap.

Figure 3.14. Funding gap



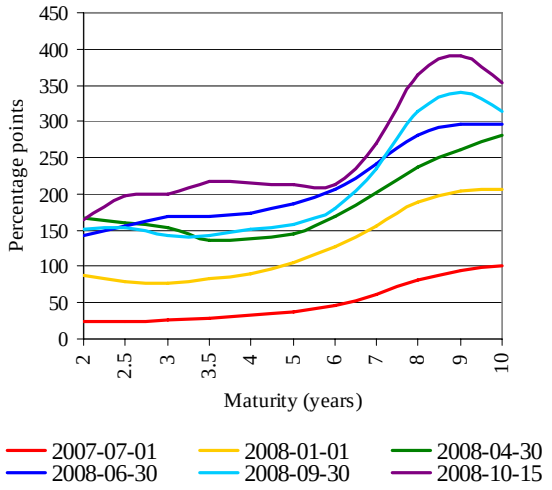
Source: NBP.

In 2008, a negative funding gap in some major

[20] Basis risk means the risk of incurring losses as a result of divergent changes in the value of the position being hedged (e.g. a bond) and the hedging position (e.g. interest rate swaps). Such a risk materialised on a much larger scale in the Hungarian market in the first quarter of 2008 when, as a result of loss of liquidity by Hungarian Treasury bond market, the spread between bond yields and the swap rates was temporarily close to 100 basis points.
[21] Loans and deposits of households, enterprises and the general government sector.

banks approached zero. As a result, the number of domestic banks that can provide financing to other banks via the market of interbank deposits is decreasing, which may have contributed to a decrease in the market's liquidity.

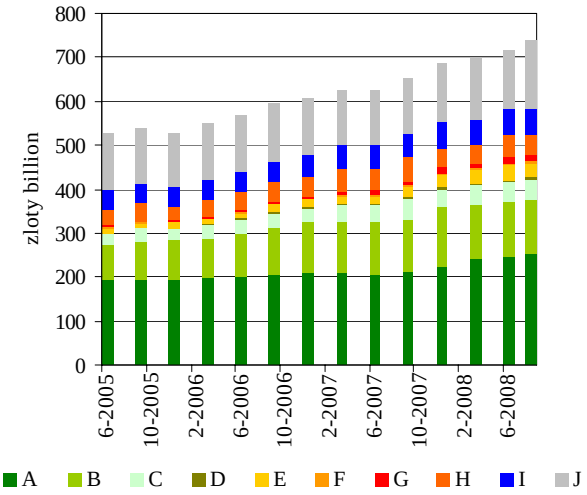
Figure 3.15. Implied credit spread for Polish banks in the bond market



Note: Implied credit spread denotes the difference between the theoretical yield of bonds issued in the euro area market by a bank operating in Poland, with an assigned A rating, and the IRS rate of corresponding maturity. The theoretical bond yields have been estimated on the basis of the yields of bonds issued by European banks with A ratings and Poland risk premium calculated on the basis of CDS contracts on Polish Treasury Eurobonds.
Source: NBP calculations based on Bloomberg and Datastream data.

Given the persistent pressure of rising volume of assets, banks have been actively seekingsources of financing their lending. In 2008, more than ten banks announced debt security issue programmes in the coming years, with values exceeding programmes from the recent years. However, in the first eight months of 2008, banks obtained less funds via this channel than in the corresponding period of 2007 and 2006. The confidence crisis in financial markets has a negative influence on availability and costs of obtaining financing by Polish banks, both on the Polish and international markets. This is due to their relatively low financial strength ratings (see Table 3.7). A likely growth in funding costs is confirmed by a consistent increase in the implied credit spread of Polish banks in the Eurobond market (see Figure 3.15). In some cases, the fact that banks are part of international financial groups may negatively influence the ability of a bank operating in Poland to obtain financing. This may take place if market participants assess that the situation of a dominant entity in the group has seriously deteriorated and may impact the situation of its Polish subsidiary.

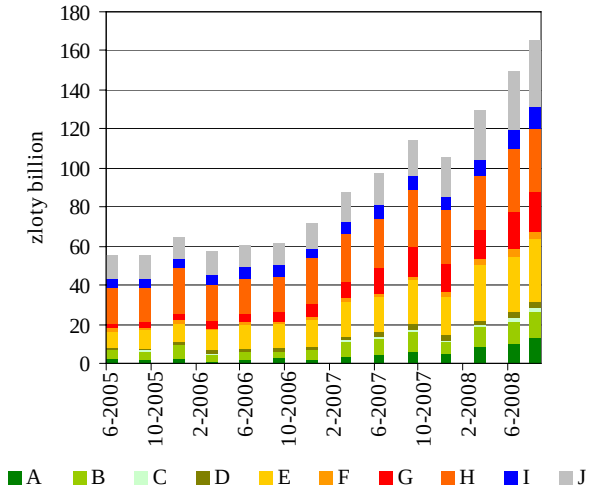
Figure 3.16. Structure of funding in banks financed mainly with deposits from the real sector



Legend: A - deposits of households, B - deposits of enterprises, C - liabilities towards the general government sector, D - issues of long-term securities, E - liabilities towards financial entities - non-residents with maturity over 1 year, F – liabilities towards financial entities - resident with maturity over 1 year, G - liabilities towards financial entities - non-residents with maturity below 1 year, H - liabilities towards financial entities - residents with maturity below 1 year, I – capital, J - other liabilities.
Note: the Figure refers to banks in which the ratio of financing obtained from non-financial entities to the balance sheet total is higher than the median of the ratio among commercial banks.
Source: NBP.

Under these circumstances, banks' demand for stable financing sources increased, which was reflected, among others, in their competition for deposits of non-financial customers. The intense competition, including numerous promotional offers, led to the increase in the interest rates paid on new deposits. As a result, the share of funds from stable sources, i.e. non-financial customers and the general government sector in the structure of financing increased (see Figure 3.16). If the downturn in the capital market and the outflow of funds from investment funds to banks (see Section 2.2 and Section 4.2) persist, the trend may be expected to continue.

Figure 3.17. Structure of funding in banks financed mainly with funds of financial institutions

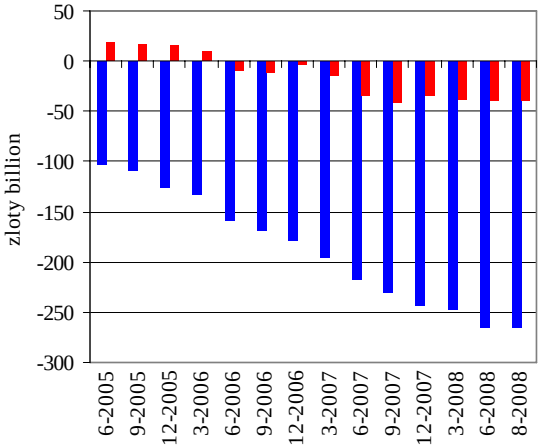


Legend: see Figure 3.16.
Note: the Figure refers to banks in which the ratio of financing obtained from non-financial entities to the balance sheet total is lower than the median of the ratio among commercial banks.
Source: NBP.

Banks with a low deposit base were compelled to supplement their sources of financing on the financial market and directly from their parent entities. In a few banks with the share of around 2% in the sector's assets, the value of financing, in particular short-term financing, from non-residents rose (see Figure 3.17). This funding strategy involves the refinance risk, especially when funding is obtained for short maturities. Due to the fall in mutual confidence among financial institutions and the decrease in liquidity of the money market, the risk related to this strategy increased. Most of these banks hold small portfolios of Treasury securities, which additionally enhances risk related to this business model. Due to the higher level of interest rates and their volatility in the money markets of the most developed countries, banks that obtain financing in foreign markets are also exposed to the increase in financing costs.

In the first half of 2008, the short-term liquidity gap of banks was increasing (see Figure 3.18), which resulted mainly from the high growth rate of long-term housing loans. In this period, the adjusted one-month liquidity gap increased, in particular in small and medium-sized banks. In the third quarter of 2008, this trend came to a halt: in almost half of the banks, the negative gap was smaller than in June 2008.

Figure 3.18. One-month liquidity gap

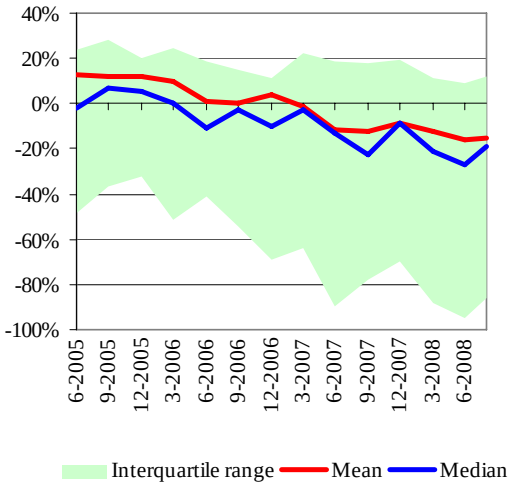


Source: NBP.

The coverage of the gap with liquid securities remained unchanged - in over half of banks, including almost all large and medium-sized banks, the gap was fully covered. Some smaller banks, which focus on extending loans (mainly to households), traditionally held small portfolios of Trea-

sury securities and at the same time exhibited a considerable - in relation to the scale of activities - negative liquidity gap. The success of such a funding strategy currently involves increased risk, as it is largely dependent on the liquidity of the interbank market and the possibility to rollover interbank deposits taken from residents and non-residents. When it is not possible to renew maturing liabilities, the bank with a small portfolio of liquid assets cannot obtain liquidity quickly via sale of assets or conditional transactions. In such a case, the bank would be forced to use the credit lines from parent entities. At the end of July 2008, the assets of the above-mentioned banks accounted for around 12% of the assets of the banking sector, of which nearly 4% were branches of credit institutions operating in Poland.

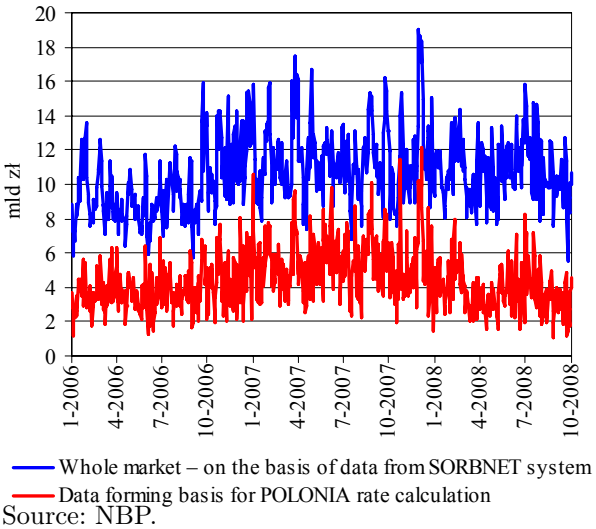
Figure 3.19. Ratio of adjusted one-month liquidity gap to assets with maturity of up to 1 month



Note: definitions in Glossary.
Source: NBP.

Liquid securities may also serve to supplement bank's intraday liquidity by using them to draw an intraday credit facility with the NBP. From June 2007 to August 2008, the ratio of average daily turnover in the SORBNET system[22] to the value of liquid securities in individual banks was decreasing. The median of the ratio in commercial banks dropped in the analysed period from around 4.8 to 3.2, and banks with the value of the ratio lower than the median had a share of around 75% in the banking sector's assets. At the same time, some banks that pursued the strategy of maximising the share of loans in assets, had limited possibilities of drawing the intraday credit facility. Turnover of those banks in the analyzed period was several times higher than their securities portfolio.

Figure 3.20. Turnover in the market of interbank deposits



Source: NBP.

Between July and September 2008, the value of turnover in the interbank market was slightly decreasing (see Figure 3.20). The fall may be the symptom of the decrease in banks' mutual confidence resulting in the reduction of credit limits.

The outflow of liquidity from the subsidiaries of foreign institutions to their home countries may not be ruled out. The scale and likelihood of the materialisation of this risk are difficult to assess. It may be assumed that the risk may be reduced by already undertaken supervisory actions and by the legal accountability of the management of subsidiaries.

[22] The large-value RTGS system operated by the National Bank of Poland.

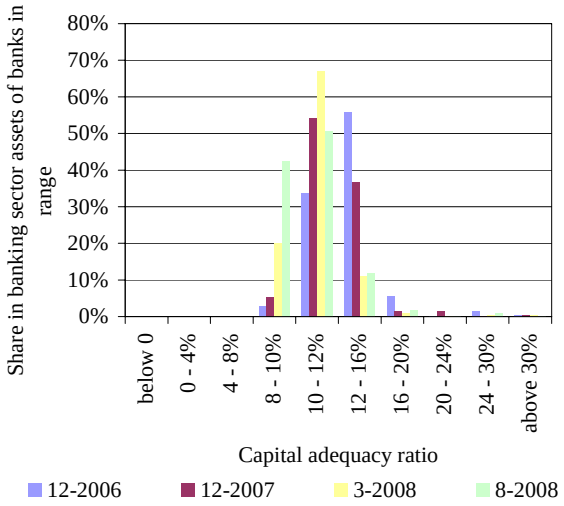
3.5. Banks' capital position and loss absorption capacity

Although banks increased their regulatory capital, the persistent high growth rate of lending and regulatory changes caused the capital adequacy ratios to fall in the first eight months of 2008. In that period, banks' capacity to absorb losses that could arise from deterioration in the quality of loans currently serviced in a timely manner diminished as well. Rising uncertainty with regard to future developments in the economy points to necessity to pursue a conservative dividend policy in order to ensure a sufficient buffer to absorb the disadvantageous effects of economic slowdown.

Banks' sound earnings in the past supported the growth of their regulatory capital. In the first eight months of 2008, the regulatory capital of the banking sector[23] rose by approximately 10%. It was mainly composed of core capital, i.e. the most stable element, which is favourable in terms of possible loss absorption capacity (see Table 3.5). The sector's core capital grew mainly as a result of accumulation of the profit generated in 2007[24] and – to a lesser extent – as a result of the increase of subordinated debt by two banks and of raising new equity by 15 banks.

Despite the growth of capital, the capital adequacy ratios declined. However, for all commercial banks they were higher than the regulatory minimum of 8% at the end of August 2008 (see Figure 3.21). The key factor behind the decline of the capital adequacy ratios in comparison with the end of 2007 was the entry in force of the requirements of Resolution 1 of the Commission for Banking Supervision of 13 March 2007, transposing the provisions of the New Capital Accord into Polish law. The application of the new capital requirement for operational risk caused the average capital adequacy ratios to drop by around 1 percentage point. At the same time, the risk weights for credit risk were reduced. As a consequence, the capital requirement for credit risk increased at a lower rate than lending. The growth structure of the banking sector's assets in 2008 also had an influence on the reduction of the decline of the capital adequacy ratio (see Table 3.6) - the growth in loans to non-financial customers was accompanied by an increase in value of the portfolio of Treasury securities. Changes in the structure of asset growth point to some reduction in banks' propensity to take on credit risk and to their willingness to increase the buffer of liquid assets.

Figure 3.21. Assets of domestic commercial banks by the capital adequacy ratio



Source: NBP.

[23] The analysis is confined to domestic banks, i.e. banks operating in Poland, excluding branches of foreign banks operating in the territory of Poland. As of end of August 2008, the assets of domestic banks accounted for around 94% of the banking sector's assets.

[24] Commercial banks retained around 37% of the net profit generated in 2007 to increase the core capital

Table 3.5. Regulatory capital and the capital adequacy ratio

	2007	3-2008	8-2008
Regulatory capital (billion zloty)	63.4	63.8	67.8
- of which: core capital	–	58.4	62.1
Sum of capital requirements	41.0	46.2	49.4
- of which: against operational risk	–	5.2	5.3
Capital adequacy ratio (%)	12.0	11.0	11.0
Capital adequacy ratio taking core capital into account (%)	–	10.1	10.1

Note: regulatory capital - core capital and supplementary capital, less regulatory deductions, plus trading book ancillary capital. Core capital - core capital less regulatory deductions regarding core capital, data for calculating this category have been available in the new capital adequacy reporting COREP since January 2008.
Source: NBP.

Table 3.6. Annual changes in value of the capital requirement for credit risk and in selected items of banks' balance sheets

	2007	3-2008	8-2008	2007	3-2008	8-2008
	(w mld zł)			(w %)		
Assets, of which:	100.2	108.4	149.0	15.2	15.6	20.8
- non–financial customers	99.6	105.9	106.4	32.5	32.2	28.1
- financial sector	-10.1	-16.5	-6.5	-8.6	-12.1	-5.6
- securities	-7.7	-1.3	15.8	-5.5	-0.9	11.8
Capital requirement for credit risk	9.0	7.7	7.2	30.6	24.3	20.0
Regulatory capital	10.2	11.5	11.7	19.8	21.9	20.9

Source: NBP.

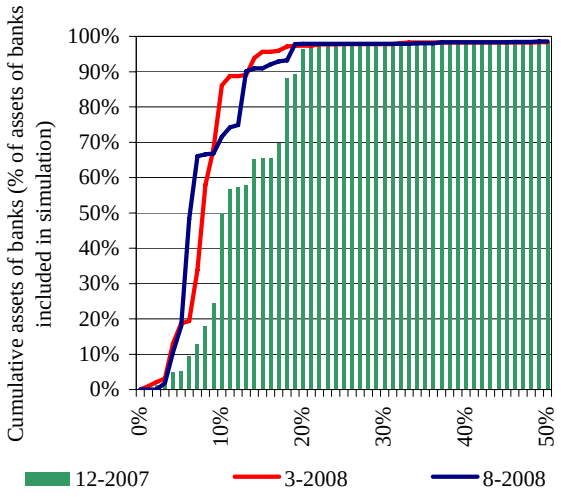
Due to the decline of the capital adequacy ratios in comparison with end of 2007, some banks will be forced to increase their capital if they plan to expand lending at the present pace. The slower lending growth in 2008 and the reduction of risk weights have reduced the scale of the problem in comparison with end of 2007. Under the assumption of no increase in regulatory capital and that the structure and growth rate of lending will be the same as in the first seven months of 2008, the capital adequacy ratios of seven small and medium-sized banks (with a share in the banking sector's assets amounting to 15%) would drop below 8% in the next 12 months. In the case of another nine banks with a combined share in the sector's assets of 24%, the ratios would drop below 9%.

Banks have sufficient capital to meet the minimum regulatory requirements, however, the decline of the capital adequacy ratios and assessments presented below indicate that banks' capacity to absorb losses diminishes.

Simulations of loan loss absorption capacity

Three simulations have been performed in order to determine whether banks' capital is sufficient to absorb possible credit risk losses. The results of the first simulation (see Figure 3.22) provide an answer to the question of what scale of the deterioration of the quality of performing loans individual banks may absorb without the capital adequacy ratio falling below 8%.

Figure 3.22. Assets of commercial banks by percentage of performing loans, whose impairment would lower the capital adequacy ratio to 8%

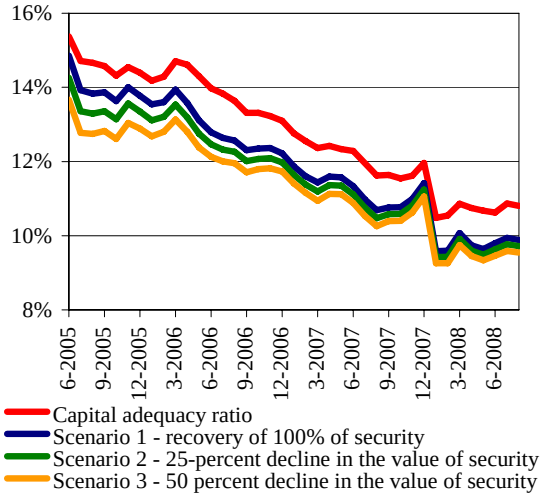


Assumptions for the simulation:
1. Impairment of loans means they are ascertained as 50% impaired.
2. Additional charges to impairment provisions fully decrease a bank's regulatory capital.
3. Impaired loans carry a 100% weight risk
4. No releases of impairment provisions.
Source: NBP.

The simulation performed on the August 2008 data indicates that banks' capacity to absorb losses has diminished in comparison with end of 2007. This is reflected in the increase of the share of banks that can absorb only a relatively minor deterioration in the quality of loans. According to August 2008 data, a deterioration in the quality of 5% of loans would mean that banks with a 18% share in the sector's assets report a capital adequacy ratio of 8% or below. In December 2007, the identical shock would have caused the capital adequacy ratio to fall below 8% at banks with a 5.3% share in the banking sector's assets, and in March 2008 - in banks controlling 18.7% of the sector's assets. The decline in banks' capacity to absorb losses largely resulted from the increase in the capital requirements at the beginning of 2008. The capacity to absorb losses has not changed considerably throughout 2008 (results of the simulations on March and August 2008 data are similar).

The second simulation was aimed at determining the capital adequacy ratio in the case of an abrupt deterioration in the quality of loans with identified impairment and a decrease in the value of their collateral. The results of this simulation show whether the present portfolio of loans with identified impairment poses a threat to banks' capital adequacy. The first scenario assumes that the assessed impairment of all loans with identified impairment is equal to the value of the unsecured portion of these claims. In the second and third scenario, a respective decrease in the value of collateral by 25% and 50% was additionally assumed.

Figure 3.23. Average capital adequacy ratio of commercial banks in scenarios assuming deterioration in the quality of impaired loans



Assumptions for the simulations:
1. Assessed impairment of all loans with identified impairment is equal to value of unsecured portion of the loan.
2. The portfolio of loans without identified impairment remains unchanged.
3. Additional charges to impairment provisions fully decrease bank's regulatory capital.
4. In the case of the second and third scenarios, charges to impairment provisions are increased by the value of a decrease of collateral (25% in the second scenario and 50% in the third scenario.).
Source: NBP.

The results of the simulation indicate that in 2008, banks' resilience to losses originating from the portfolio of loans with identified impairment remained at a high level - the capital adequacy ratios only slightly declined in the simulation (see Figure 3.23). As the capital adequacy ratio was lower than in previous years, in the most pessimistic (third) scenario, the capital adequacy ratios in three small banks would fall below 8%. Despite the reduction of banks' capital adequacy ratios, the potential influence of the portfolio of impaired loans on banks' capital adequacy is low. This results from both a low share of these loans in the whole portfolio, as well as from a high ratio of impaired loans coverage with impairment provisions (around 67%).

The third simulation was designed to assess the effect of a simultaneous bankruptcy of the banking sector's three largest non-financial borrowers (according to end of July 2008 data). The simulation assumes that in the case of all the loans extended to these customers, impairment is assessed at 100%[25] and that the costs of provisions established are deducted from banks' regulatory capital, which results in a drop in the capital adequacy ratio.

The bankruptcy of the three largest borrowers would cause a considerable decrease in banks' capital, but its scale would not pose a systemic threat. The bankruptcy of the three entities would affect 17 banks and push up the costs of impairment provisions by around 4.3 billion zloty. This group of banks held a total of 70% assets of the banking sector. In case of two banks with a combined share in the sector's assets amounting to 1.5% the capital adequacy ratio would fall below 8%, of which in one bank the regular capital would be exhausted. A comparison of these results with the results of a corresponding simulation carried out on data taken from December 2007 indicates that banks' sensitivity to exposures towards largest borrowers increased (in the simulation performed on end of 2007 data, additional costs were 3.9 billion zloty, and regulatory capital of no bank was exhausted).

A similar simulation was performed to examine the impact the bankruptcy of three largest borrowers from the financial sector might have on banks. In the simulation, no account was taken of exposures towards subsidiaries, affiliates and towards other banks. Among the three largest borrowers, there are no institutions analysed in Chapter 4, i.e. insurance companies, investment funds, pension funds and investment fund management companies and pension fund management companies. Bankruptcy of the three largest borrowers would affect 16 banks and push up the costs of impairment provisions by around 4.7 bn zloty. This group of banks held a total of 68% of the banking sector's assets. In the case of two banks (with a combined share in the sector's assets amounting to 4.5%), the capital adequacy ratio would fall below 8%, of which in one small bank the regulatory capital would be exhausted. A comparison of these results with the results of the simulation performed on December 2007 data shows lack of considerable changes in banks' sensitivity to exposures towards this group of borrowers (for the simulation carried out on end of 2007 data, additional costs were 5 billion zloty and the regulatory capital of 4 small banks was exhausted).

The results of the simulations point to the important role of the financial position of the group of the largest borrowers for the safe operation of the banking sector.

The simulations indicate that the hypothetical losses originating from the impaired loans portfolio could be absorbed by most of the banks without a fall in the capital adequacy ratios below 8%. However, at the same time banks' sensitivity to the deterioration in the quality of loans serviced currently in a timely manner is rising. Banks' sensitivity to losses resulting from this portfolio has been on the rise since 2006, which is caused by a high loan growth rate exceeding the growth rate of banks' capital.

[25] The calculations accounted for available data on loans' collateral accepted by banks.

As there is significant uncertainty about the future quality of banks' loan portfolio, it is important for banks to maintain high capital levels. Rapid lending growth at a time when credit standards are being eased, particularly in the segment of mortgage loans, makes the future quality of the loans highly uncertain. This uncertainty is further enhanced by lack of data on the repayment performance of certain categories of loans, among others housing loans, across the full business cycle. Thus, in order to ensure the stable operation of banks in the long run, it is desirable than banks maintain their capital at the level that would allow them to operate safely in case of a substantial deterioration in loan quality. It is especially important in view of accounting rules (in particular, the IFRS) in force, as they make establishment of provisions for credit risk contingent on past events. Therefore, it is desirable for banks to pursue conservative dividend and lending policies, so that their capital buffers allow them to absorb the unfavourable effects of a possible slowdown of economic growth.

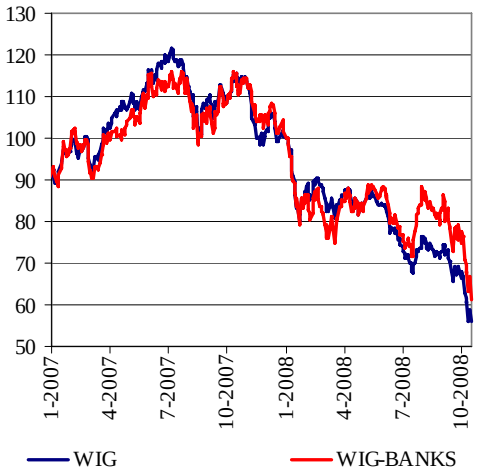
3.6. Market assessment of Polish banks and their parent entities

The deposit and financial strength ratings of Polish banks have been mostly stable since the last issue of the Report. Due to the crisis in the world financial markets, assessments of risk related to investment in the foreign parent entities of Polish banks deteriorated again.

Stock market investors have assessed the financial position of and outlook for Polish banks as better than in the case of other companies listed on the Warsaw Stock Exchange since the last issue of the *Raportu* was published. The normalized WIG-Banki index[26] was higher than the normalized WIG index, in particular since the publication of the very good earnings of banks for the first half of 2008 (see Figure 3.24). Declines of the WIG-Banki index towards the end of the surveyed period resulted rather from share prices' falls in the developed markets than from the current assessment of the companies included in the index.

Ratings assigned to Polish banks by rating agencies have not changed considerably as well. Moody's downgraded ratings for BPH due to its division[27] and its being taken over by the GE Money group. The ratings of BRE Bank, Lukas Bank and Bank Handlowy were placed under review (for possible downgrade), which resulted either from changes in the ratings of the parent entities of these banks or from placing these parent entities under review.

Figure 3.24. Sectoral index WIG-Banki against WIG index



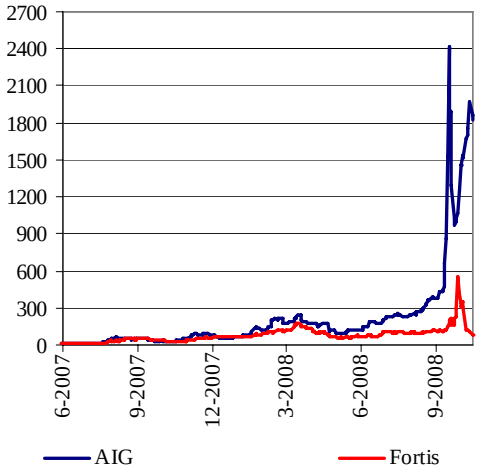
Note: the stock exchange indices have been rescaled to 100 at the start of 2008. Indices' values as at the close of trading session.
Source: Bossa.

[26] At the end of September 2008, WIG-Banki comprised 13 banks listed on the WSE, including one foreign bank (UniCredit). Polish banks listed on the WSE had a combined share of 61.9% in the total assets of the banking sector (according to data as at end of June 2008).
[27] http://www.bph.pl/pl/relacje_inwestorskie/ratingi/archiwum

There were significant changes, especially in August and September 2008, in the financial standing of the parent entities of some Polish banks and in the risk perceived by markets and rating agencies related to investment in financial instruments issued by these companies. This was connected with the growing liquidity crisis in the global financial markets (see Section 2.2). Due to problems in obtaining financing, three parent entities (AIG, Fortis, Dexia) of Polish banks were forced to seek state support in their home countries. The funding they gained will allow them to restructure their activities, and the impact on the domestic financial system should consist mostly in a possible change of the owner of the subsidiaries in Poland. It is also possible that counterparties of these subsidiaries operating in Poland will cut limits for operations with these subsidiaries, which may create additional challenges for their operations (in the case of cutting limits for operations with a dominant entity, the same reductions apply to all entities of the group).

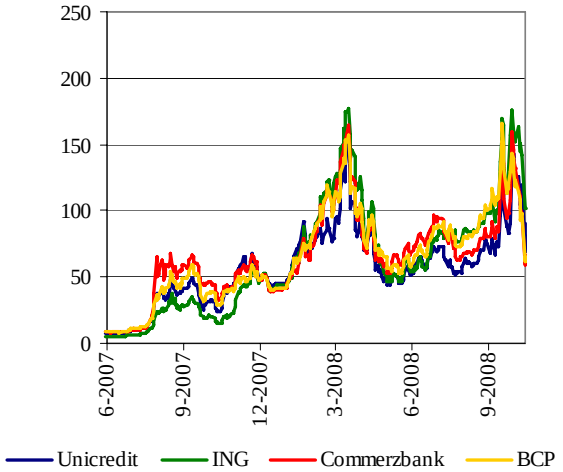
The problems financial institutions are facing led to an overall increase in risk premium, as shown in CDS premia for bonds of banks, also including other parent entities of banks operating in Poland (see Figures 3.25 – 3.27).

Figure 3.25. CDS premia for bonds of parent entities of selected Polish banks



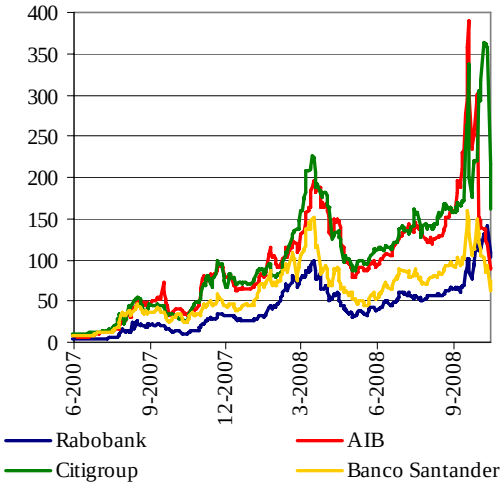
Note: Credit Default Swap premium represents the price of the insurance of the holder of a bond issued by the reference entity (here: a bank) against a bankruptcy of the entity over the 5 year horizon.
Source: Bloomberg.

Figure 3.26. CDS premia for bonds of parent entities of selected Polish banks



Note: see Figure 3.25.
Source: Bloomberg.

Figure 3.27. CDS premia for bonds of parent entities of selected Polish banks



Note: see Figure 3.25.
Source: Bloomberg.

Table 3.7. Ratings of Polish banks and their parent companies[1] by Moody's

	Financial strength rating	Long-term deposit rating	Outlook	Parent company	Parent company financial strength rating
Pekao	C (C)	A2 (A2)	NEG (POS)	UniCredit	C+ (B-)
PKO BP	C (C)	A2 (A2)	STA (STA)	n/a	n/a
ING Bank Śląski	D+ (D+)	A2 (A2)	STA (STA)	ING	B (B)
BRE Bank	D (D)	A2 (A2)	DNG (STA)	Commerzbank	C (C+)
BZWBK	C- (C-)	A2 (A2)	STA (STA)	AIB	B- (B-)
Bank Handlowy	C- (C-)	A2 (A2)	DNG (STA)	Citigroup	B (B)
Bank Millennium	D (D)	A3 (A3)	POS (POS)	BCP	C+ (C+)
Kredyt Bank	D (D)	A2 (A2)	STA (STA)	KBC	no rating
BGŻ	D (D)	A2 (A2)	STA (STA)	Rabobank	B+ (B+)
Getin Bank	D (D)	Ba2 (Ba2)	STA (STA)	Getin Holding	no rating
BPH	D- (C-)	Baa2 (A3)	UPG (RUR)	GE	no rating
Lukas Bank	C- (C-)	A2 (A2)	DNG (STA)	Credit Agricole	B (B)
BRE Bank Hipoteczny	D- (D-)	A3 (A3)	DNG (STA)	Commerzbank	C (C+)

[1] Parent company or its dominant entity.
Notes: data as at 6 October 2008, in brackets - as at end of 2007. Definitions of ratings in Glossary.
Source: www.moodys.com.

Chapter 4.

Non-bank financial institutions

The developments in the sector of non-bank financial institutions in the analysed period were mainly influenced by continuing worsening of the situation in financial markets. This resulted in a significant decline in investment fund assets, which may lead to the deterioration in earnings of investment fund management companies. The profitability of the insurance sector also declined. Owing to the specificity of the pension sector (mandatory participation) changes in the situation on financial markets had a smaller impact on pension fund management companies - their revenues and profits rose as a result of an increase in the value of contributions. Despite a decline in profitability ratios of some non-bank financial institutions their stability remains strong. The profitability of pension fund management companies and investment fund management companies remains high, which is driven by the fact that the investment risk is borne by their clients. Average capital adequacy ratios in the insurance sector also remain high.

4.1. Insurance companies

In the first half of 2008 both the life insurance and non-life insurance sectors posted a high growth in premiums (see tabela 4.1), which has mainly resulted from strong economic growth and an increase in household incomes. The expected decline in premiums from life insurance policies with UFK (unit-linked insurance policies) has been compensated by the growth in other life insurance sub-sectors, which was driven, among others, by the fact that other insurance products with predominantly investment character (structured products and so called anti-tax deposits) became widespread.

Despite a high rise in premiums, the net profit and the technical result in the life insurance sector decreased in the first half of 2008 (see tabela 4.1). Net profit and result on investment activities of the non-life insurance sector increased as compared to the first half of 2007, but this was only due to the fact that PZU S.A. received a high (PLN 2.2 billion) dividend from PZU Życie S.A. The large drop in prices in financial markets, particularly in the equity market was the most important reason for the decline in profits of the insurance sector in the first half of 2008. In addition, in the same period of previous year a high rise in prices was observed in this market, which also contributed to a large decline in profits in the first half of 2008 compared with the preceding year.

It should be emphasised that despite a large impact of the developments in the equity market on the earnings of insurance companies in the

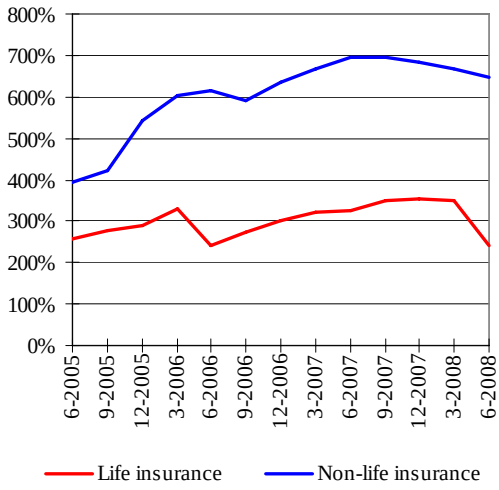
Table 4.1. Earnings of insurance companies (million zloty)

	First half of 2007	First half of 2008	Change (in %)
Non-life insurance:			
- Gross written premium	9 127	10 325	13.1
- Technical result	741	769	3.8
- Net investment income	1 115	2 613	134.3
- Net profit	1 426	3 019	111.6
Life insurance:			
- Gross written premium	12 572	18 701	48.8
- Net investment income	5 739	-3 647	-
- Technical result	1 924	1 617	-16.0
- Net profit	2 112	1 344	-36.4

Source: KNF.

first half of 2008, the sector's exposure to equity market risk is relatively low. The total share of equities in insurance companies' investment portfolio declined at the end of the first half of 2008 to 3.3% from 5.8% at the end of the first half of 2007.

Figure 4.1. Activity monitoring ratio



Source: KNF.

Profits from insurance activities in non-life insurance sector increased slightly in the first half of 2008, mainly owing to a high profit growth in the comprehensive auto insurance sub-sector (AC). The growth was caused by a increasing number of cars and the growing popularity of non obligatory AC policies owing to, among others, an improvement in the financial condition of households. On the contrary, the situation in third party liability insurance sub-sector, which is the largest non-life sub-sector had a negative impact on the performance of the whole non-life insurance sector. Strong competition and the fact that some companies waited until the end of the first quarter of 2008 to raise prices of third party liability policies, which are used to cover the cost of treating victims of traffic accidents led to a negative technical result in this sub-sector in the first half of 2008.

In the first half of 2008, average capital adequacy ratios of the insurance sector decreased (see figure 4.1). This resulted from a strong growth of the sector, leading to a rise in capital requirements, and from the payment of the dividend by PZU Życie S.A. (earnings were retained by the company in the previous year). The sector's average level of the basic capital adequacy ratio (activity monitoring ratio) still significantly exceeds the required minimum (100%), especially in the non-life sector.

Despite favourable average capital adequacy ratios, in the first half of 2008 there were a few incidents of non-compliance by small insurance companies with capital requirements and with the requirement to cover provisions with adequate investments. As at the end of the 1st quarter

2008 this was the case in seven companies whose share in the total sector's premiums amounted to 7,3%. The main reason for the above situation was failure by some fast growing life insurance companies to increase their own funds in due time. By the end of June 2008, the share in the sector's premiums of companies that did not meet the capital requirements fell to 5,0%, while all companies complied with the requirement to cover provisions with adequate investments. Companies that did not meet the capital requirements undertook actions to increase their capital and some of these companies filed applications to register the increase in capital with the National Court Register.

4.2. Investment fund management companies and investment funds

In the first eight months of 2008, a significant net outflow of cash from investment funds took place (see table 4.2). The main reason for the outflow was an unfavourable situation in the equity market that had lasted since the second half of 2007. The largest net outflow of cash occurred in the case of equity, balanced and stable growth funds. The outflow of cash from these funds was not compensated with an inflow of cash to the other types of funds (see table 4.2).

Table 4.2. Net inflow of new cash to investment funds (million zloty)

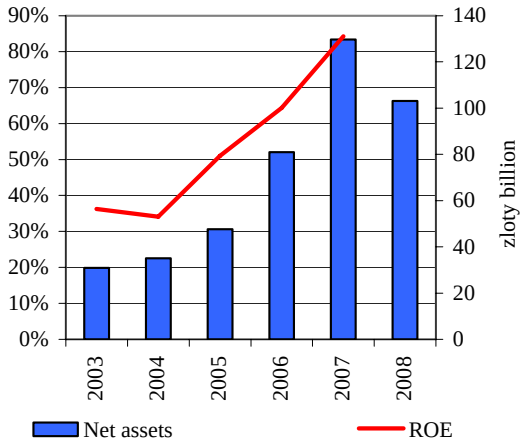
Type of fund	I-VIII.2007	I-VIII.2008
Equity	19 523	-7 597
Balanced	9 024	-10 395
Stable growth	1 746	-7 455
Bonds	-1 278	-39
Cash and money market	763	1 511
Other	-214	188
Total	29 563	-23 785

Source: Analizy Online.

Withdrawal of cash contributed to a highly negative balance on investments in shares (around 10 billion zloty in the first seven months of 2008). The volume of stock supply from investment funds may have contributed to the deepening of declines of stock exchange indices in that period. The impact of the supply was partly offset by the demand for shares from open pension funds (OFE). Owing to a constant inflow of premiums, open pension funds recorded a positive balance of investments in shares in that period which amounted to around 3.1 billion zloty.

Despite a large decline in investment funds' assets the risk of a significant worsening of the condition of investment fund management companies (TFI) is low due to the present size of the funds' assets. In previous years, the profitability of investment fund management companies was very high, which also refers to periods when the companies managed funds with a significantly lower value of assets than currently. (see figure 4.2). Practically, TFI do not bear the investment risk related to funds' investments. In periods of a downturn in the financial markets TFI usually limit their marketing campaigns, which contributes to a reduction in costs.

Figure 4.2. TFI ROE compared to investment funds' assets



Source: GUS, Analizy Online.

Table 4.3. Financial results and technical profitability of pension fund management companies (million zloty)

	First half of 2007	First half of 2008	Change (in %)
Revenues from OFE management. of which	823	951	15.6
- income from contribution commissions	498	607	21.9
- income from OFE management fees	285	299	4.9
OFE management cost	454	497	9.5
Technical profit on OFE management	369	454	23.0
PTE net profit	331	403	21.8
Technical profit margin on OFE management (in %)	45	48	-

Note: technical profitability – the relation of the technical profit to revenues from open pension funds management.
Source: KNF.

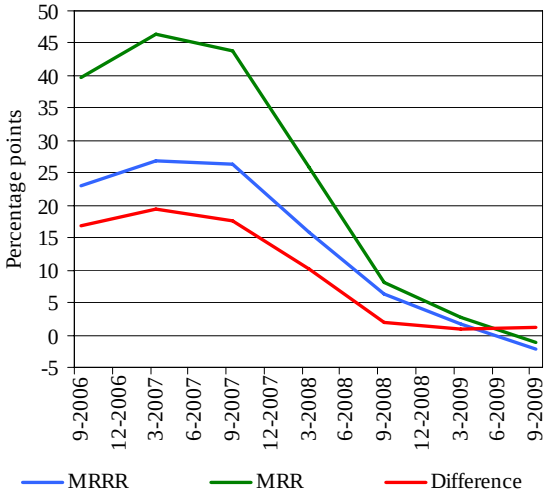
4.3. Pension fund management companies and open pension funds

Despite a slight decline in the assets of open pension funds in the first quarter of 2008, profits and profitability of the pension fund management companies sector (PTE) increased (see table tabela 4.3). This was possible owing to a growth in the inflow of premiums. Commissions on contributions represent the most important source of OFE revenues. A strong rise in wages and employment also contributed to the growth in the value of contributions.

All pension companies except for one posted positive earnings. A small loss of one of the companies resulted from aggressive strategy of acquiring clients, which was reflected in a very high share of acquisition costs in total costs of managing the fund (52%).

Downturn on the stock market in the first nine months of 2008 was responsible for a significant fall in the funds' rate of return. There was also a significant decline in the difference between the lowest rate of return recorded by open pension funds and the minimum required rate of return (see wykres 4.3). Under the present regulatory environment open pension funds do not have a possibility of hedging their investment against market risk, which results in a decrease in the value of funds accumulated in the pension system by its members in periods of market downturn.

Figure 4.3. Three-year rates of return of open pension funds



Note: MRRR/MRR/Difference – Minimal Required Rate of Return / Minimal Rate of Return/Difference between MRR and MRRR . Up to 30.09.2008 historical data after 30.09.2008 – results of simulation.
Source: KNF.

The potential maintenance of the unfavourable situation in financial markets may lead to a further decline in the difference between the lowest

rate of return recorded by open pension funds and the minimum required rate of return, which would increase the risk of failing to reach the minimum required rate of return by one of the funds. The results of a simulation which assumed that at the end of March and September 2009 the value of participation units of all open pension funds would remain at the level of September 2008, show that the value of the weighted average rate of return would fall from 31.5% recorded at the end of March 2008 to 5.7% and 1.8% at the end of March and September 2009 respectively. (see figure 4.3). The lowest rate of return recorded by open pension funds at the end of March and September 2009 would then exceed the minimum required rate of return only by 1.0% and 1,1%. The results of the simulation suggest that if the downturn in the financial markets continues, the risk of failing to reach the minimum required rate of return will rise. However, risk to financial stability seems to be low in this case. The simulation shows that one of the small pension funds may achieve a rate of return close to the minimum required rate of return. The own funds of its management company are high, which is likely to enable it to cover the costs resulting from reaching a lower rate of return than the minimum required rate.

Financial Soundness Indicators

Financial Soundness Indicators compiled according to IMF methodology

	3-2007	6-2007	9-2007	12-2007	3-2008	6-2008
Capital adequacy						
Regulatory capital to risk weighted assets (capital adequacy ratio)	12,5%	12,4%	11,8%	12,1%	11,0%	10,8%
Regulatory Tier 1 capital to risk weighted assets	12,5%	12,5%	11,9%	11,8%	10,7%	10,7%
Nonperforming loans net of provisions to capital	14,7%	13,6%	12,4%	11,5%	11,3%	12,2%
Assets quality and composition						
Nonperforming loans to total gross loans:						
- Non-financial sector	6,8%	6,3%	5,6%	5,2%	4,9%	4,8%
- All sectors	4,8%	4,6%	4,2%	4,0%	3,9%	3,8%
Structure of loans to non-financial sector:						
- Loans to households	57,2%	57,7%	58,5%	59,3%	59,4%	59,5%
- Loans to enterprises	42,6%	42,0%	41,2%	40,4%	40,3%	40,1%
Profitability						
Return on assets	1,7%	1,8%	1,8%	1,7%	1,6%	1,7%
Return on regulatory Tier 1 capital	22,7%	22,9%	23,6%	22,1%	22,1%	22,9%
Interest margin to gross income	58,5%	58,1%	58,3%	59,4%	60,6%	60,8%
Operating costs to gross income (C/I)	59,2%	58,4%	57,6%	59,8%	59,5%	58,2%
Net interest margin to assets (NIM)	3,2%	3,3%	3,3%	3,1%	3,1%	3,2%
Net non-interest margin to assets	2,3%	2,4%	2,3%	2,1%	2,0%	2,1%
Liquidity						
Liquid assets to total assets	19,1%	18,0%	17,5%	17,1%	17,1%	16,9%
Liquid assets to short-term liabilities	27,1%	25,6%	25,2%	24,2%	24,4%	24,5%
Sensitivity to FX risk						
Net open FX positions to capital	0,3%	0,7%	0,9%	0,7%	1,9%	1,3%

Note: metadata available at http://dsbb.imf.org/Applications/web/fsi/fsihome/
Source: NBP.

Timeline of the global market crisis

Key events in September and October 2008

Date	Event	Details
7 September	Fannie Mae and Freddie Mac taken over by the US Treasury	a. the Treasury injects USD 1 billion of cash into each company ; b. financial assistance guarantee of up to USD 100 billion; c. the Treasury buys mortgage-backed securities of the two companies (first issue - USD 5 billion). The takeover was a consequence of the announcement made on 13 July 2008 by Treasury Secretary Henry Paulson of the bail-out plan in the form of a credit line and direct access to Fed funds.
9 September	Beginning of significant falls of Lehman Brothers' (LB) share price	Shares plunge by nearly 45% to the lowest level since 1998 r. The direct reason was the announcement that the South Korean Development Bank had withdrawn from investing in LB (LB had been seeking new capital for a few months; the bank's problems were connected with the subprime crisis).
12 September	Notice by the US Treasury Department A possible takeover of Lehman Brothers announced	The Treasury will not commit public funds to rescue Lehman Brothers. Bank of America, JC Flowers & Co. and China Investment Corp. (Chinese sovereign wealth fund) planning a joint Lehman Brothers bid.
13-14 September	Attempts to solve the problems of Lehman Brothers: talks between the Fed, the Treasury and representatives of leading American financial institutions	Options considered: a. purchase of property-related assets for the amount of around USD 30 billion by financial institutions, b. joint bid for the investment bank by Bank of America (BoA), JC Flowers & Co. and China Investment Corp. gathered around BoA, c. purchase of asset management arm by the British bank Barclays.

Date	Event	Details
	Problems of the American AIG financial group	a. AIG shares plunge on stock exchange in the United States, b. AIG loss of USD 18 billion in the previous three quarters, c. AIG has asked the Fed for a USD 40-billion bridge loan. Prior to the above, negotiations with private equity firms and Warren Buffett's fund – Berkshire Hathaway – failed, as well as the earlier Fed initiative of asking JPMorgan Chase and Goldman Sachs to create a USD 70-75 billion loan fund for AIG.
	Announcement by the Fed of its readiness to provide liquidity to financial markets and expand liquidity schemes.	The Fed has broadened the list of collateral to be pledged at the Primary Dealer Credit Facility (PDCF) by adding shares and increased the frequency and size of Term Securities Lending Facility (TSLF) auctions. PDCF and TSLF facilities were introduced in March 2008 to make the Fed's discount window facilities available to a broader group of institutions (including non-bank institutions) through a wider variety of collateral.
15 September	Lehman Brothers filed for bankruptcy	Barclays and BoA withdraw from LB takeover (BoA invested USD 44 billion in Merrill Lynch).
	Bank of America, Barclays, Citigroup, Merrill Lynch, Morgan Stanley and UBS announce a joint program to support the liquidity of banks in the United States	Program assumptions: a. ensure mutual collateralised loans, b. create a joint fund for the amount of USD 7 billion, c. possible liquidity support from the fund to the level of a maximum of one third of the fund.
	Central banks become actively engaged	Active provision of liquidity through open market operations by: the Fed, European Central Bank (ECB), the central banks of the United Kingdom (BoE), Australia, Canada, Switzerland, Norway and Russia. Special announcements about monitoring the situation and / or readiness to provide support: ECB, central banks of the United Kingdom, Germany, Switzerland and Japan.
16 September	Assistance to AIG: - State of New York assistance - USD 85 billion loan for AIG from the Fed	a. assistance from the state of New York: possibility of using USD 20 billion from AIG subsidiaries as collateral, b. USD 85 billion loan for AIG from the Fed for 79.9% equity interest in AIG (penalty interest rate on loan amounting to 11%: Libor 3M + 8.5 p.p. credit margin).
17 September	Morgan Stanley - seeking an investor	Potentially interested parties: - Wachovia Corp. - CITIC - China controlled conglomerate, owner of CITIC securities brokerage house.

Date	Event	Details
	Search for buyer of Washington Mutual announced	
	Bank of England's announcement on the extension of Special Liquidity Scheme	Special Liquidity Scheme - introduced in April 2008, initially until 21 October 2008 - its aim was to allow banks to temporarily swap some of their illiquid assets secured with mortgage loans for Treasury bills.
18 September	Lloyds TSB consent to buy HBOS	Transaction value: GBP 123 billion.
	Coordinated action by central banks	Increased swap lines: with ECB by USD 55 billion (to USD 110 billion): with the Swiss National Bank (SNB) by USD 15 billion (to USD 27 billion); introduction of the line with BoE - USD 40 billion, Bank of Japan (BoJ) - USD 60 billion and Bank of Canada - USD 10 billion (first in history possibility to offer O/N financing in dollars by the ECB, BoE , SNB and BoJ).
19 September	Short-sale ban introduced by: - British FSA (until 16 January 2009) - American SEC (until 8, and subsequently until 17 October 2008).	
	Notice by the Fed	The Fed - system of loans to banks broadened to allow them to buy "high quality" asset-backed commercial paper (ABCP) in the financial market
20-21 September	Notice of a rescue plan of the U.S. Treasury (Paulson Plan)	Assumptions of the plan: Treasury to purchase "bad" assets from each financial institution for the nearest 2 years up to the equivalent of USD 700 billion.
	Change in Goldman Sachs and Morgan Stanley status	Investment banks in the U.S. have changed their status to become bank holding companies regulated by the Fed: wider access to Fed funds and increased possibility to buy retail banks.
	Short-sale ban issued by BaFin (until end of 2008)	
	Japanese Mitsubishi UFJ takes stake in Morgan Stanley	
	Ameribank Inc. goes bankrupt.	FDIC transfers deposits and eight branches of the bank to other local banks.
23 September	Bank of Denmark provides liquidity support to Ebh bank	
	Asian arm of Lehman Brothers purchased by Japan's Nomura Bank	

Date	Event	Details
	AIG announces it may sell some of its assets	
24 September	AIG formally signs USD 85 billion loan agreement with the Fed	
	Warren Buffet's fund invests USD 5 billion in Goldman Sachs	
	New swap lines provided by the Fed	Lines with central banks of Australia (USD 10 billion), Sweden (USD 10 billion), Denmark (USD 5 billion), Norway (USD 5 billion).
25 September	Problems of Belgo-Dutch Fortis Bank	Strong share drop by 20 % to the lowest level since 1995. EUR 2.49 billion loss in 2008 resulting from subprime crisis.
26 September	The Fed expands swap lines	Swap lines broadened between the Fed and BoE, ECB and SNB: possibility to offer funding at 7-day maturities and broadening the facility line with ECB by USD 10 billion (to USD 120 billion) and with SNB by USD 3 billion (to USD 30 billion).
	Fortis announces it may sell some of its assets	
27 September	U.S. regulator shuts Washington Mutual	Washington Mutual, the U.S. largest savings and loan association, taken over by the regulator, bank assets purchased afterwards by JP Morgan Chase for USD 1.9 billion.
	Assistance to Fortis	EUR 11.2 billion state aid from the governments of the Benelux countries (Belgium, the Netherlands and Luxembourg).
29 September	Congress fails to adopt Paulson rescue plan	
	The Government of Iceland takes over the Island's third largest bank - Glitnir	Purchase of 75% equity for EUR 600 million. The bank had problems in financing its operations; trading in its shares was suspended.
	UK Government decision to nationalise Bradford & Bingley (B&B)	B&B, the ninth largest bank specialising in mortgage credit in UK. The branch network taken over by Spanish Santander bank.
	Support to German Hypo Real Estate	Consortium of German banks promise government guaranteed EUR 35 billion.
	UniCredit shares begin to fall on the Milan stock exchange	Trading in UniCredit shares suspended twice; fall in share price by 10%.

Date	Event	Details
	The Fed expands swap lines	The increase from the total amount of USD 290 billion to USD 620 billion (ECB will be able to offer USD 240 billion, Bank of Japan USD 120 billion, Bank of England USD 80 billion, SNB USD 60 billion, Bank of Canada USD 30 billion, Reserve Bank of Australia USD 30 billion, Bank of Sweden USD 30 billion, Bank of Denmark USD 15 billion, Bank of Norway USD 15 billion).
	The Fed increases funds available through Term Auction Facility	Term Auction Facility was introduced in December 2007 to allow deposit institutions to borrow from the Fed for a fixed period using the same collateral as in the discount window (28-day and 84-day operations) - an increase from USD 150 billion to USD 300 billion - announcement of two additional auctions in November (USD 150 billion).
	Citigroup's plans to buy Wachovia Corp. assets	
30 September	Paulson's statement to continue work on the rescue plan	
	Another anti-crisis package announced in Russia	Among others, refinancing the foreign debt of Russia's corporations and banks to the amount of up to USD 50 billion through the state-owned Development Bank and simplified rules for refinancing banks by Russia's central bank
	Cash injection to Belgo-French financial group DEXIA	EUR 6.4 billion aid from the governments of Belgium, France and Luxemburg.
	Decision of the Government of Ireland to fully guarantee deposits of the largest banks for 2 years	The change applies to: Allied Irish Bank, Bank of Ireland, Anglo Irish Bank, Irish Life and Permanent, Irish Nationwide Building Society and Educational Building Society (earlier, on 20 September the guarantee limit was raised from EUR 20,000 to EUR 100,000).
2 October	US Senate adopts a revised rescue plan (Emergency Economic Stabilization Act)	Additional assumptions to the plan: the ceiling for federal insurance for bank deposits raised from USD 100,000 to USD 250,000, restrictions on wages and on "golden parachute" payoffs for executives of the banks receiving assistance under the plan, prolonged application of tax breaks for enterprises, amounting to a total of USD 110 billion, spurring economic growth.
3 October	Information on potential takeover of Wachovia Corp. by Wells Fargo & Co	

Date	Event	Details
	Nationalisation of the Dutch arm of Fortis	Buyout for EUR 16.8 billion.
	Limits for guaranteed deposits raised in the United Kingdom	Increase from GBP 35,000 to GBP 50,000 (with a possibility of further rise).
	Full bank deposit guarantees introduced in Greece	
6 October	Nationalisation of the Belgian arm of Fortis	The Belgian government buys the remaining shares; consent to take over 75% of Fortis Bank and 100% of Fortis Insurance Belgium by the French BNP Paribas (transaction value: around EUR 14.5 billion).
	Support to German Hypo Real Estate	Support by consortium of banks increased from EUR 35 billion to 50 billion.
	Continuing problems of UniCredit	Suspension of share trading on the Milan stock exchange. Announcement of capital increase of EUR 6.6 billion.
	Full guarantee for retail savers' bank deposits introduced in Germany	
	Full guarantee for bank deposits introduced in Denmark	Under the agreement with banks establishing the Liquidation Fund totalling USD 6.4 billion.
	Full guarantee for bank deposits introduced in Iceland	
	Increase of the amount of guaranteed deposits in Sweden	The amount of guaranteed deposits doubled to the amount of SEK 500,000 and the possibility to extend guarantees to branches of credit institutions in Sweden, should the home country guarantee for such an institution be lower.
	Promise to introduce full guarantee for retail savers' deposits in Austria	
	The Fed raises funding at short-term auctions	Increase in funds under Term Auction Facility to USD 900 billion, including two auctions planned in November, each USD 150 billion.
	Dispute over takeover of Wachovia Corp.	The Fed involvement in dispute between Citigroup and Wells Fargo.
7 October	Change of deposit guarantee rules in EU	EU finance ministers agreed to raise the minimum guarantee from EUR 20,000 to EUR 50,000.

Date	Event	Details
	Iceland's problems escalation	a. the government takes control over the banking system (the government's power to nationalise banks, push through mergers, change governors and determine restrictions on their wages); b. Icelandic financial supervision authority seizes control of Landsbanki, the second largest bank in the country; c. currency peg for the Icelandic krona announced: 131 ISK per euro.
	Reserve Bank of Australia cuts interest rates	Cut by 100 basis points.
	Changes in deposit guarantee rules	Spain - promise to raise deposit guarantee to EUR 100,000; the Netherlands - decision to raise deposit guarantee to EUR 100,000; Taiwan - promise to double guarantee (from 1.5 million to 3 million Taiwan dollars, i.e. USD 92,000); Belgium - promise to raise guarantee to EUR 100,000; the Czech Republic - promise to raise guarantee to EUR 50,000
8 October	Central banks' coordinated move	the Fed , EBC, Bank of England, Bank of Canada, Bank of Sweden and Swiss National Bank cut interest rates by 50 basis points (Switzerland by 25 b.p.).
	Further interest rate cuts by other central banks	China by 27 b.p., Hong Kong 100 b.p, Kuwait by 135 b.p, United Arab Emirates by 50 b.p.
	Italy - anti-crisis package	Urgent creation of a EUR 20 billion protection fund for banks experiencing difficulties.
	Financial assistance plan for UK banks	a. central bank support of GDP 200 billion in short-term liquidity b. public capital injection to banks and building societies of up to GDP 50 billion c. the government guarantees up to GDP 250 billion of banks' new issues of short- and medium-term debt, with the aim of ensuring medium-term funding stability of banks. Banks covered by the scheme: Abbey, Barclays, HBOS, HSBC, Lloyds TSB, Nationwide Building Society, Royal Bank of Scotland and Standard Chartered.

Date	Event	Details
	Changes in deposit guarantee rules	Austria - introduction of full deposit guarantees announced earlier Finland - increase to EUR 50,000; Slovakia - government's proposal to guarantee deposits fully; Cyprus - promise to raise deposit guarantee to EUR 100,000; Hungary - promise to guarantee deposits fully; Romania - promise to raise deposit guarantee to EUR 50,000
	Iceland - insolvency of Icesave bank	a. insolvency of Icelandic Icesave bank (owned by Landsbanki, operating in the Netherlands; one day earlier - announcement of insolvency of Icesave branch operating in the United Kingdom); b. Icelandic FSA takes control of Glitnir Bank (a few days earlier the state acquired a 75 percent stake in the bank for (the equivalent of) EUR 600 million; c. Sweden's central bank grants assistance to the branch of Kaupthing, the largest Icelandic bank.
	Supplementary liquidity assistance for AIG	the Fed's announcement about providing supplementary liquidity to AIG - borrowing USD 37.8 billion in securities from AIG in return for cash.
9 October	Icelandic FSA takes control of Kaupthing, Iceland's largest bank	
	Governments of France, Belgium and Luxembourg guarantee Dexia's liabilities	
	Ukraine - central bank grants assistance to Nadra Bank	1.5 billion hryvnia refinancing credit. (USD 300 million).
10 October	Ireland expands guarantee to major branches of foreign banks	Guarantee granted to five foreign financial institutions with their seats in Ireland: Ulster Bank from Northern Ireland, First Active from the United Kingdom, Halifax Bank of Scotland, IIB Bank from Belgium and the German Postbank.
	Possible wider support for Italian banks	Italian finance minister Giulio Tremonti is preparing a "contingency plan" to give banks more liquidity and guarantee loans – it would allow cash-strapped banks to buy guarantees from the government. The minister consulted the the authorities of Bank of Italy.

Date	Event	Details
	Problems in Ukraine	a. FX operations for the public suspended by some banks; b. administrator appointed in Prominvestbank, the country's sixth-largest bank, and capital injection of 2 billion hryvnia granted; c. assistance for Nadra Bank, Ukraine's seventh largest bank.
11-12 October	Euro area countries adopt a flexible assistance plan.	Guarantees of euro area countries for interbank lending for a limited period until end of 2009 to provide banks with liquidity and enable them to increase capital.
	Short-term sale ban in Greece	The ban will remain in force until 31 October 2008.
	Changes in deposit guarantee rules	Australia - full guarantee for a period of 3 years for deposits in credit unions and building societies; New Zealand - full guarantee for 2 years.
13 October	Euro area countries rescue plans following the adoption of a joint plan	France - EUR 320 billion package for interbank lending guarantees and EUR 40 billion to increase own funds in troubled banks Germany - EUR 400 billion package for interbank lending guarantees and EUR 100 billion for banks' recapitalisation and guarantees; Portugal - up to EUR 20 billion guarantee for domestic banks; Spain - possibility to guarantee up to EUR 100 billion in banks' new debt; Italy - EUR 20 billion banks' protection fund; the Netherlands - EUR 200 billion interbank lending guarantee; Austria - promise of assistance of up to EUR 100 billion.
	the Fed broadens swap lines with central banks	ECB, Swiss National Bank, Bank of England may offer unlimited amount of funds in US dollars through 7-day, 18-day and 84-day auctions at fixed interest rate.
	Ukraine - ban on early withdrawal of bank deposits	Ban issued by central bank.
14 October	Rescue plan in the United States - implementation of the first part	Enabling the government to acquire equity stakes totalling USD 250 billion in banks. First stage: acquisition of equity stake for USD 125 billion in the following 9 banks: Bank of America; Merrill Lynch; Citigroup; JPMorgan Chase; Wells Fargo; Goldman Sachs; Morgan Stanley; Bank of New York; State Street.

Date	Event	Details
	Hungary - FX credit suspended by some banks	Hungarian branch of Bayerische Landesbank suspended FX loans (the largest Hungarian branch of OTP bank and the branch of Erste Bank were considering taking similar steps).
	Bank of Japan decision to join unlimited swap lines in USD	
15 October	Liquidity assistance plan in South Asian countries	World Bank to provide USD 10 billion in start-up capital. Funds to be used for purchase of "toxic" assets and banks' recapitalisation.
	Greece - rescue plan	EUR 28 billion in financial assistance for the banking system.
16 October	Ukraine - cash withdrawal limited	Banks' decision to limit cash withdrawal from ATMs.
	Switzerland - assistance for two largest banks	Financial assistance for UBS and Credit Suisse Group.
	Hungary - central bank's agreement with the ECB	Providing supplementary liquidity to Hungarian banks in the amount of EUR 5 billion through repo operations.

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

Balance on technical insurance account – difference between income from premiums as well as the so–called other technical income and damages paid out, benefits and changes to technical and insurance provisions, the costs of pursuing insurance activity (*inter alia*, administrative and canvassing costs and the cost of acquisition), the so–called other technical costs and a part of income from deposits.

Borrowing burden ratio (enterprise sector) – the ratio of bank loans and advances (to residents and non–residents, total) to the balance sheet total. Both at the level of the whole sector and that of particular enterprises, the ratio is calculated with the use of data from GUS F–01 reports.

Borrowing burden ratio (household sector) – the ratio of loans to households (residents) to their yearly gross disposable income. Data on loans come from the NBP monetary statistics, data on gross disposable income come from GUS national accounts.

Cash liquidity ratio – the ratio of short–term investments (short–term assets purchased for the purpose of achieving economic profits resulting from the increase in value of the assets) to short–term liabilities (liabilities arising from purchase of goods and services, and other liabilities that become due within 12 months).

Capitalisation rate – the ratio of income from a property to its purchase price.

Consumer loans – *inter alia*, overdraft facility, credit card lending, instalment loans.

Core deposits – the stable part of deposits of the non–financial sector. For the purpose of NBP analyses it is assumed that the proportion of core to total deposits amounts to 70% of the value of deposits. This level is the minimum amount reported by eight banks questioned by the NBP on their estimation of the stable part of deposits placed by non–financial entities.

Cost/income ratio – the ratio of operating expense to net income from banking activity.

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.

Credit spread – the difference between the loan interest rate and the interbank market interest rate.

Debt burden ratio (enterprise sector) – the ratio of liabilities (towards residents and non–residents, total) to the balance sheet total. Both at the level of the whole sector and that of particular enterprises, the ratio is calculated with the use of data from GUS F–01 reports.

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.

Earning assets – the sum of claims on financial institutions, non–financial customers and general government sector, plus securities and claims due to sell–buy back and repo transactions on securities.

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.

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.

Guaranteed rate – the interest rate used for the calculation of technical and insurance provisions in life insurance sector and provisions for discounted value of annuities.

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

Irregular loans – at banks applying Polish accounting standards: loans classified as *substandard, doubtful, loss* loans; at banks applying IFRS: impaired loans, as recognized by the bank on the base of objective circumstances.

Irregular loan ratio – the ratio of irregular loans to total loans.

Loan service burden ratio (household sector) – the ratio of the sum of principal and interest instalments paid by households to their disposable income. For the sector's aggregated ratios, the sum of principal and interest instalments is estimated based on banking statistics on the value of loans, the average interest rate on consumer, housing and other loans, and the average maturity loans. Data on gross disposable income come from GUS national accounts. Ratios on the level of particular households are calculated on the basis of data from GUS Household Budget Surveys.

Net charges / Net movements in provisions and valuation allowances – net charges to provisions less releases of certain provisions.

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.

One–month liquidity gap – the difference between the book value of assets with the maturity of up to 1 month and the book value of liabilities with the maturity of up to 1 month.

Premiums earned – part of the gross written premiums payable to the insurance company for the risk incurred within a particular reporting period (determined as a written premiums in the reporting period decreased by the balance of provisions for unearned premiums as at the end of the reporting period and increased by the balance of provisions for unearned premiums as at the beginning of the reporting period).

Quick liquidity ratio – the ratio of the sum of short–term investments (short–term assets purchased for the purpose of achieving economic profits resulting from the increase in value of the assets) and short–term claims (claims arising from sales of goods and services, and all or part of other claims that are not classified as financial assets and become due within 12 months) to short–term liabilities (liabilities arising from purchase of goods and services and other liabilities that become due within 12 months).

Technical profit/loss of PTE from the management of OFE – difference between revenues from managing OFE (*inter alia*, fees from premiums paid–in and remuneration for OFE management) and the costs of OFE management (*inter alia*, commissions for ZUS on premiums paid–in, the costs of acquisition, PTE general costs).

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

List of abbreviations

AC	Comprehensive insurance of land vehicles, excluding rail vehicles - subsector III of non- life insurance
BIK	Credit Information Bureau
CRD	Capital Requirements Directive (Directive relating to the taking up and pursuit of the business of credit institutions)
DEV	Developing rating outlook (contingent upon an event)
DNG	Rating under review by agency for possible downgrade
ECB	European Central Bank
EURO STOXX 50	Index of 50 big-cap companies from the euro area, calculated by Stoxx Ltd - joint venture of stock exchanges of Germany, Switzerland and Dow Jones & Co.
IF	Investment funds
IFRS/IAS	International Financial Reporting Standards / International Accounting Standards
IRS	Single currency Interest Rate Swap. An Interest Rate Swap is a contractual arrangement between two counterparties who agree to exchange interest payments on a defined nominal amount for a fixed period of time. The payments are expressed in the same currency and calculated according to a predetermined interest rate for each of the parties. The rates of IRSs presented in the *Report* are ones where counterparty pays a fixed rate in exchange for receiving an interest rate calculated according to a floating WIBOR.
GUS	Central Statistical Office
GPW	Warsaw Stock Exchange
KDPW	National Depository for Securities
KNB	Commission for Banking Supervision
KNF	Polish Financial Supervision Authority
KSF	Financial Stability Committee
LtV	Loan-to-value ratio. Ratio of the amount of loan to the value of property on which security is established
MSCI EM	Index of companies from 26 emerging economies calculated by MSCI Barra - subsidiary of Morgan Stanley
MRRR	Minimum required rate of return
mWIG40	Index of 40 medium-cap companies listed on the Warsaw Stock Exchange

NBP	National Bank of Poland
NFI	Non-bank financial institutions
OC	Third-party liability insurance
OFE	Open Pension Funds
OIS	Single currency interest rate swap based on overnight rate. Overnight Index Swap is a transaction obligating both parties to swap periodical interest payments from a given nominal amount for an agreed period. Interest payment is expressed in the same currency and is calculated at the interest rate fixed for each of the parties. Rates for OIS contracts presented in *Przeglądzie* are the fixed interest rates paid for interest accrued according to average O/N rate in the contract validity period.
POS	Positive rating outlook.
PTE	Pension fund management companies
ROA	Return on assets. Profit of an entity expressed as percentage of the average value of its assets
ROE	Return on equity. Profit of an entity expressed as a percentage of the average value of its equity (in the case of banks, defined as regulatory capital)
ROEA	Return on earning assets. Profit of a bank expressed as a percentage of the average value of its earning assets(ang. *return on earning assets*)
STA	Stable rating outlook
sWIG80	Index of 80 small-cap companies listed on the Warsaw Stock Exchange
TFI	Investment fund management company
ufk	Insurance investment fund
UPG	Rating under review by agency for a possible upgrade
VaR	Value at Risk
WIG20	Index of 20 large-cap companies listed on the Warsaw Stock Exchange
ZU	Insurance companies