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# Financial Stability Review

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First half of 2006

Warsaw, September 2006

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National Bank of Poland

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## **1. Executive Summary**

The first half of 2006 saw no phenomena that could pose a threat to the stability of the domestic financial system. Good macroeconomic conditions had a favourable impact on the condition of financial institutions. A high economic growth rate favoured improvement in profitability of enterprises and increase in income of households; this, coupled with increased lending, resulted in an improvement in the results of bank's lending activity and in higher income of non-bank financial institutions.

Unfavourable tendencies on the debt securities market in the second quarter of 2006 negatively influenced the financial performance of some institutions, especially those that held large portfolios of Treasury securities. Nonetheless, calculations of VaR resulting from the interest rate risk and the exchange rate risk demonstrate that banks' exposure towards the market risk remains low, relative to their capital.

Good outlook for the financial condition of banks' customers fuelled the growth in demand for loans. This, combined with the tendencies observed in the economy, induced banks to broaden the scope of lending products offered, and widen their customer base. This contributed to the acceleration of the growth rate of housing loans and sustained high growth rate of consumer loans. The gradual recovery of banks' lending to enterprises also continued.

The increased value of banks' loan portfolios translated into a rise in their exposure to customers' credit risk. Since the growth rate of banks' capital was somewhat slower than that of risk-weighted assets, the measures of the banking sector's ability to withstand adverse developments in the economy slightly diminished. However, owing to the high level of capital, the level of banks' shock absorption capacity remains high. This thesis is endorsed by the results of simulations conducted under assumptions of various paths of deterioration in the quality of banks' assets. The results indicate that the banks' capital buffer is large enough to let them survive even severe disruptions.

Non-bank financial institutions exerted a positive influence on the banking sector stability. It stemmed largely from increased assets and improved earnings, from the strengthening of banks' role as distributors of financial products offered by non-bank financial institutions, and from the stabilising role that they play in financial markets. The financial performance of non-bank financial institutions may, however, be impacted by a drop in the price of Treasury bonds.

The outlook for further asset growth and improvement in earnings of financial institutions is favourable, although, certain risk factors exist that may – should they occur – adversely affect banks' portfolio quality and, in consequence, their earnings. Developments on international markets will be a significant factor influencing the financial system stability. A risk exists that the sustained high commodity prices, including oil prices, or their further growth, may cause a slowdown in the world economy or, in the case of a rise in inflation, further tightening of the monetary policy in core economies. It could also hamper the growth in the Polish economy.

The rapid growth in lending, and the constantly increasing borrower base in particular, need to be carefully monitored. It is not quite clear whether the easing of loan terms and conditions by banks, observed at present, has a sound enough base in

improvement in risk management procedures. An increase in credit risk taken by banks, including larger lending to customers that have a relatively low income margin, may cause deterioration in banks' portfolio quality in the case of an unexpected increase in the amount of principal and interest instalments. Such consequences may arise from a sudden adjustment of prices on the world's financial markets, which would in turn induce upward pressure on domestic interest rates, and depreciation of the zloty.

To recapitulate, financial system stability in the first half of 2006 did not come under threat. However, the rapid growth of banks' lending that accompanied the economic expansion and the improvement in the financial condition of households and enterprises requires strict monitoring, due to the possibility of an accumulation of credit risk in the balance sheet of the banking sector – the largest component of the financial system.

## 2. Real sector performance

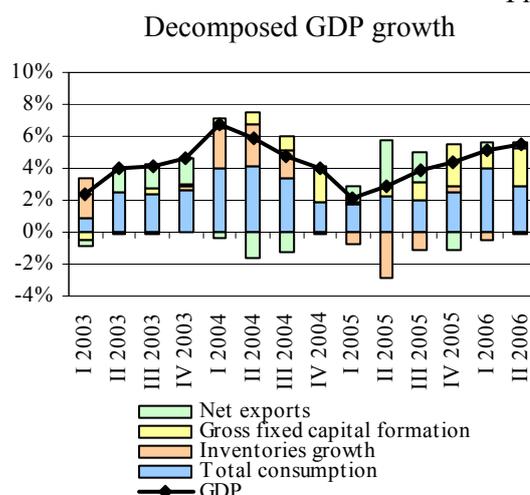
The macroeconomic developments in the first half of 2006 favoured stability of the financial system. A high economic growth rate and high profitability of enterprises prevailed in that period. The developments on the labour market (a further slide in the unemployment rate and an increase in wages) reduced risk related to lending to households and was conducive to a growth in the number of customers of financial institutions. Favourable trends in the economy — from the point of view of financial system stability — will possibly be maintained in the forthcoming quarters, as indicated, inter alia, by the NBP projection of the GDP (see *Inflation Report*, July 2006).

### 2.1. The corporate sector

The second quarter of 2006 was the fifth consecutive quarter of accelerating economic growth (year-on-year) which amounted to 5.5%. The high GDP growth resulted mainly from increased domestic demand, in particular from individual consumption (see Fig. 1). As indicated by the projection published in the July *Inflation Report*, the GDP growth rate is very likely to continue at ca. 5% (y/y), whereas individual consumption will remain the main driver of the economic growth. Responses of the enterprises and banks surveyed by the NBP support expectations of high and growing investment dynamics in the forthcoming quarters as the capacity utilisation rate continues at a record high (see Fig. 2). At the same time enterprises, especially large ones and those manufacturing investment goods, positively assess the investment climate. The possible growth in investment in the long term is also shown by the results of GDP projection developed by the National Bank of Poland. Further growth in investment should be additionally supported by the favourable terms and conditions of obtaining external financing by enterprises due to low interest rates.

The positive macroeconomic developments were also reflected in the condition of enterprises. Companies positively assess the present and expected demand for their products as well as anticipate further growth in output. The average corporate profitability remained high (see Fig. 3). However, profitability movements differed, depending on the size of enterprises. In the first half of 2006, the average profitability

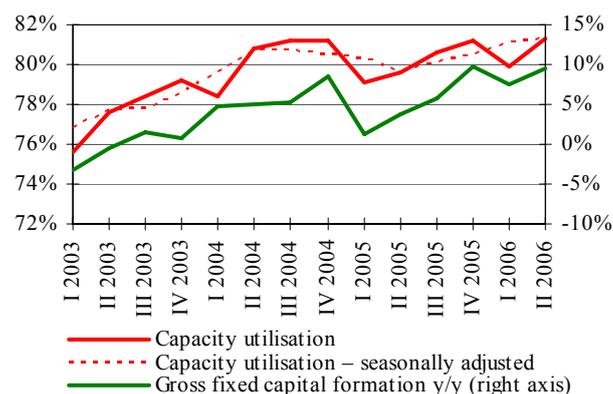
Figure 1



Source: NBP estimates based on GUS data.

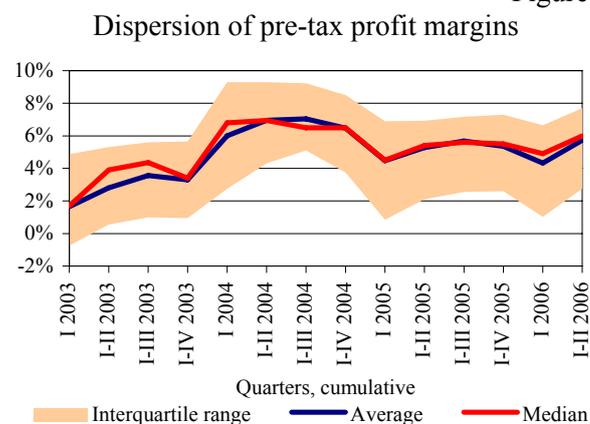
Figure 2

### Average capacity utilisation and gross fixed capital formation



Source: quick monitoring survey data, NBP, GUS.

Figure 3



Note: the lower bound of the shaded area represents the first quartile, whilst the upper bound represents the third quartile; the ratios refer to the average levels in particular sections of the economy.

Source: NBP calculations based on GUS data.

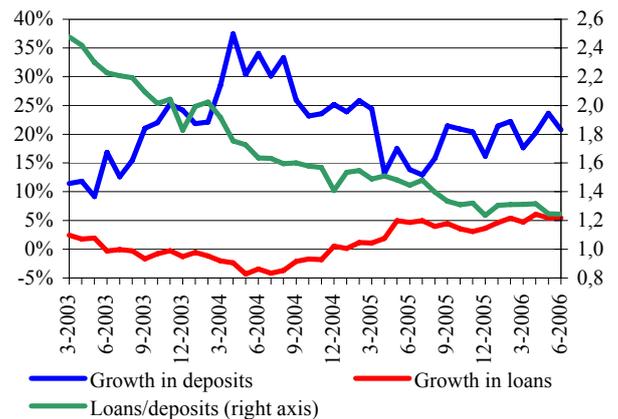
of the corporate sector improved as compared to the previous year. The greatest improvement was recorded in large enterprises, which continued to demonstrate high profitability.

Optimistic expectations of enterprises had an impact on the continuation of the upward trend in loans extended (see Fig. 4). The growth in lending, adjusted for exchange rate movements, was slightly higher in the first half of 2006 as compared to the second half of 2005. At the same time, strong corporate deposit growth continued, which resulted from large corporate profits and the relatively low scale of investment — as compared to the growth in individual consumption. The increase in deposits was noted mainly by enterprises which did not use any bank loans. These enterprises made the greatest contribution to the improvement in liquidity ratios of the corporate sector. However, also corporate borrowers (including those that increased their loans outstanding) maintain a liquidity reserve in the form of cash and other liquid assets (see Fig. 5).

The possibility for a continued upward trend in banks' lending to enterprises is indicated by the results of NBP's *Senior Loan Officer Survey*. In the second quarter of 2006 banks observed a significant growth in demand for loans from large enterprises, and a steadily high demand for loans on the part of SMEs. At the same time, banks continued easing their policy towards the small and medium-sized enterprises sector (lending policy towards large enterprises had been significantly eased before).

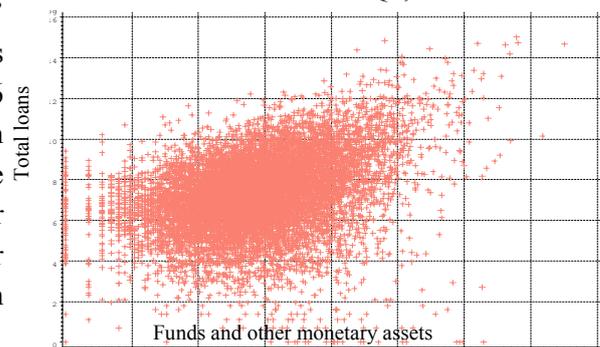
The easing of banks' lending policy coincided with a rise in debt of enterprises which recorded losses (see Fig. 6). The total value of domestic and foreign banks' claims on enterprises which recorded losses amounted to PLN 27.2 bn at the end of June 2006 (24.2% of total lending to enterprises), increasing from PLN 25.1 bn (23.4% of total lending) in the previous year. At the same time, debt of enterprises that recorded positive profitability picked up. Increased banks' exposures towards enterprises that recorded losses may reflect the banks' stronger preference for funding higher risk entities whilst expecting improvement in their financial standing. The continued downward trend in the number of corporate bankruptcies and arrangements, as well as in the number of companies pronounced uncreditworthy by banks, points to a decrease of credit risk in corporate lending and supports the hypothesis of banks' stronger preference for funding companies which temporarily exhibit higher risk. Increased

Figure 4  
Growth in corporate loans and deposits (y/y)



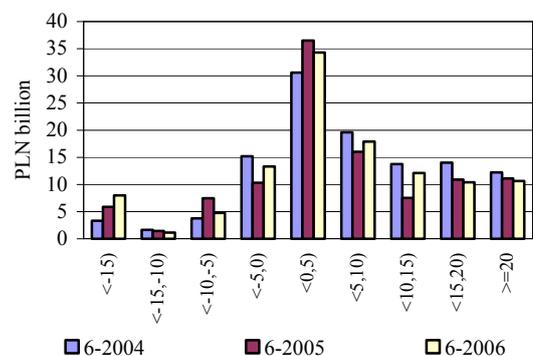
Note: the growth rates have been calculated for data adjusted for FX movements. The loans/deposit ratio has been calculated for unadjusted data.  
Source: NBP.

Figure 5  
Interdependency between loans outstanding and cash and equivalents held, as of the end of Q1, 2006



Note: both axes are in the logarithmic scale. Each point in the figure presents an enterprise with bank loans outstanding — data for enterprises with more than 49 employees.  
Source: NBP calculations on the basis of GUS data.

Figure 6  
Distribution of bank loans by corporate profit margins (first half of each year)



Source: NBP calculations on the basis of GUS data.

debt of unprofitable companies may also arise from increased foreign funding of international corporations' affiliates operating in Poland, which did not show any profits as they were transferred abroad.

The continued growth in the value of corporate loans extended induced a slight increase in the borrowing and debt burden of enterprises (both for the ratios calculated based on aggregated data, i.e. for all enterprises reporting to GUS, and at the micro-level, i.e. for individual corporate borrowers) (see Figs. 7 and 8). Notwithstanding the above, the increase in the borrowing burden of enterprises should not have a negative impact on the outlook for banking sector stability, as both the debt burden and the borrowing burden ratios are at historically low levels.

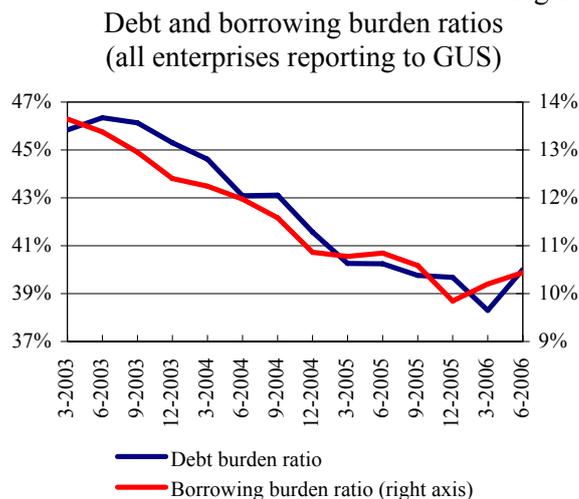
Good financial results of enterprises and falling interest rates on zloty-denominated loans decreased the interest payments to pre-tax profit ratio, despite the growing corporate bank debt (see Fig. 9). The growing corporate foreign debt requires further observation. Corporate foreign debt arising from loans and debt securities amounted to ca. EUR 32.5 bn in the first quarter of 2006, up by 8.2% as compared to the first quarter of 2005. The phenomenon stems mainly from the increased foreign trade. The growing foreign debt translates to increased exposure of a part of enterprises to FX risk. However, possible threats to financial system stability are mitigated by the fact that a significant portion of that risk is hedged by foreign currency revenues of enterprises. The share of enterprises that use derivative instruments to hedge FX risk is also growing. At the end of 2000, 17.3% of enterprises used such instruments, whereas in mid 2006 their share grew to 31%. The figures for exporters stood at 20.9% and 40.5%, respectively.

## 2.2. The household sector

As the corporate sector, the household sector also saw an improvement in the economic outlook. In the first half of 2006, the average monthly wages in the economy continued to grow at a high rate (see Fig. 10). Better labour market performance led to a decline in unemployment<sup>1</sup> and a rise in the number of employed (see Fig. 11). With these trends continued, the high growth rate in individual consumption should be maintained.

The surge in salaries and in employment as well as a

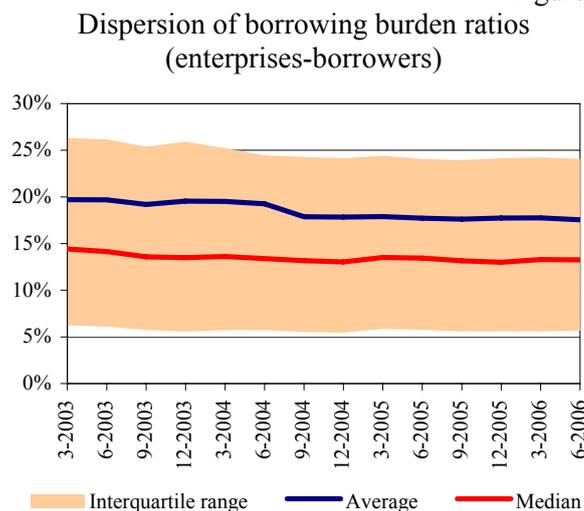
Figure 7



Note: "debt" shall be construed as total liabilities of the enterprise, "loans" shall be construed as bank loans and advances.

Source: NBP calculations on the basis of GUS data.

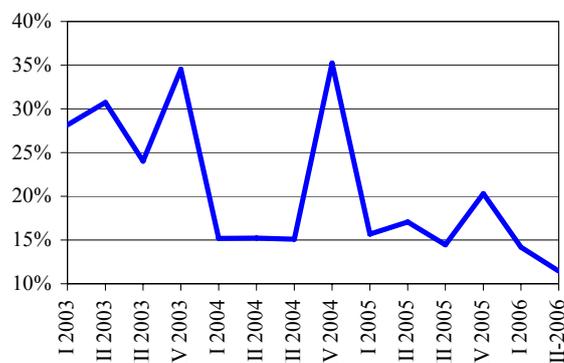
Figure 8



Source: NBP calculations on the basis of GUS data.

Figure 9

## Interest burden on net operating income (total enterprises)



Source: GUS.

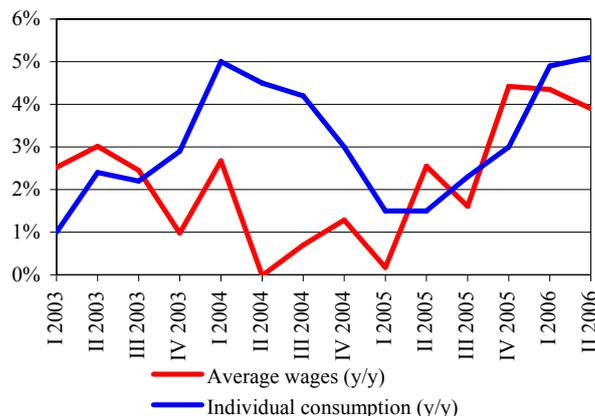
positive economic climate on the Warsaw Stock Exchange contributed to a substantial increase in financial assets of the household sector. The highest growth was reported in assets accumulated as investment fund participation units and life insurance investment fund units (see Chapter 5). It should be noted here, however, that the growing share of funds accumulated in investment funds and stocks in financial assets of households will increase the volatility of their assets value in the case of changing climate on the capital markets. At the same time, real estate becomes an ever more significant component of household assets. Unfortunately, data that would allow for an assessment of the extent of the impact of movements in real estate prices on financial sector stability is still missing.

The improvement on labour market, optimistic expectations of households as to their future financial standing, and concerns about further growth in property prices induced households to increase their bank borrowing. In the first half of 2006, a high growth rate of consumer lending<sup>2</sup> continued, whereas the growth in the value of housing loans extended accelerated (see Fig. 12). The increased significance of household debt means that households are increasingly exposed to interest rate and FX risk. These types of risk may, in turn, translate to increased credit risk incurred by banks. Most housing loans are extended on flexible interest rates (which translates to increased interest payment burden of households, should the market interest rates increase) (see Table 9). At the same time, the share of foreign currency loans in property loans granted to households picked up from 59.5% in March 2005 to 68.5% in June 2006.

The growing scale of indebtedness of households led to an increase in the sector-average debt and loan service burden ratios (see Figs. 13 and 14). However, both ratios remain at a low level as compared to more developed economies of the EU<sup>3</sup>.

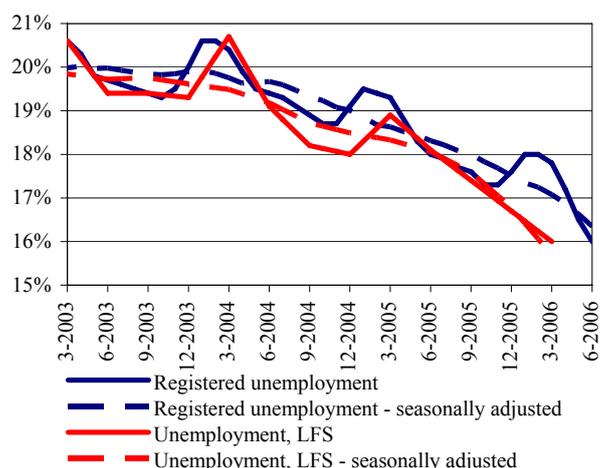
Debt service and loan service burden ratios calculated at the microeconomic level (i.e. for individual households-borrowers) did not change significantly in 2005, which resulted mainly from a drop in interest rates on zloty loans. However, the mortgage loan service burden ratio grew (see Fig. 15)<sup>4</sup>. The rapid growth in housing loans that influenced the increase of the said ratio prevailed over several factors that counteracted this upward trend, i.e. an increase in the average loan maturity, strengthening of the zloty exchange rate, and

Figure 10  
Increase in real wages against individual consumption



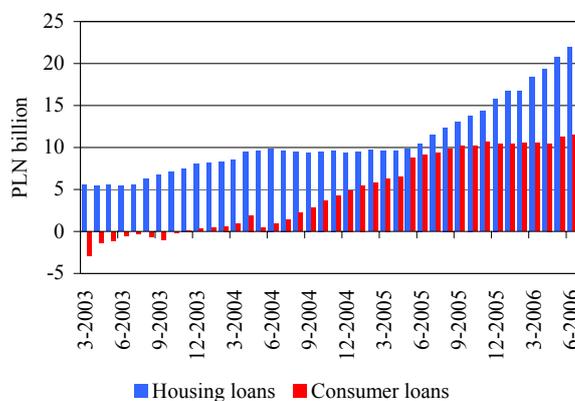
Note: wages CPI-deflated.  
Source: NBP estimates based on GUS data.

Figure 11  
Registered unemployment and unemployment according to Labour Force Survey



Source: GUS data, seasonally adjusted by the NBP.

Figure 12  
Growth amounts of loans to households (y/y)

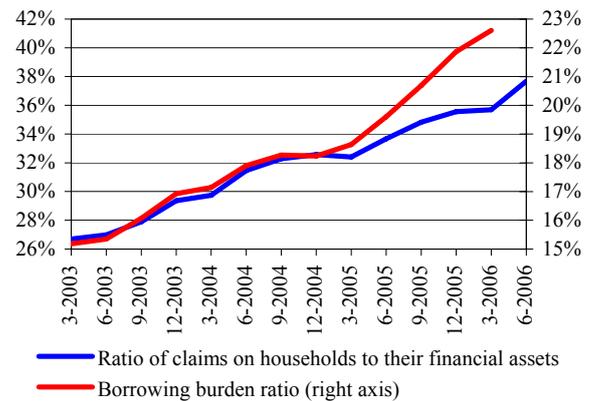


Note: data adjusted for FX differences. Consumer loans were defined in footnote 2.  
Source: NBP.

narrowing of credit spreads. However, the level of the ratio remains below EU-15 median value (about 20%). Moreover, households repaying housing loans are, on average, more affluent than households repaying any loan<sup>5</sup> and thus have a larger income margin, in case of a change in the amount of principal and interest instalments.

The decreased banks' credit risk may have been favoured by the extension of the average maturity of housing loans (between December 2005 and June 2006 the average foreign currency loan maturity went up from 11.9 to 13.2 years). However, the results of the increase in the average maturity of housing loans should be interpreted with caution. In the case of some borrowers, the maturity was being extended in order to increase the loan amount granted. In such circumstances, the actual credit risk incurred by the bank may even grow.

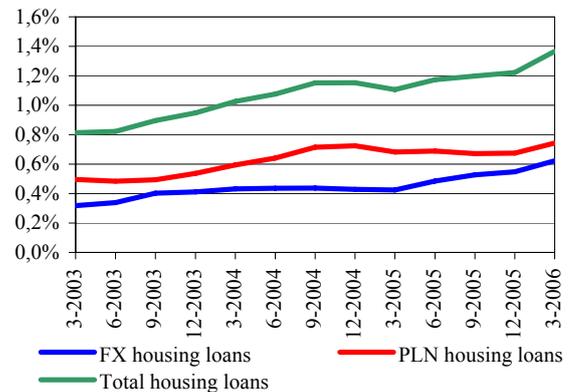
Figure 13  
Ratio of household loans to financial assets and the borrowing burden ratio



Source: GUS, NBP.

Figure 14

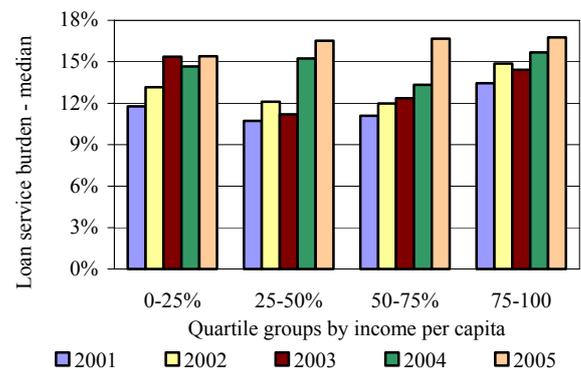
Housing loan service burden ratio (total households)



Source: NBP.

Figure 15

Loan service burden (households repaying mortgage loans)



Note: due to changes in the survey questionnaire, calculations for 2005 have been conducted with the new method (details in footnote 4).

Source: NBP calculations on the basis of GUS data.

### 3. Financial markets in the first half of 2006

In the first half of 2006 the picture of financial markets changed as compared to 2005. The change pertained primarily to the markets of debt securities and interest-rate-sensitive derivatives, which are the most significant markets in terms of exposure of domestic financial institutions to market risk.

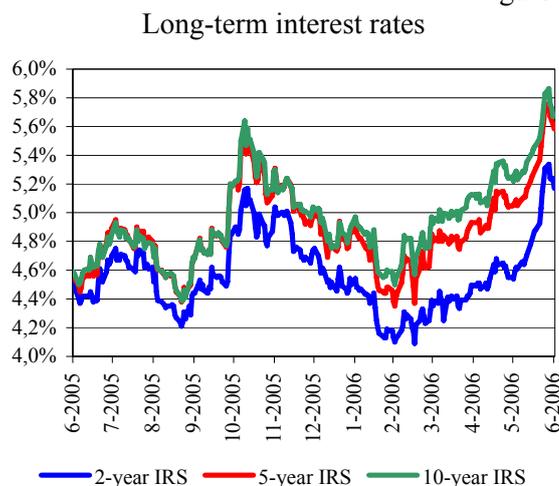
The condition of the domestic financial market was largely influenced by the developments on the markets of the most advanced economies (tightening of the monetary policy in the largest economies), which resulted, inter alia, in turbulence in the emerging markets (which was particularly strong in Turkey) in the second half of May and in June. Some influence was also exerted by the growing political uncertainty in the second quarter, related to the changes in the office of the Finance Minister and the reconstruction of the government.

#### 3.1. Interest rates

Following the cuts in NBP official interest rates in January and February, market expectations of further short-term interest rate cuts faded. The short-lasting downward trend in long-term interest rates, which was a continuation of the market's reaction to the drop in bond prices in the fourth quarter of 2005, ended as well. As of March, the entire yield curve consistently moved upwards. Thus, the previous long-term upward trend in prices of Treasury securities finally finished (see Fig. 16).

In the second quarter, withdrawal of capital by foreign investors could be observed, which was reflected in, among other things, a decrease in the relative exposure of non-residents on the bond market. The reduction of investment positions by foreign investors followed from the increased expectations of domestic interest rate rises, a greater political uncertainty (related primarily to changes in the office of the Finance Minister and the threat to implementation of fiscal reforms), a smaller disparity of domestic interest rates against yields observed on the markets of more advanced economies, and profit taking by some foreign investors aimed to offset the losses they had incurred as a result of turbulence on the emerging markets. It is worth noting here that the increase in FRA contract rates, observed at the end of the second quarter, (see Fig. 17), only partly followed from the emergence of

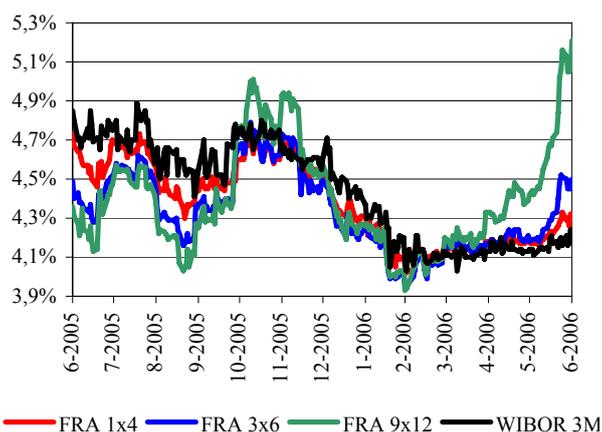
Figure 16



Source: Reuters.

Figure 17

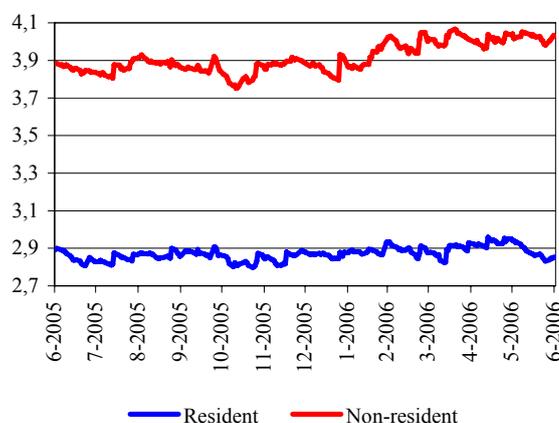
Quotations of FRA contracts vs. 3M WIBOR rates



Source: Reuters.

Figure 18

Duration of wholesale bond portfolios of residents and non-residents



Source: NBP calculations based on National Depository for Securities data.

market expectations of an increase in NBP official interest rates. The increased FRA contract rates were also a result of the arbitrage against the growing yield of Treasury securities, sold by foreign investors.

### 3.2. FX market

The zloty exchange rate against the euro remained within the range marked by market fluctuations in 2005. In the second half of the second quarter, a weakened zloty exchange rate was related to the increased closing of positions by foreign investors on the Treasury bond market (see Fig. 19). The behaviour of foreign investors stemmed from the higher uncertainty related to investment on markets outside the most developed economies and the occurrence of processes (e.g. increased interest rates on core markets) gradually weakening the “hunt for yield” phenomenon. The growing interdependency of the zloty exchange rate and the exchange rate of other currencies of the region also indicates to the impact of foreign investors on the exchange rate movements.

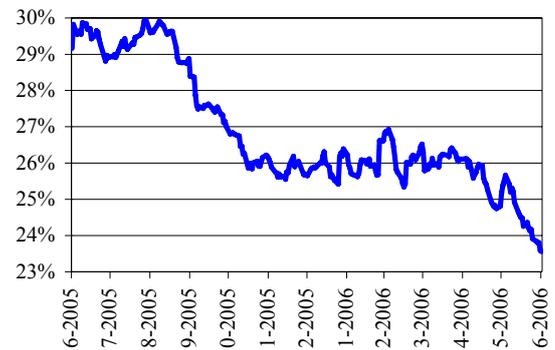
A strong interdependency between the cash segment of the FX market and the options market occurred (see Fig. 20). Periods of zloty depreciation were accompanied by increased implied volatility. It means that market participants perceived the depreciation periods as time of increased risk and uncertainty as to the scale and direction of further movements in the value of the zloty. However, throughout the period under analysis, the level of implied volatility did not exceed those observed in 2005.

Zloty exchange rate movements do not have a direct significant impact on the stability of financial institutions. Banks — which have the largest assets among the financial institutions operating in Poland — are characterised by closed FX positions. However, the increase in the value of foreign currency housing loans granted to households makes monitoring exchange rate movements significant for the purpose of analyses of financial system stability.

### 3.3. Equity market

In the first half of 2006 the Polish equity market featured trends similar to those on the world markets (see Figs. 21 and 22). The upward trend on the Polish market, present since

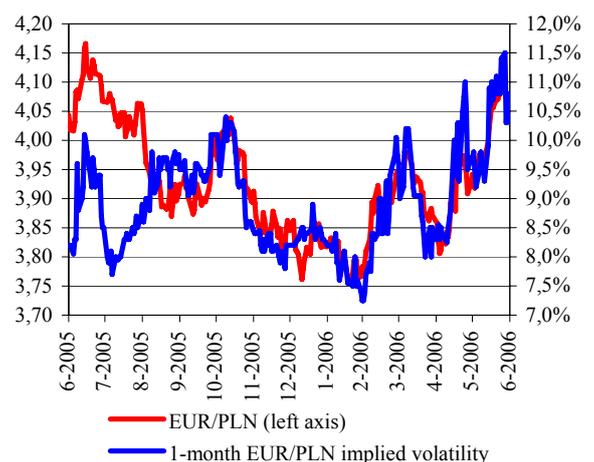
Figure 19  
Market share of non-residents on the wholesale Treasury bond market



Note: calculations are based on the market value of Treasury bonds.

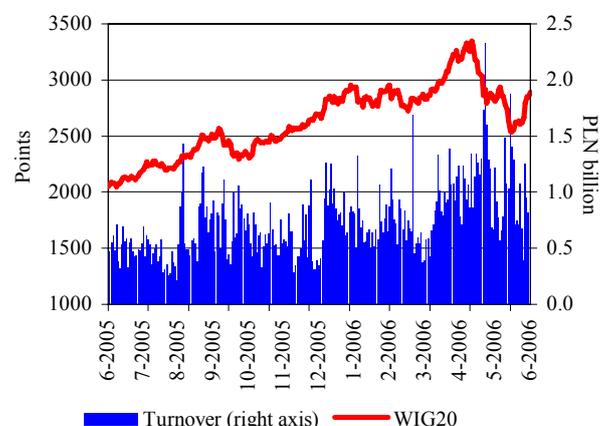
Source: NBP calculations based on National Depository for Securities data.

Figure 20  
Zloty exchange rate vs. its implied volatility



Source: Reuters.

Figure 21  
WIG20 and turnover in stocks comprising WIG20



Source: GPW.

May 2003, peaked in May, with GPW indices reaching their historical highs. Then, the index of the largest companies (WIG20) plummeted (its value fell by 24% in the period from 11 May to 14 June). It was accompanied by a significant increase in the risk of price changes perceived by investors, reflected in higher implied volatility resulting from WIG20 option quotations. The realised volatility of the index increased at that time as well.

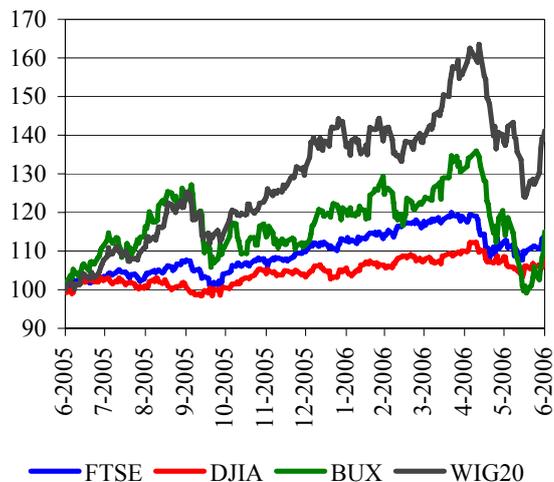
The share price slump at the turn of May and June had the greatest impact on the largest, most liquid companies. It resulted partly from the previous relatively high market share of foreign investors, who invested their funds in stocks of the largest and the most liquid companies. The reduction of their exposure on the Polish market led to a downtrend of share prices at the WSE. The significant role of foreign investors is further confirmed by the increasing correlation with other markets of the region and with the world's leading stock exchanges. Changes in quotations of oil and metal prices on the world's markets also had a strong impact on movements in the stock exchange indices, due to a large share of commodity companies in the capitalisation of the Warsaw Stock Exchange.

### 3.4. Real estate market

In the first quarter of 2006<sup>6</sup>, the housing market experienced a continued firm surplus of demand over supply. It contributed to further growth in housing unit prices. However, a detailed analysis of the phenomenon is hampered by a lack of basic information concerning the real estate market. In particular, reliable nationwide indices of price movements in this market are missing. The NBP is currently working on developing such an index. Completion of work in this area will allow to conduct more comprehensive analyses of this issue, which is important from the point of view of financial system stability.

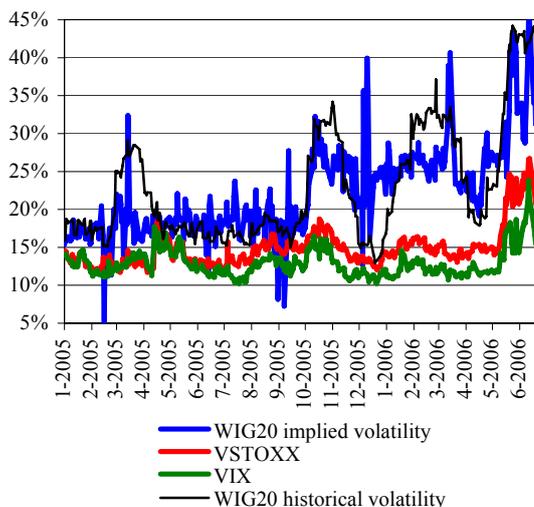
Due to a lack of data for the whole country, partial data concerning local markets must be used in analyses. Prices of newly built flats in Warsaw increased between the first quarter of 2005 and the first quarter of 2006 by about 10-20%, and by as much as 30%<sup>7</sup> in the most attractive locations. Primary market trends had an impact on the secondary market. The available data allow to assess that the average transaction price in the secondary market in the first quarter of 2006 was by ca. 20% higher than the average transaction price

Figure 22  
WIG20 movements vs. other stock exchanges



Note: values of all indices are standardised to 100 as at 30 June 2005.  
Source: Reuters.

Figure 23  
Implied volatility for WIG20 against other volatility indices



Note: WIG20 implied volatility calculated according to method introduced in "Financial Stability Report — 2005", NBP, June 2006, pp. 41-43.  
Source: NBP calculations.

in 2005.

Many factors indicate that the surplus of demand over supply, resulting in an increase in housing unit prices, will be maintained in the forthcoming quarters. The structural demand for flats, stemming from migration to larger cities, from the demand reported by successive generations of the demographic boom of the 70s and the 80s, and from the desire to improve housing conditions, is strengthened by short-term factors. Some investors accelerate the decision on the purchase of a flat due to the uncertainty as to the VAT on housing property as of 2007. As of 1 January 2007 a new, 19% tax on property sale income is planned to be levied. Strong expectations of further increases in housing unit prices and purchases of investment and speculative nature resulting therefrom, including those made by foreign investors, also play a significant role. For a part of borrowers, who finance the purchase of a flat with a loan, the announcement of Recommendation S (see subchapter 4.1) taking effect (as of 1 July 2006) was also important.

There are still considerable problems on the supply side. There is no information on systemic measures that would allow for an increase in the supply of flats (e.g. favouring increase in the supply of land provided with utilities, increase in the number of local development plans, or acceleration of the procedures of issuing decisions on development terms and conditions). The fact that the supply of housing units grows relatively slowly despite a quick response of companies to changes in this market indicates a significant role of limitations of structural nature. In particular, a growing number of companies, including foreign ones, enter the development business on the Polish market. However, there is a risk that even if structural limitations are contained, it may not fully translate into an increase in housing unit supply, since the phenomenon of economic emigration may prevent construction companies from employing a sufficient number of qualified workers.

A different situation prevails in the commercial real estate market (office space). Although the unrented space ratio in Warsaw is on a continuous decrease, rent rates are observed to consistently decrease. Market analysts expect that in 2006 office space rental prices in the centre of Warsaw may continue their slight downtrend. They should stabilise when the process of renting office space in further large investments is finalised.

#### 4. Banking sector stability

The most important factor that characterised the banking sector in the first half of 2006, shaped its financial performance and future soundness, was acceleration of household lending growth<sup>8</sup>, primarily of foreign currency housing loans and — to a lesser extent — consumer loans. At the same time, banks showed a greater appetite for credit risk, which brought about, among other things, improved net interest income. The continued trend of expanding the group of borrowers through lending to less wealthy customers may have led to accumulation of credit risk in banks' balance sheets, which may be of some importance in the long term, in the circumstances of a turnaround of the business cycle.

As a result of an increase in the value of loans, capital adequacy ratios diminished slightly; however, the average capitalisation in the banking sector was very high. Simulations of various paths of deterioration in the loan portfolio quality indicate that the development of lending slightly compromised banks' resilience, but they still would be able to absorb losses resulting from the occurrence of analysed scenarios, and continue to develop their business (although on a lesser scale than so far).

To sum up, it should be stated that banks' financial condition and the simulations conducted do not indicate any systemic threat to banking sector stability.

##### 4.1. Credit risk

###### 4.1.1. Overall claim quality

In the first half of 2006 positive changes in the quality of claims of the banking sector were observed: irregular loan ratios dropped, as compared to year-end, particularly in the non-financial sector. However, the improvement was largely a statistical effect, stemming from a high growth of new loans. The overall irregular loan ratio for all sectors amounted to 6.5% at the end of June 2006. The ratio was much lower for the financial sector and the general government sector, whereas the mean was raised by the ratio for claims on non-financial customers, which amounted to 9.4% (see Table 1).

The concentration of credit risk in the portfolio of claims on non-financial customers (see Table 2) means that

Table 1  
Irregular loan ratios by sector of borrower (%)

	2004	2005	6-2006
Financial sector	3.7	3.2	3.1
Non-financial customers	95.4	96.0	96.6
General government	0.9	0.7	0.5

Source: NBP.

Table 2  
Composition of irregular loans  
(total irregular loans = 100%)

	2004	2005	1 <sup>st</sup> half of 2006
Non-financial customers:	-27.4	-15.9	-5.5
Corporates	-31.4	-22.5	-7.8
Households	-17.6	-0.5	-1.7
- of which individuals	-24.0	9.0	1.5

Source: NBP.

Table 3  
Changes in value of irregular loans to non-financial borrowers (%)

	2004	2005	1 <sup>st</sup> half of 2006
Non-financial customers:	-27.4	-15.9	-5.5
Corporates	-31.4	-22.5	-7.8
Households	-17.6	-0.5	-1.7
- of which individuals	-24.0	9.0	1.5

Notes: non-economic factors influencing movement in amounts of irregular loans:

(1) 2004 — change in loan classification criteria (e.g. extending of the minimum arrears period to 90 days in the case of corporate and housing loans, and to 180 days in the case of retail loans);

(2) 2005 — application of individual methods of impairment valuation, i.e. application of IFRS by the majority of the banking sector.

Source: NBP.

the potential costs of banks related to insolvency of borrowers from this sector would be the highest. Therefore, further analysis covers quality of loans extended to non-financial customers.

### Quality of claims on non-financial customers

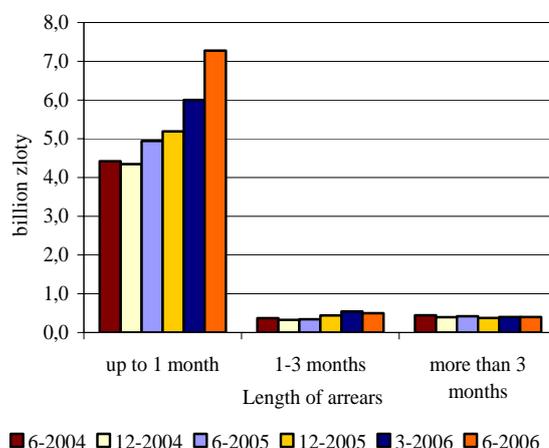
In the first half of 2006, irregular loan ratios were on a downward trend, both in the portfolio of loans to households and enterprises (see Table 4). However, since it was largely a statistical effect stemming from the growth in loans extended as well as a result of cleaning up balance sheets by removal of accumulated *loss* loans<sup>9</sup>, the improved quality of loan portfolios must be assessed with caution (the impact of the growth in loans on the drop of the ratio may be assessed at ca. 60% for the total portfolio and at 90% in the case of loans extended to households).

In the first half of 2006, the total amount of irregular loans decreased. This fall in irregular loans resulted primarily from a drop in the enterprise sector, which should be related both to the fact that part of customers regained creditworthiness, and to the impact of application of individual methods of estimating impairment of financial instruments by a greater number of banks (IAS 39)<sup>10</sup>. A slide in the amounts of irregular loans was also recorded in some groups of household sector borrowers, i.e. micro-enterprises (with up to 9 employees) and farmers. On the other hand, an increase in the amount of irregular loans was recorded in the largest component of the household debt, i.e. in loans to individuals (see Table 3). Its slow growth has been progressing gradually since end-2004, when, pursuant to a regulation of the Minister of Finance, all banks reclassified consumer loans with a delay shorter than 180 days to the satisfactory category, and improved the average portfolio quality stepwise.

Acceleration should be noted in the growth of the amount of loans with the shortest payment delays, i.e. delays which do not classify them as irregular loans (see Figs. 24 and 25). However, the percentage of loans with payment delays up to 30 days in the total loans extended to individuals was on a downtrend, similarly to irregular loans ratio.

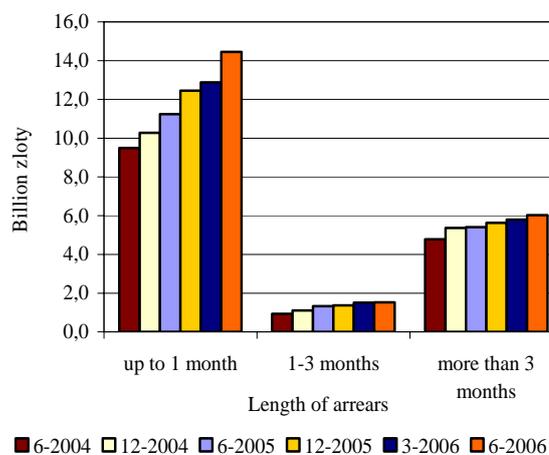
The increase in the value of irregular retail loans is related to the acceleration of banks' lending in the past three years and, to a certain extent, also its natural consequence. It does not necessarily have to indicate future problems with loan

Figure 24  
Foreign currency loans to individuals, by length of arrears



Source: NBP.

Figure 25  
Total loans to individuals, by length of arrears



Source: NBP.

Table 4  
Irregular loan ratios by borrower groups of non-financial sector (%)

	2004	2005	6-2006
Corporates	19.5	14.7	12.8
Households	9.7	7.8	6.7
- of which individuals	7.2	6.1	5.3

Source: NBP.

repayment, as long as it is not accompanied by eased risk management standards in banks. However, the phenomenon should be observed with special attention, due to the symptoms of the increasing propensity of banks to undertake credit risk. It is evidenced by changes developing for a dozen months in the structure of the banking sector assets, and the type of credit products indicated by banks as strategic.

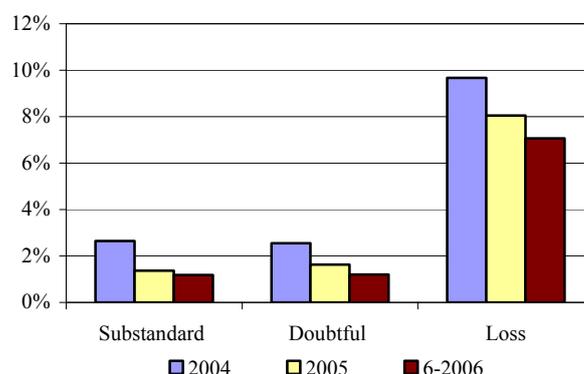
A several-year stagnation in loans to corporates, which was overcome only in mid-2005, caused a situation where the main source of the banks' income was lending to the retail sector. Banks have for a dozen quarters reported easing of their credit standards and loan terms and conditions for that sector, which has been accompanied by a high growth rate of loans, especially housing loans denominated in foreign currencies. Easing of loan terms and conditions leads, among other things, to increased loan amounts and LTV ratios, whereas easing of credit standards — to extending loans to lower income customers, who have smaller buffers for loan repayment in case of increased interest rates or depreciation of the zloty.

Not only the growth rate of housing loans — largely mortgage-secured, but also a high growth rate of consumer loans — typically with worse security (other than the so-called consolidation loans, mortgage-secured)<sup>11</sup>, should be noted.

Offers of consumer loans (advances) with simplified granting procedure and with no security requirements or guarantors have emerged in the market. Some of these products are targeting customers from the segment not serviced by banks until not so long ago, i.e. higher-risk customers. Along housing loans and credit cards which are slowly becoming a mass product, these loans are listed by banks as strategic and, indeed, record high sales.

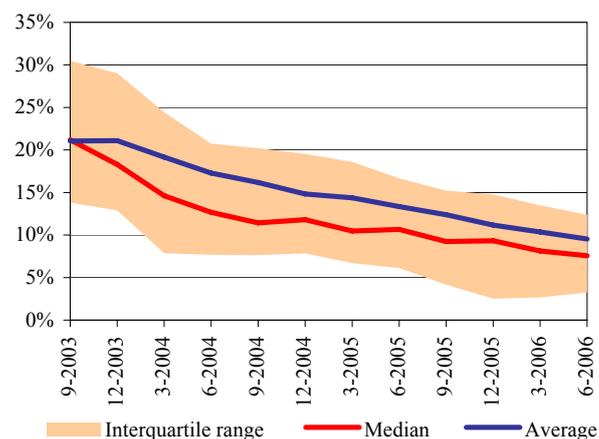
The intensified sale of easily-accessible consumer loans is accompanied by improvement of internal risk management procedures and increased use by banks of reports prepared by the Credit Information Bureau (BIK). Thanks to cooperation with the BIK<sup>12</sup>, banks have access to credit histories of potential customers (both negative and positive ones), and — as of February 2004 — the behavioural scoring, prepared on the basis of information from all institutions submitting data to the Bureau. The use of scoring facilitates banks to select loan applications and thus favours easing of the credit policy. However, easing of the bank's credit policy should be

Figure 26  
Shares of individual irregular loan categories in the overall loan portfolio



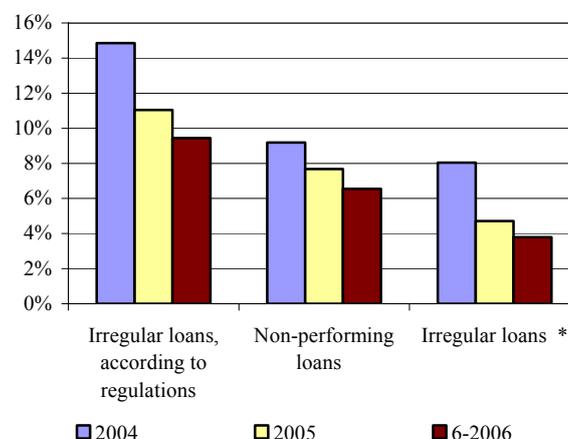
Source: NBP.

Figure 27  
Dispersion of irregular loan ratios, commercial banks



Source: NBP.

Figure 28  
Share of irregular loans in total loans



\* Irregular loans and total loans reduced by loss loans covered with provisions.

Source: NBP.

conducted correspondingly to the growing possibilities of proper customer risk rating, and not stem solely from the competitive pressure.

Loans classified as *loss* still dominated irregular loans (see Fig. 26), which was a consequence of a backlog in writing them off (which began on a larger scale only at end 2003), and a slow pace of cleaning up banks' balance sheets. The amount of loans deducted from assets and posted as memo-items during the first half of 2006 constituted less than 3% of loss loans as at the end of 2005. Since the banks exhibit a reserved approach to this form of balance sheet cleaning, it should rather be expected that irregular loans will be sold to specialised investment funds that further commission the loan recovery to debt recovery companies. The sale of claims to funds allows for recovery of a portion of the claim (an estimated 5-20%<sup>13</sup>), and — contrary to the case of posting loans as memo-items — brings tax benefits (the difference between the face value of the claim and the sale price obtained may be recognised as a deductible cost). The irregular loan ratio (for non-financial customers) that takes into account the possibility of sale of *loss* loans would amount to roughly 3.8%<sup>14</sup> at the end of June 2006 (see Fig. 28).

The increased value of loans was accompanied by higher net charges to specific provisions (in banks that apply PAS in the preparation of unconsolidated statements) and impairment provisions (in banks that apply IFRS). However, the above operations of charging-off *loss* loans to provisions and sale of assets to investment funds caused a decrease in total provisions<sup>15</sup>, which led to slightly diminished coverage of the loan portfolio with provisions (see Table 5).

### ***Credit risk related to financing the real estate market***

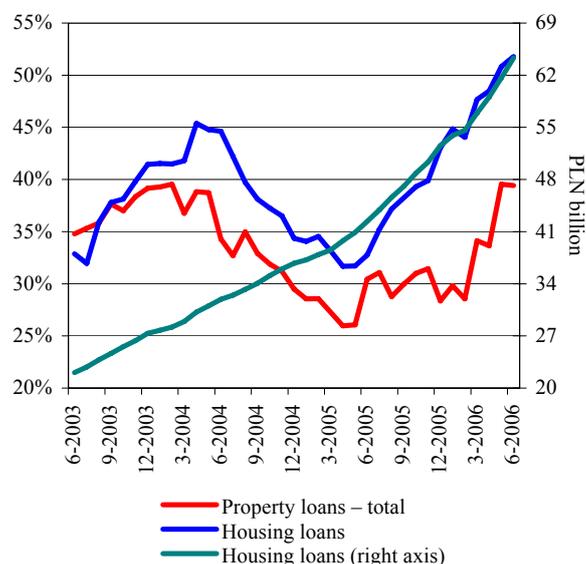
Loans extended to finance the real estate market call for a separate consideration. Their impact on the financial condition of banks is ever more increasing, in view of their high growth rate and increasing importance as a source of interest income. It refers particularly to housing loans (see Fig. 29). Fierce competition on the housing loan market is also of some importance, as it has contributed to lowering lending margins to levels similar to those observed in the euro area countries, and induced easing of credit standards.

Table 5  
Coverage of loan portfolio with specific provisions (%)

	2004	2005	6-2006
Specific provisions / irregular loans	55.5	66.2	68.2
Specific provisions / loan portfolio (i.e. a total of <i>satisfactory, special mention, and irregular loans</i> )	5.5	7.74	7.54
(Total specific provisions - specific provisions for loss loans) / loan portfolio – <i>loss</i> loans in the equivalent of provisions established for them	1.7	0.76	0.71

Source: NBP.

Figure 29  
Housing loans to households: value and nominal growth rate (y/y)



Source: NBP.

The long sustained high growth rate of housing loans follows both from the banks' policy in which this banking product is considered strategic, and from the maintained demand for housing units as well as from the increased present and anticipated housing unit prices. Additionally, the announcement of *Recommendation S* taking effect as of 1 July 2006 contributed to the acceleration of the growth of housing loans. The recommendation of the Commission for Banking Supervision was developed for the purpose of improving the banks' procedures of granting foreign currency mortgage loans and the overall process of credit risk management. It imposes an obligation on banks to require higher creditworthiness from a customer that applies for a foreign currency housing loan than when applying for a zloty loan of an equivalent amount. This requirement makes banks offer their customers lower amounts of loans in foreign currencies than in the zloty, where the difference is to act a "buffer" in the case of zloty depreciation and increased principal and interest instalments. Before 1 July 2006, most banks had been willing to grant a higher loan (at a particular level of creditworthiness/material status of the customer) denominated in foreign currency than in the zloty<sup>16</sup>. Therefore a tightening of credit standards for foreign currency loans was generally expected as of July 2006. Hence, part of potential borrowers brought forward their borrowing decisions.

Whilst the impact of the implementation of *Recommendation S* on the acceleration of housing loans growth rate was limited over time, the growing demand for housing units and the increase in their prices seems to be of sustainable nature, at least over the next several years (see subchapter 3.4).

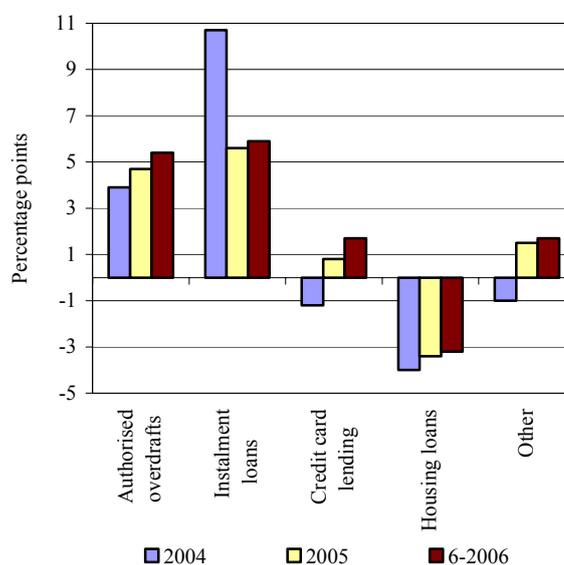
*Recommendation S* may slow down the growth in foreign currency loans. As follows from comments of banks' representatives, the hitherto-observed demand for foreign currency loans stemmed partly from lower interest rates on such loans as compared to zloty loans, and partly from the difference in their availability, conditioned on the borrower's creditworthiness. Restricted availability of foreign currency loans in the hitherto-granted amounts to persons with the lowest creditworthiness will be offset to a certain extent by the possibility of drawing zloty housing loans subsidised by the State Treasury<sup>17</sup> (due to a limitation of the group of potential beneficiaries of the subsidies, it will apply to customers buying their first flats, in relatively cheaper locations). The above changes in the demand structure and

Table 6  
Irregular loan ratios for property loans (%)

	2004	2005	6-2006
Property loans, of which:	6.3	5.8	4.9
by currency			
- zloty loans	7.2	8.0	7.6
- foreign currency loans	5.2	4.1	3.0
by type			
- housing loans to households	3.3	2.3	2.2
- housing loans to corporates	9.7	14.4	13.6
- non-housing loans to corporates	18.4	19.6	16.7

Source: NBP.

Figure 30  
Irregular loan ratios (difference in percentage points relative to the average quality of loans to individuals)



Note: data for residents; a negative value shall be construed as quality better than average.

Source: NBP.

lowering of the maximum amount of loans for customers with the lowest creditworthiness should have a favourable impact on the resilience of banks' loan portfolios.

Tightening of credit standards for foreign currency loans should enhance the interest in zloty loans, which is growing anyway due to the gradual convergence of interest rates on the most popular — so far — loans in Swiss francs and in the zloty. These developments will, on the other hand, probably translate into further increase in competition on the zloty housing loan market.

The present quality of housing loans is relatively good — it exceeds the quality of other loans to households (see Table 6 and Fig. 30), and underwent further improvement in the first half of 2006. However, it should be borne in mind that the major improvement in housing loan portfolio quality ratios is a result of a rapid expansion of their denominator (i.e. high growth of lending), and thus is of a statistical nature. Slides in the amounts of irregular loans were recorded in the categories of foreign currency loans and non-housing loans to enterprises (see Table 7). Nonetheless, the percentage growth in the remaining property loan categories remained contained.

The average amount of a housing loan increased during the year, which raises the sensitivity of households to interest rate fluctuations. The effect of the increase in the average amount of a housing loan was partly offset by the extension of the average loan maturity (see Table 8).

The FX risk of banks' customers also grew (the growth rate of foreign currency housing loans was more than twice higher than that of zloty loans, and three times that in the case of loans denominated in Swiss francs) (see Fig. 31).

To sum up the developments in the banking sector in terms of the credit risk undertaken, it should be stated that the favourable macroeconomic environment supported the improvement of the current quality of loan portfolios. At the same time, however, the evolution of banks' loan offers and the easing of credit standards and loan terms and conditions, stemming from the competition, may raise some concern about the future quality of loans, as it is not entirely clear whether changes in the credit policy are sufficiently justified by the improvement in risk management.

Table 7  
Changes in amounts of irregular loans for property financing (%)

	2004	2005	1 <sup>st</sup> half of 2006
Property loans, of which:	0.3	24.5	2.6
by currency			
- zloty loans	4.9	29.7	6.7
- foreign currency loans	-5.8	16.9	-4.0
by type			
- housing loans to households	-26.0	-1.2	18.3
- housing loans to enterprises	-21.4	57.7	-0.7
- non-housing loans to enterprises	175.7	28.1	-2.6

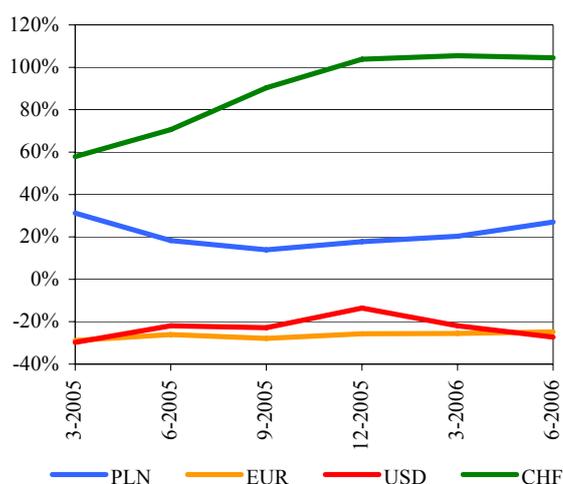
Source: NBP.

Table 8  
Average maturity of housing loans (years)

	Zloty	Foreign currency	Total
12-2005	11.28	11.87	11.60
3-2006	11.34	12.74	12.13
6-2006	11.29	13.17	12.39

Source: NBP.

Figure 31  
Growth rate of property loans for households (y/y)



Source: NBP.

#### 4.1.2. Outlook for loan quality

The course of economic developments in the forthcoming quarters should favour the maintenance of financial system stability. The expected high GDP growth of around 5% (according to NBP projection) translates into a high probability of further improvement in the financial condition of both enterprises and households. Therefore, the credit risk incurred by banks with regard to the previously granted loans should be diminishing. Such a course of developments would also favour the possibility for expansion of the scale of activity by financial institutions.

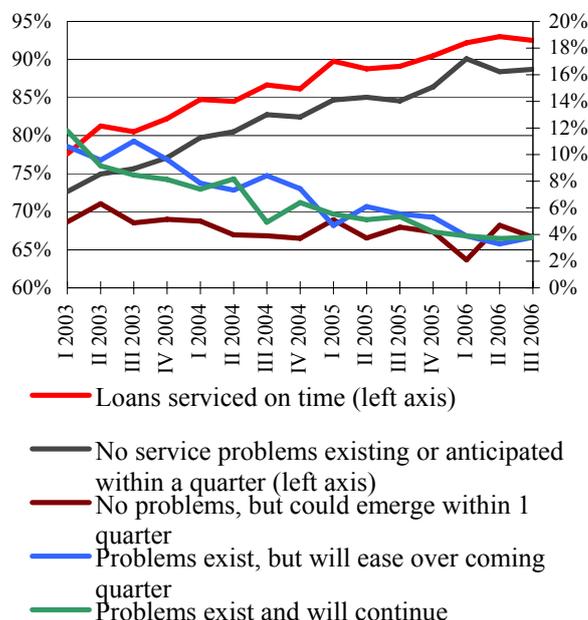
The improving financial condition of enterprises, rapidly growing individual consumption, increasing absorption of EU funds, and a better outlook for the economic development of Poland's main economic partners may induce enterprises to continue the launched investments or undertake new ones, and expand their business. This should in turn drive their demand for loans. The trends observed also indicate a high probability of high demand for loans by households continuing — both for housing and consumer loans. This follows both from their improved financial standing and continually high level of consumer optimism ratios.

#### Enterprises

Both macroeconomic data and results of surveys demonstrate a decrease in banks' risk related to financing enterprises. There is a high probability that the situation will prevail over the forthcoming quarters. The percentage of enterprises that have problems with debt service or anticipate such problems in the future remains at a historically low level (see Fig. 32). A downtrend also prevails in the number of corporate bankruptcies and arrangements declared. As follows from the GUS survey, enterprises in most sections of the economy assess their financial outlook as better. This is a positive phenomenon, especially where the high levels of profitability currently noted are taken into account.

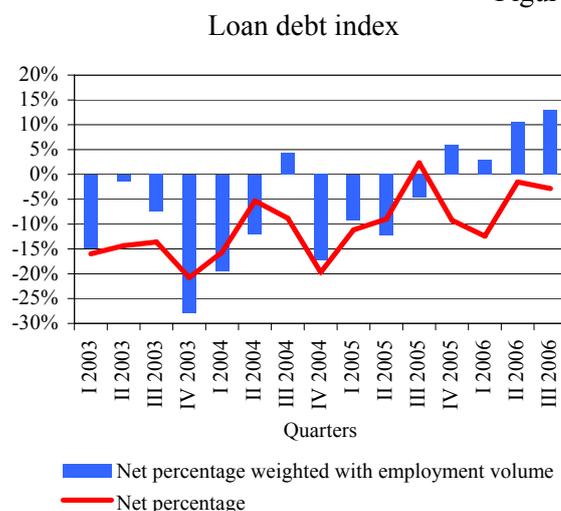
The optimism of enterprises is expressed inter alia in decisions taken by enterprises concerning borrowing (which is reflected in the increase of loan debt index — see Fig. 33).

Figure 32  
Problems with loan servicing (corporate sector)  
and possibilities of their occurrence in the near  
future



Source: NBP.

Figure 33



Source: NBP quick monitoring survey data.

Table 9  
Share of floating rate loans in housing loans(%)

	12-2005	3-2006	6-2006
Zloty loans	98.22	98.88	99.02
US dollar loans	97.68	97.73	97.16
Euro loans	98.68	98.66	98.51
Other currency loans	98.21	97.43	97.25

Note: Swiss franc loans dominate the "other currency loans" category in housing loans.

Source: NBP.

## Households

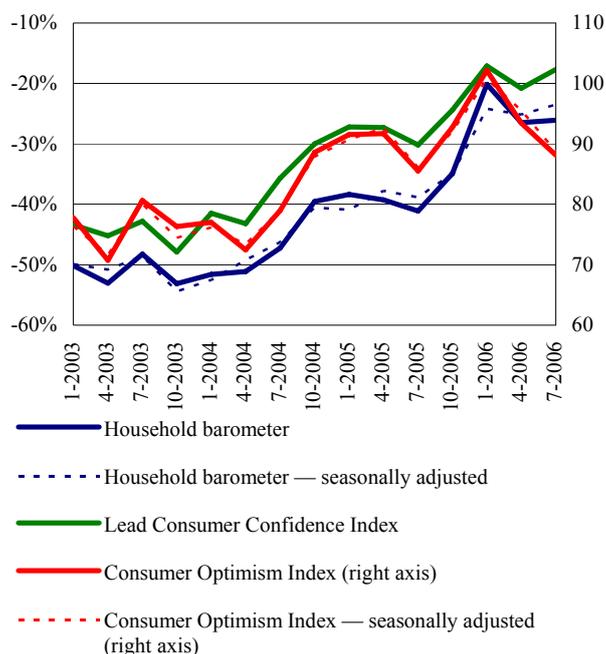
Maintenance of the upward trend in demand for loans on the part of households may be expected. It is favoured by the anticipated improvement in the financial standing of households (which leads to their increased creditworthiness) as well as by a high level of consumer optimism ratios (which has a positive impact on plans concerning consumption) (see Fig. 34). The favourable developments on the labour market, the decreasing uncertainty related to employment, and the lower risk of income source loss have a diminishing effect on the bank's risk related to loans granted in previous years. The tendencies observed in the condition of households will favour both the good financial standing of households and the growth of their demand for loans.

## Risk factors

The tendencies discussed above, favourable for the financial system stability, have a high probability of materialising. However, emergence of factors that would adversely affect the economic growth outlook and the condition of financial institutions and their customers, although unlikely, cannot be excluded.

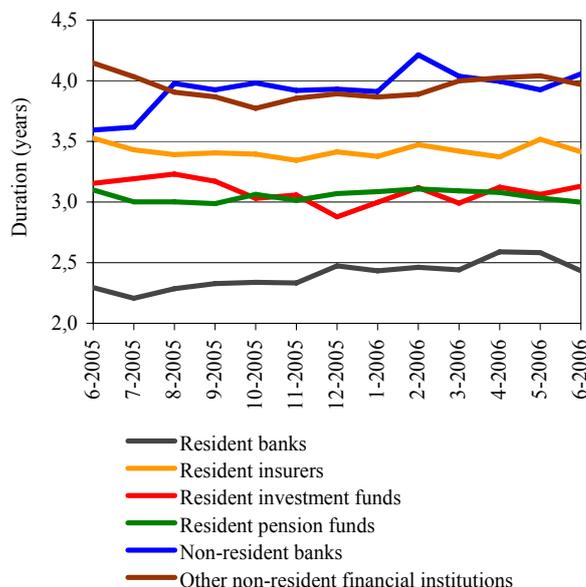
The increase in household borrowing means that, apart from the macroeconomic situation, tendencies observed on financial markets have an ever greater impact on the financial condition of households. It stems from the fact that the majority of loans are extended on variable interest rate terms as well as from a large share of foreign currency loans in loans to households, especially housing loans. At the same time, lower income individuals constitute an ever growing group of banks' customers. This customer group may turn out to be more sensitive to any disruptions in the economy, since it has a limited margin of disposable income to finance an unexpected increase in debt service cost — e.g. as a result of weakening of the zloty exchange rate or increased interest rates. Rapid unwinding of imbalances in the global economy, which manifest themselves in particular through simultaneous emergence of trade deficits and high levels of public finance deficits in the largest economies, may become a cause of disruptions in financial markets. Were such tendencies to emerge, a risk would arise that investors withdraw from countries perceived as emerging markets. This in turn may contribute to a weakening of the zloty exchange rate and

Figure 34  
Condition of households during the next year



Source: Research Institute of Economic Development (Warsaw School of Economics), Ipsos, GUS.

Figure 35  
Duration of portfolios of wholesale Treasury bonds held by individual categories of financial investors



Source: NBP calculations based on KDPW data.

increased domestic interest rates.

Unwinding the global imbalance could also contribute to a slowdown in the global economic growth rate. A similar effect may be brought about by the sustained high prices of oil and other commodities as well as more restrictive monetary policy implemented by the central banks in core economies, resulting inter alia in falling prices of debt securities. A deterioration of the economic climate in countries which are Poland's most important economic partners might also slow down the economic growth in Poland, thus worsening the financial condition of enterprises and households and increasing banks' credit risk.

Threats to the future economic growth may also be of internal origin. Problems with absorption of EU funds, together with the sustained political risk and the limited scope of structural reforms, may induce enterprises to delay their investment decisions. The current high growth rate of individual consumption, coupled with a relatively low investment rate (18.5% over the past 12 months), raises concerns about the grounds for the future economic growth.

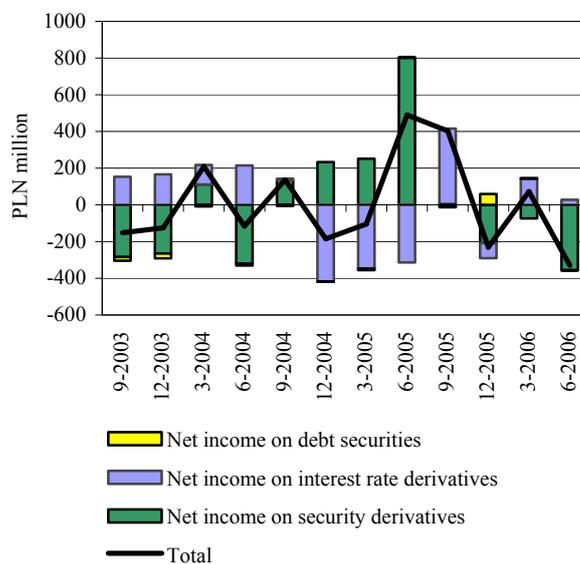
Another risk factor lies in the possibility of intensification of wage pressures in the economy, which may bring about the necessity of adjustments in the macroeconomic policy. The probability of occurrence of intensified wage pressures is increased by favourable labour market developments (a drop in the unemployment rate) and the economic migration, which has produced a deficit of employees in some industries.

#### 4.2. Interest rate risk

The major source of bank's market risk is the interest rate risk. Since a prevailing part of the loan portfolio and the deposits accepted is on a variable interest rate, operations on financial markets remained the main source of interest rate risk for banks. Many banks hold large portfolios of Treasury securities. However, resident banks are the most conservative group of investors on wholesale Treasury bond market in terms of risk-taking appetite, since the duration of their wholesale Treasury bond portfolio is the lowest (see Fig. 35).

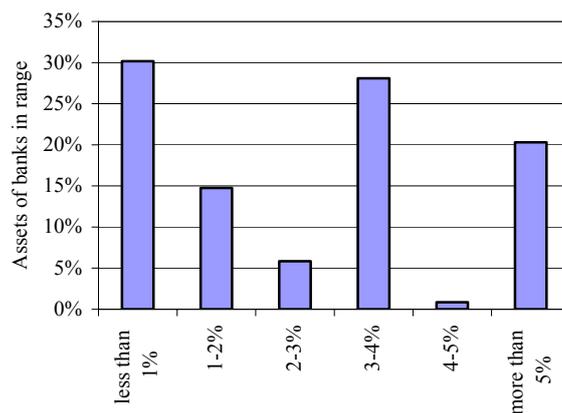
The first quarter of 2006 was beneficial for banks in terms of the possibilities to generate income from debt securities. The downward trend in long-term interest rates prevailing in January and February translated into increased prices of

Figure 36  
Selected items of profit and loss account related to interest rate - sensitive instruments



Source: NBP.

Figure 37  
Distribution of domestic commercial banks' assets by VaR expressed as percentage of regulatory funds (the Monte Carlo method)



Note: VaR at the level of 99%.  
Source: NBP.

Treasury bonds held by banks. However, the reversal of the trend in the second quarter brought about significant losses to many banks (see Fig. 36). Withdrawal of foreign investors from this market additionally deepened the fall in prices (see Chapter 3).

Due to large debt securities portfolios held by some major banks and the maintenance of open positions by banks, further increases in long-term interest rates may adversely impact banks' profitability. The probability of maintenance of the upward trend in long-term interest rates in the medium term is quite high. It stems from the increase in interest rates in the core markets and from the emergence of expectations of future rises in NBP official interest rates among participants of the domestic financial market.

The increased level of banks' risk, related to interest rate changes, is reflected in the growth of VaR measures<sup>18</sup> (see Fig. 37). A high share of banks with the highest (relative to the regulatory capital held) exposure to interest rate risk in the sector's assets results from the fact that this risk measure reached high levels in several major banks.

#### 4.3. Foreign exchange risk

Foreign exchange risk taken directly by banks in the first half of 2006 was low, similarly to the previous years. Despite a large share of foreign exchange assets and liabilities in the balance sheet total (see Table 10) banks did not maintain large open FX positions. The long FX position in the balance sheet, remaining — in view of the acceleration of the growth rate of foreign currency loans to households — at a level close to the 5-year maximum (ca. 9% of the balance sheet total) was offset against short positions in derivatives.

The largest open FX positions were maintained in the euro and — albeit much lower — in the Swiss franc and the US dollar (see Fig. 39). Hence, the main risk factor was the EUR/PLN exchange rate, strongly correlated with the zloty exchange rate against other European currencies, including the Swiss franc, the pound sterling, and the Czech koruna, in which banks also maintained some exposures. The role of the Swiss franc was growing in this group, as most housing loans (ca. 70-80%) were extended in this currency — due to low interest rates.

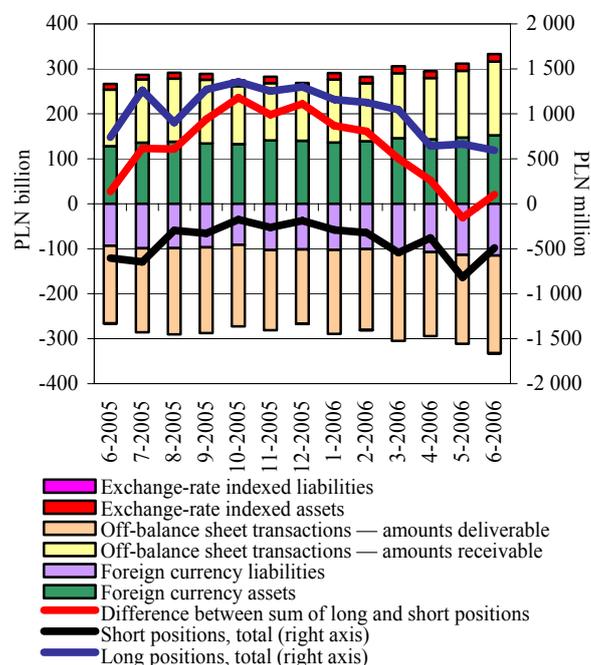
An analysis of the VaR due to FX risk confirms that

Table 10  
Share of FX assets and liabilities in the balance sheet total of the banking system (%)

	12-2005		6-2006	
	Total	Non-resident	Total	Non-resident
Foreign currency assets	25.7	10.9	26.0	9.4
-financial sector	10.8	9.0	9.6	7.5
-non-financial customers	12.0	0.3	13.5	0.4
Foreign currency liabilities	16.4	5.4	17.0	6.2
-financial sector	5.2	3.7	5.9	4.1
-non-financial customers	9.5	0.5	8.9	0.4

Source: NBP.

Figure 38  
Components of commercial banks' FX position



Note: short/long positions, total — a total of short/long positions in particular currencies.

Source: NBP.

banks' risk arising from possible losses from valuation of open FX positions as a result of exchange rate changes was contained. The median of the VaR<sup>19</sup> expressed as percentage of regulatory capital amounted to 0.03% at the end of the first half of 2006 (see Fig. 40), while the bank most exposed to the risk of loss had a VaR at the level of a mere 0.43% of capital. The scale of the FX risk taken by the banking sector (VaR), expressed in nominal terms, dropped by one-third in the first half of 2006 and amounted to ca. PLN 30 million. A total of 28 banks were exposed to a risk higher than at the end of 2005, and 24 banks reduced the scale of FX risk taken.

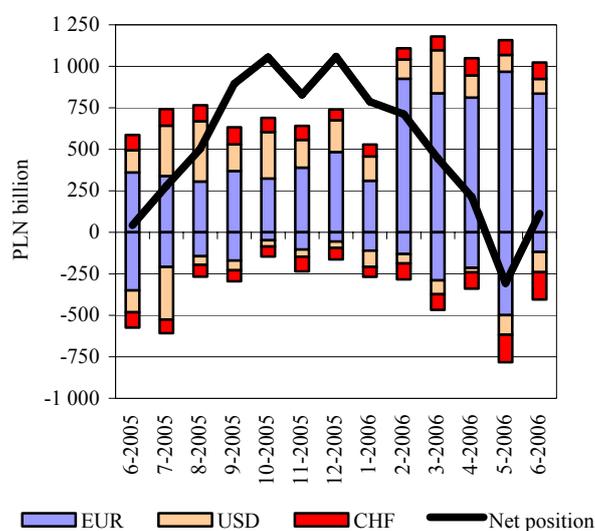
Banks may also be influenced by the FX risk taken by their customers. In particular, this concerns households, which have very limited possibilities of entering into FX risk hedging transactions and typically do not obtain income in the contract currency. The scale of the fall in customers' creditworthiness in the case of depreciation of the zloty may be significant, due to the aforementioned popularity of foreign currency housing loans. However, the hitherto-gained experience of banks indicates that the zloty exchange rate volatility has an insignificant impact on delays in loan repayment and on changes in loan quality. Nonetheless, the symptoms of increased banks' exposure in the segment of foreign currency loans to households of lower creditworthiness may raise some concern.

#### 4.4. Liquidity risk

Banks' mid-term liquidity depends on access to stable sources of financing the lending activity, such as customers' deposits. Financing with market instruments (e.g. with interbank deposits) is typically raised for a shorter period and may prove more costly for banks. The funding gap is a measure of utilisation of market-based financing (see Fig. 41).

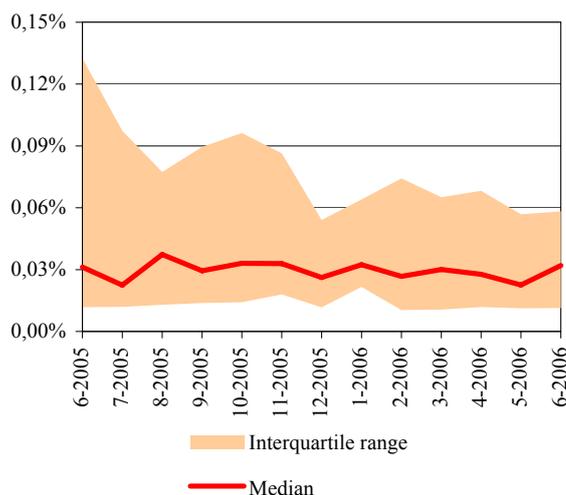
An analysis of the funding gap indicates that, similarly to the end of 2005, the amount of loans extended to customers exceeded the deposits accepted in the case of about a half of the banks. However, the average value of the funding gap in the sector was negative, which means that the banks that use sources of financing other than customer's deposits hold a small share in the sector's assets. They obtain funding in other financial institutions, especially through the interbank market, and from strategic investors, through terms deposits

Figure 39  
Open FX positions in the banking system



Note: net position is the balance of the sector's long and short positions for all currencies.  
Source: NBP.

Figure 40  
Distribution of FX value at risk expressed as a percentage of domestic commercial banks' regulatory capital



Source: NBP.

and loans. This group of banks is exposed — more than other banks — to the risk of increased costs of financing in the case of a rapid interest rate rise on the interbank market.

A measure of the short-term liquidity risk is the value of the liquidity gap, which shows the difference between the value of assets and the value of liabilities sorted into the same maturity buckets. A surplus of short-term liabilities over short-term assets is sustained in the Polish banking system (see Fig. 42).

The 1-month liquidity gap, remaining at a stable level since end-2002, began to widen at the end of 2005, which resulted mainly from the acceleration in lending to households, including replacing of more liquid assets with housing loans. The tendency prevailed in the first half of 2006.

The sustained liquidity gap and the simultaneous lack of market symptoms of liquidity problems reflect a significant share of rolled-over deposits among deposits from non-financial customers. However, it means that banks would be exposed to the risk of such problem occurring in the case of a bank run and a mass, rapid withdrawal of deposits. It should be noted here that the majority of commercial banks entered into agreements with its foreign owners, which guarantee their liquidity support. This reliance of support on the part of the owners is reflected in the bank deposit rating (see section 4.7).

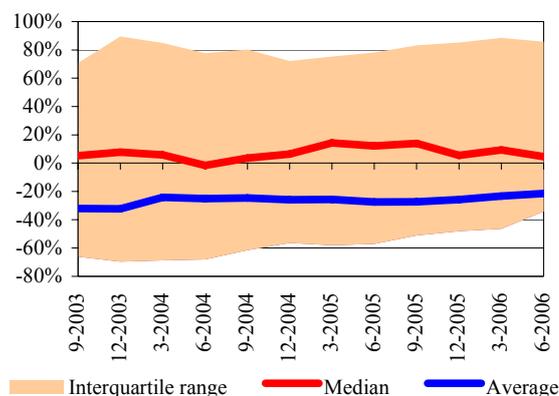
#### 4.5. Earnings

Processes undergoing in banks' balance sheets, e.g. the acceleration of lending to households and the increased sale of investment and insurance products, were reflected in excellent earnings of the banking sector. The reasons behind the improvement in earnings included, first and foremost, higher interest, fee and commission income as well as dividends from subsidiaries, linked, and affiliated entities.

Along increased assets and capital, the banking sector recorded an increase in the average profitability ratios: ROA and ROE. Larger banks typically achieved higher profitability, and the tendency strengthened as compared to previous periods (see Figs. 43 and 44). Despite favourable external conditions, 12 small banks incurred losses. However, their impact on the total results of the sector was limited due

Figure 41

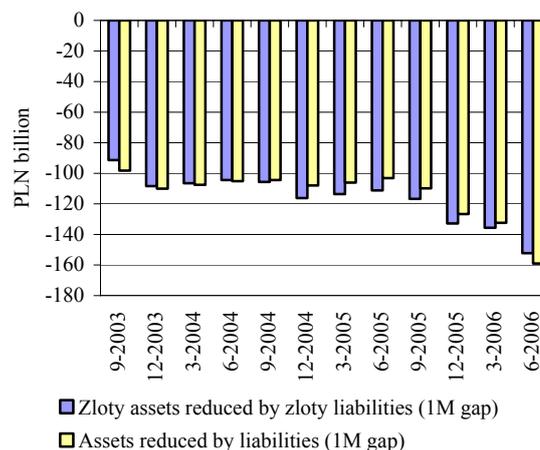
Distribution of the funding gap (commercial banks)



Source: NBP.

Figure 42

1M liquidity gap (commercial banks)

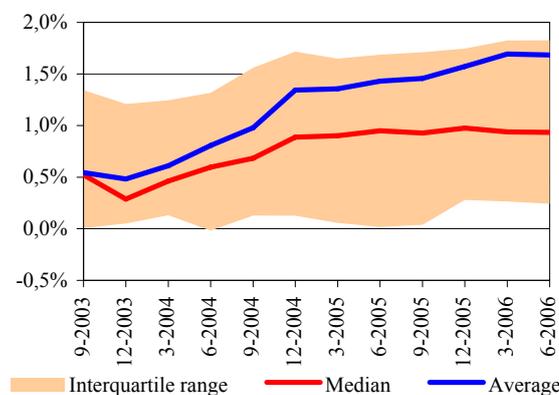


Note: due to changes in the reporting layout introduced in June 2005, comparability of the liquidity gap with data from previous periods is limited.

Source: NBP.

Figure 43

Dispersion of ROA in commercial banks



Note: data annualised.

Source: NBP.

to an insignificant size of those banks (1.2% of assets of commercial banks).

### *Net income from banking activity*

#### *Net interest income*

The net interest income obtained in the first half of 2006 by the banking sector was much higher than a year before (see Table 11), which increased the net interest margin (NIM).

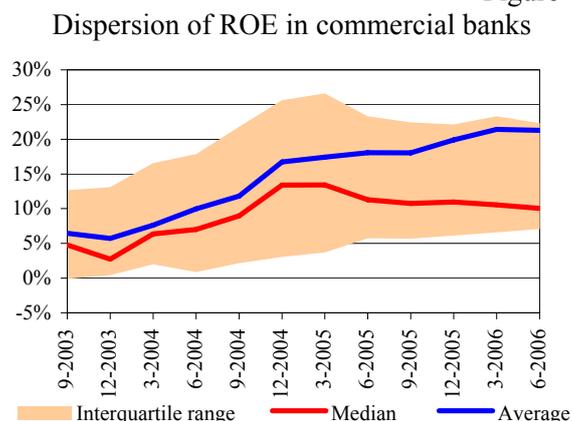
The increase concerned primarily the basic component of the net interest income, i.e. the result on operations with non-financial customers (up by more than 35%). At the same time, the high growth rate in loans to households for the first time caused a situation where operations of banks' retail divisions generated the largest share of the net interest income (see Fig. 45). Although lending margins charged on some retail products were low (inter alia, on housing loans), operations performed with the household sector were in general more profitable, since competition in the corporate segment had reduced lending margins to minimum. The significance of income from housing loans, credit card lending, and instalment loans increased in the structure of net interest income on operations with the retail sector.

The net interest income on operations with non-financial customers was positively influenced by tendencies within the scope of liabilities raised. In the first half of 2006, changes in deposits from households occurred: current deposits (paying lower interest rates) grew at a rate higher than that of time deposits (since December 2005, the growth rate of time deposits has been negative). Coupled with a further reduction in interest rates on deposits, it brought down the interest expense of the whole sector to a level lower than a year before (interest paid to households was lower by 26%, and to enterprises — by 11%).

#### *Non-interest income*

As compared to the corresponding period a year before, the share of non-interest income in the total income from banking activity decreased in the first half of 2006 (down by 1.6 percentage points, to 42.6%) (see Fig. 46). The drop was largely influenced by the developments on the financial markets in the second quarter of 2006, which caused

Figure 44



Note: data annualised.  
Source: NBP.

Table 11

Selected items from the profit and loss account of the banking sector (PLN billion)

	1 <sup>st</sup> half of 2005	1 <sup>st</sup> half of 2006
Interest income	17.11	16.79
Interest expense	8.23	6.85
Net interest income	8.88	9.94
Net fee income	3.82	4.35
Income on stocks and shares	0.52	0.98
Net income on financial operations	0.80	0.27
Net FX gains/losses	1.88	1.78
Net income from banking activity	15.90	17.32
General expense	8.50	9.02
Depreciation	1.17	1.10
Net movements in provisions and valuation allowances	0.71	0.76
of which: net charges to provisions for irregular loans	0.61	0.80
Pre-tax earnings	5.64	6.96
Net earnings	4.67	5.84

Source: NBP.

a decrease in the value of Treasury securities from the portfolio of securities *held for trading*, which are marked-to-market, and had an impact on the relatively low result on operations in financial instruments<sup>20</sup>.

Fees and commissions — the largest component of the non-interest income, were considerably higher than in the first half of 2005<sup>21</sup>. Banks earned much more on distribution of investment fund units and on sale of insurance products (commissions obtained from the financial sector were over twice higher than a year before). Insurance products sold via banks are partly offered as independent products (e.g. insurance policies with the insurance investment fund — UFK), but more typically constitute a component of packages related to banking products. Insurance policies required from or recommended to customers when drawing loans, in particular housing loans and credit card borrowing (e.g. house insurance against fire and other cases of force majeure, bridge insurance, insurance of the missing part of own contribution, insurance against unauthorised use of credit card, travel insurance providing protection to credit card holder), may be mentioned as examples here. Insurance products are typically handled by insurers linked to banks through a single owner (international capital groups).

The higher than a year before non-interest income also resulted from considerably higher revenues of the banking sector on stocks and shares, including high dividends from subsidiaries, linked, and affiliated entities (see Table 11). The growth in this income item should be attributed to several major banks, which booked the dividends received in the first half of 2006.

The growing popularity of foreign currency loans in 2006 caused exchange rate margins, i.e. the differences between the bid rate and the ask rate, to become an important component of net FX gains. In the case of two main foreign currencies in which loans to households are granted, margins charged on payments<sup>22</sup> constituted, on average, 4% of the bid rate (17 groszy, i.e. 4.2% of the bid rate in the case of the euro, and 11 groszy, i.e. 4.5%, in the case of the Swiss franc). The estimated profit on exchange rate margins in the first quarter of 2006 amounted to 8-9% of the FX result. Overall, the sector's earnings on FX operations were slightly lower than a year before.

Table 12  
Selected operating ratios (as % of assets)

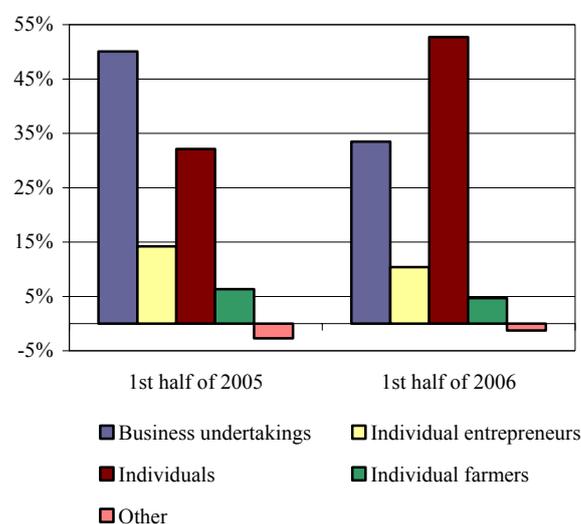
	1 <sup>st</sup> half of 2005	1 <sup>st</sup> half of 2006
Net interest margin	1.57 (3.08)	1.61 (3.14)
Net non-interest income	1.24 (2.40)	1.20 (2.23)
Net income from banking activity	2.82 (5.48)	2.81 (5.36)
General expense	1.71 (3.48)	1.64 (3.30)
Net charges to provisions	0.14 (0.38)	0.12 (0.22)
of which: net charges to provisions for irregular loans	0.12 (0.33)	0.13 (0.22)
Tax	0.17 (0.32)	0.18 (0.33)
ROA (pre-tax earnings)	1.00 (1.65)	1.13 (2.01)
ROA (net earnings)	0.83 (1.43)	0.95 (1.68)
ROE <sup>1</sup> (pre-tax earnings)	12.6 (20.8)	14.3 (25.4)
ROE <sup>1</sup> (net earnings)	10.4 (18.1)	12.0 (21.3)

<sup>1</sup> % of regulatory capital.

Note: annualised data provided in brackets.

Source: NBP.

Figure 45  
Structure of net interest income from non-financial customers



Source: NBP.

### Allocation of income from banking activity

Expansion of the scale of banks' activities, and primarily an increase in the business activity in the most labour-consuming sector, i.e. loan services to retail customers, caused a rise in the sector's general expense (by 6.2%). Some banks increased their employment and took a decision to develop their branch network, mainly for the purpose of winning customers from the household sector<sup>23</sup>. Moreover, the increase in the average wages in the banking sector, which began in 2005, was continued, due to the growing costs of the incentive wage system<sup>24</sup> and the increasing market competition for experts (e.g. in the areas of credit and operational risk), stimulated by legal changes.

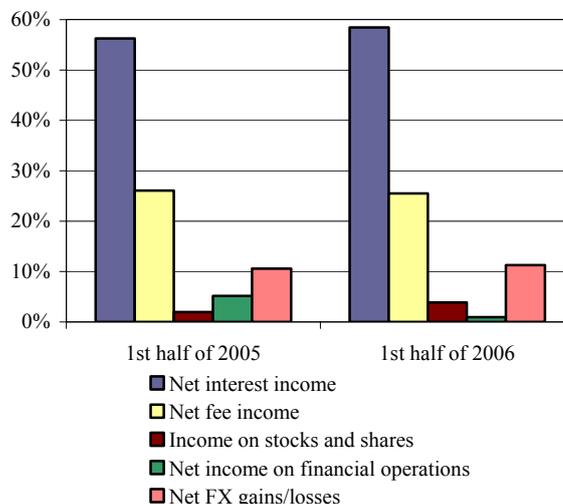
The increased sales of products and services led to further enhancement of the operating efficiency of the banking sector: the basic ratios of cost efficiency improved (general expense to assets and general expense to net income on banking activity). The improvement in the average values of the ratios was accompanied by their increased dispersion and the emergence of a greater number of banks whose ratios diverged negatively from the average (see Fig. 47). However, this is not a sign of a drop in their efficiency, but arises from including six new banks/branches in the analysis that launched their activities in the period June 2005 — June 2006, and from the transfer of activities to branches by banks which have so far operated in the form of a joint stock company (costs are "transferred" unevenly, and their major part remains with banks — companies).

The balance of provisions and valuation allowances was slightly higher than in the first quarter of 2005 (see Table 11), which adversely affected the earnings. Net charges to specific provisions for irregular loans and to impairment provisions (hereinafter referred to as: net charges) increased by ca. 1/3 as compared to June 2005. It was caused by establishing exceptionally high net provisions in two banks, which had an impact on the overall results of the sector. However, the distribution of net charges indicates that in most banks, net charges (annualised) relative to assets remained at a historically low level from the end of the previous year (see Fig. 49).

In some banks, the amounts of net charges to provisions for claims assessed on portfolio basis and special mention claims increased, which is consistent with the observed upward trend in claims that are delayed but have not been

Figure 46

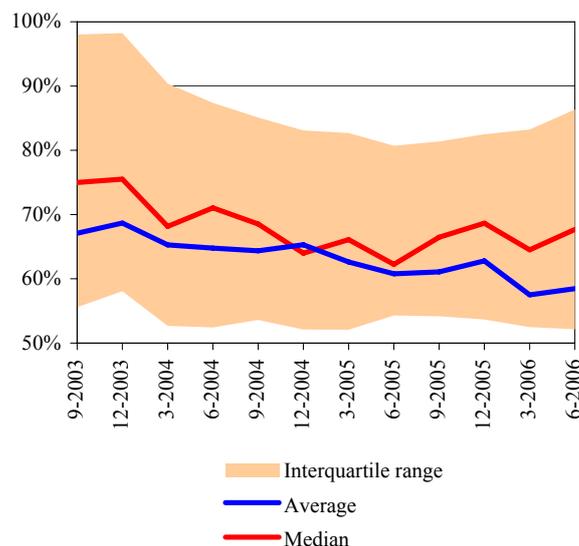
Structure of net income from banking activity



Source: NBP.

Figure 47

Dispersion of the ratio of general expense to net income on banking activity, commercial banks



Source: NBP.

classified as irregular claims.

### Outlook

Following the very good earnings of banks in the first half of 2006, continuation of this growth trend may be expected in the forthcoming months. The banking sector will generate earnings on interest operations and on fees and commissions, e.g. arising from the growth in authorised overdrafts and in credit card borrowing, on the development of bancassurance and on sales of investment fund participation units. Despite the pressure on lowering the general expense and increasing efficiency, some banks may face the necessity of further rise in employment, related to the high demand for loans on the part of households.

Possible continuation of the increase in market interest rates may pose a threat to banks' earnings in the second half of 2006, due to its adverse impact on the value of Treasury securities. Behaviour of foreign investors will be of great importance, since domestic institutional investors play a largely stabilising role in this market.

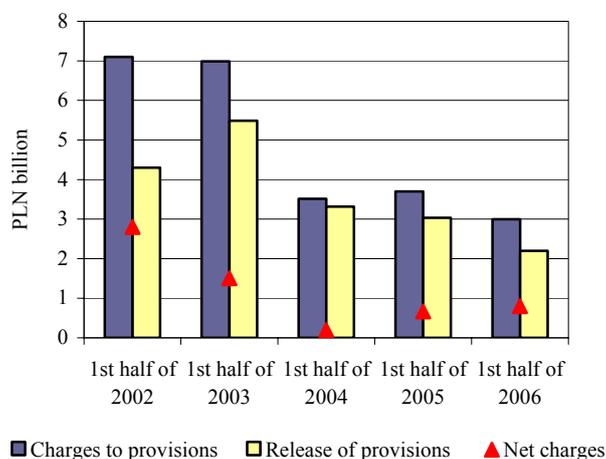
It appears that in the forthcoming months no significant increase should be expected in the balance of charges to provisions for irregular loans that would result from increased banks' losses arising from credit risk (an increase in the amount of irregular loans). Nonetheless, easing of loan terms and conditions, resulting from the competitive pressure, and the probable increase in claims on lower income customers in banks' balance sheets, may be unfavourable to the banking sector's earnings in the long term. This is particularly probable in the face of the presently binding regulations and standards, which allow for making charges to impairment provisions only when there are premises for the impairment, so it is not possible to establish provisions in advance, during periods of good economic climate.

#### 4.6. Banks' capital positions and loss absorption capacity

The regulatory capital of the banking sector<sup>25</sup> went up in the first half of 2006 by 7.3%. Its majority comprised the most stable element, i.e. the core capital<sup>26</sup>, which was favourable in terms of the possible loss absorption capacity (see Table 13). The increase in the sector's core capital followed from allocation of the profit generated in the previous year to

Figure 48

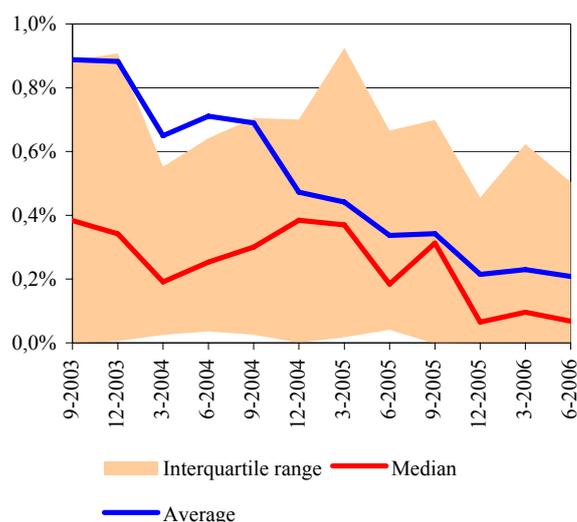
Charges to and release of provisions for irregular loans and loan impairment



Source: NBP.

Figure 49

Dispersion of the ratio of net charges to specific provisions for irregular claims and loan impairment to assets, commercial banks



Source: NBP.

increase the supplementary capital and the reserve capital. The amount of supplementary capital decreased, on the other hand, as a consequence of the abovementioned tendencies on the financial market, i.e. an upward shift of the yield curve. It resulted in depreciation of the market value of securities, including those from the *available for sale* portfolio, and in decreasing of the revaluation fund by that change.

The continued growth in assets of the banking sector in the first half of 2006, especially in loans to non-financial customers, induced a significant rise in the value of risk-weighted assets (see Table 14). It is worth noting here that, unlike in the previous years, a major part of the increase in the amount of assets within the past 12 months occurred as a result of increased lending to non-financial customers, where deposits in financial institutions remained at the same level and the growth in the balance of securities was smaller by almost a half. This comparison confirms the enhanced tendency of banks to take on credit risk, highlighted in previous chapters. As a consequence of simultaneous changes in the value of risk-weighted assets and the regulatory capital of the banking sector, the level of capital adequacy ratio decreased slightly. However, it is still high and exceeds the regulatory minimum of 8% considerably.

The increase in capital requirements, caused by growing credit exposures, is also visible in the changes of the distribution of banks' assets by the capital adequacy ratio. A definite majority of the sector's assets still belongs to banks, which hold a considerable capital buffer, i.e. ratios exceeding 12% (see Fig. 50). However, as compared to the year-end, the significance of banks whose capital adequacy ratios ranged within 10-11% picked up. These banks will have to raise their capital or make greater changes in their asset structures, if they intend to increase their lending in the future at a rate close to the present.

### ***Simulation of loan loss absorption capacity***

Four simulations have been conducted, aimed to determine whether banks' capital is sufficient to absorb possible losses related to the credit risk taken. The simulations conducted refer to situations whose probability of occurrence is small, but which might have a significant impact on banking sector stability.

The results of the first simulation provide an answer to

Table 13  
Regulatory capital and capital adequacy ratio

	2004	2005	6-2006
Regulatory capital <sup>1</sup> (PLN billion)	43.1	46.0	49.3
- of which: core capital	42.8	45.6	49.5
Capital adequacy ratio (%)	15.4	14.6	14.1
Capital adequacy ratio taking into account core capital (%)	15.4	14.4	14.1

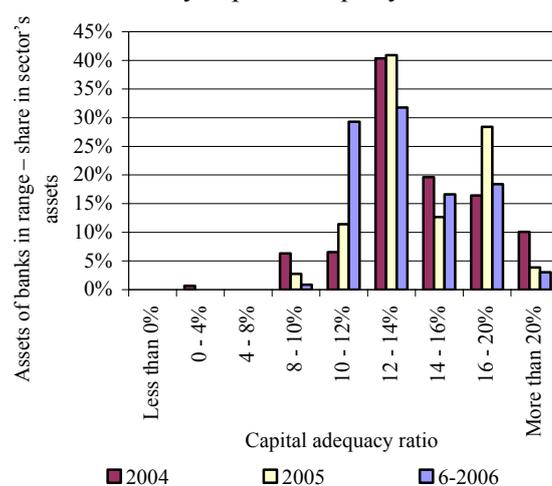
<sup>1</sup> Regulatory capital: core capital and supplementary capital, less any shortfall of specific provisions and other so-called regulatory deductions, plus trading book ancillary capital.  
Source: NBP.

Table 14  
Changes in risk-weighted assets and in selected asset items of the banking sector (y/y)

	2004	2005	6-2006
PLN billion			
Assets, of which:	49.5	48.6	57.3
- non-financial customers	9.1	22.3	43.6
- financial sector	29.6	15.7	1.2
- securities	2.0	18.4	10.2
Risk-weighted assets	2.1	34.2	43.9
%			
Assets, of which:	10.1	9.0	10.0
- non-financial customers	4.2	9.9	18.7
- financial sector	38.5	14.7	1.0
- securities	1.7	15.9	8.0
Risk-weighted assets	0.9	14.5	17.1

Source: NBP.

Figure 50  
Distribution of assets of domestic commercial banks by capital adequacy ratio



Source: NBP.

the question about the part of loans classified as *satisfactory* and *special mention* that would have to be downgraded to *doubtful* (or to loans in the case of which the estimated impairment is 50%) The simulation, conducted on data as at end-June 2006, indicates a continuation of the downward trend in bank's loss absorption capacity, observed in 2005. For example, in June 2006 the capital adequacy ratio would fall to 8% in domestic commercial banks whose assets constitute 1/5 of the total assets of banks if about 13% of their *satisfactory* and *special mention* loans were downgraded to doubtful. To compare, in December 2005 such a situation would occur in the case of deterioration in the quality of 15% of *satisfactory* and *special mention* loans.

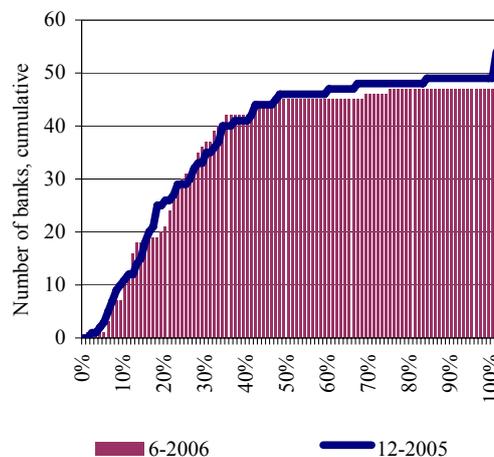
The decrease in loss absorption regarded primarily large banks (greater shifts in the distribution of banks are shown by Fig. 52). At the same time, banks with the smallest capital resources (where deterioration in the quality of 5% of claims would be sufficient for the capital adequacy ratio to fall to 8%) have a stable share of ca. 2.5% in the assets of domestic commercial banks. The drop in capital buffers of large banks stems primarily from the rapid growth rate of their lending (amounting to 30%), which exceeds the increase in banks' regulatory capital.

Another simulation was aimed to determine the level of capital adequacy ratio in the case of a rapid deterioration of the quality of irregular claims, and a decrease in the value of loan security. The first scenario assumed that all claims on non-financial customers from the *substandard* and *doubtful* categories were downgraded to the category of *loss* loans. In the second and third scenarios, a decrease in the value of security by 25% and 50%, respectively, was additionally assumed. The simulation was conducted on a group of 10 largest banks.

The results of the simulation indicate that banks' loan loss absorption capacity decreased in the first half of 2006, as compared to end-2005 (see Fig. 53). The capital adequacy ratio for one of the banks slid to a level slightly below 8% in all the three scenarios; however, in the case of other banks, it did not drop below 10% in any of the scenarios. Similarly to the first simulation, the drop in the capital buffer in 2006 resulted from increased lending of the banks under analysis, causing an increase in capital requirements.

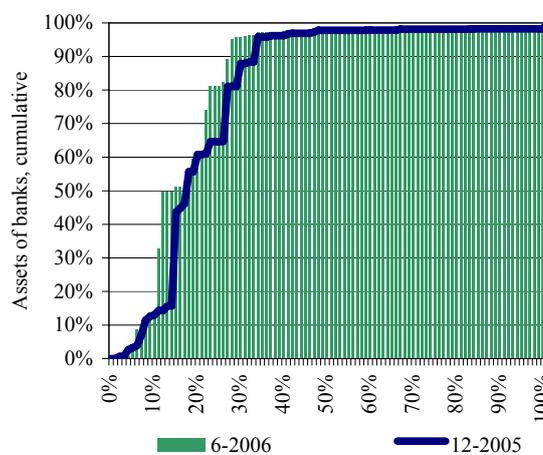
The drop in the average capital adequacy ratio for 10 banks is consistent with the results of the first simulation.

Figure 51  
Number of domestic commercial banks with the capital adequacy ratio of 8% under the assumed scenario of migration of *satisfactory* and *special mention* loans to *doubtful* loans



Source: NBP.

Figure 52  
Assets of domestic commercial banks with the capital adequacy ratio of 8% under the assumed scenario of migration of *satisfactory* and *special mention* loans to *doubtful* loans



Source: NBP.

Assumptions for the simulation (Figs. 51 and 52):

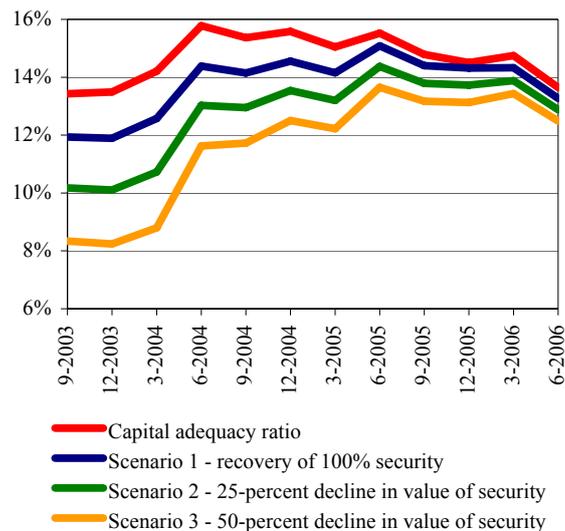
1. Calculations refer to the portfolio of loans to non-financial customers classified satisfactory and special mention as at end June 2006 (bars) and December 2005 (line).
2. Numerator and denominator of the capital adequacy ratio adjusted by the full amount of specific provisions against doubtful loans (it is assumed that the loans are unsecured and that downgraded classifications attract a 100% risk weight). The adjustment to the denominator has been divided by 12.5, in accordance with the methodology for calculating the capital adequacy ratio.
3. No releases of specific provisions envisaged (it is thereby assumed that there is no improvement in the quality of loans classified irregular at the end of June 2006 and 2005).
4. Banks with capital adequacy ratios lower than 8% or higher than 100% have not been considered.

However, attention should be paid to the convergence of lines picturing the results of particular scenarios. This phenomenon is explained by the change in the structure of irregular loans, i.e. the relative increase in the weight of loans of lower quality. This change causes a growth in the average coverage of irregular loans with specific provisions, which — in the scenarios under analysis — translates to a necessity of establishing smaller provisions for loans that would be reclassified as *loss* loans. The overall drop in irregular loans in the years 2004-2006 also causes a situation where reclassification of loans from the *substandard* and *doubtful* categories to the category of *loss* loans would have a less severe impact on the level of capital (the provisions missing would be smaller).

The third simulation was designed to assess the effect on the banking sector of the simultaneous bankruptcy of the sector's three largest non-financial borrowers (using data for the end of June 2006). Two of the them operate in the energy sector, whereas the third company — in the manufacturing sector. An assumption was made that all loans extended to those companies had been reclassified to the category of *loss* loans, and that costs of the specific provisions established (impairment provisions) were deducted from banks' regulatory capital, which resulted in a drop in the capital adequacy ratio. Bankruptcy of the three largest borrowers would affect 19 banks and cause an increase in the costs of establishing specific provisions (charges) by ca. PLN 4.2 billion. This group of banks held a total of 81% of the banking sector's assets. The decrease in the capital adequacy ratio in particular banks would range between 0.1 and 3.7 percentage points, but only one bank would record a drop slightly below 8%. Capital adequacy ratios of the majority of banks under analysis would exceed 11.5%. Thus, bankruptcy of the largest borrowers, although causing a significant reduction in banks' capital, would not bear any systemic risk. A comparison of these results with the results of the same simulation conducted on end-2005 data shows a slight increase in banks' sensitivity to exposures towards the largest borrowers (in the simulation on 2005 data, the costs of charges are lower by ca. PLN 0.2 billion, i.e. less than 1% of regulatory capital of the banks included in the analysis).

An identical simulation was conducted to examine the impact that bankruptcy of the three largest borrowers from the financial sector could have on banks. Bankruptcy of those enterprises would affect 18 banks and cause an increase in the

Figure 53  
Average CAR of 10 largest commercial banks upon reclassification of total irregular claims on non-financial customers to loss loans



Assumptions for the simulation:

1. All irregular claims on non-financial customers are reclassified as loss.
2. The satisfactory and special mention loan portfolio remains unchanged.
3. Numerator and denominator of the capital adequacy ratio are reduced by the shortfall in specific provisions, and — under Scenarios 2 and 3 — also by the decline in the value of security (25% of eligible security under Scenario 2 and 50% under Scenario 3).
4. Analysis conducted for ten largest banks as at the end of June 2006. Where banks were involved in mergers and acquisitions in the period analysed, analysis includes all merging banks prior to transaction.

Source: NBP.

costs of establishment of specific provisions (charges) by ca. PLN 2.9 billion. This group of banks held a total of 70% of the banking sector's assets. The decrease in capital adequacy ratios in particular banks would range between 0.1 and 3.4 percentage points, but none of the banks would record a slide in its capital adequacy ratio going below 8%. In a majority of the 18 banks under analysis, capital adequacy ratios would exceed 11.5%. A comparison of these results with the results of the simulation conducted on end-2005 data indicates an insignificant rise in banks' sensitivity to exposures towards this borrower group (an increase in hypothetical costs of charges by PLN 0.3 billion, accompanied by a similar scale of impact on banks' capital adequacy ratios).

Simulations conducted on June-2006 data indicate that banks' loss absorption capacity is still high, albeit decreasing as a result of the dynamic growth in banks' lending in some market segments, observed during the past two years. Due to the prevailing uncertainty as to the future quality of loans that are extended at present, for the sake of financial system stability it is desirable that banks assess the credit risk taken with caution, and maintain their capitalisation at a level ensuring safe continuation of the banking activity, even in the case of severe deterioration in the quality of claims.

#### 4.7. Market assessment of banks

Independent assessment of banks' financial position is conducted and published by rating agencies. Moody's publishes assessments of 13 Polish banks, of which one is a mortgage bank (see Table 15). In the first half of 2006 ratings of deposits and financial capacity of Polish banks were stable, and their outlook either stable or positive.

Nine banks were assigned the long-term deposit rating at the level of A2, three other banks — at the level of A3; one smaller bank was assigned a Ba2 rating. Since A2 is the highest rating that may be assigned to a Polish financial institution due to a ceiling established by the country rating, the prevalence of this rating indicates a good financial position of the Polish banking sector. Financial strength ratings were more dispersed, and ranged from E+ to C, with the median at the level of D+.

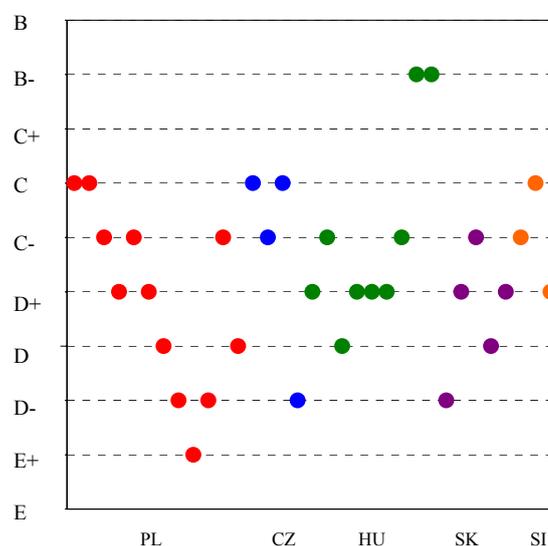
Polish banks, according to Moody's rating, are slightly weaker in financial terms than Czech, Hungarian, and Slovenian banks, whereas their financial capacity is rated

Table 15  
Ratings of Polish banks by Moody's  
(as at end-June 2006)

Bank's name	Deposit rating	Financial strength rating	Outlook
PKO BP	A2	C	stable
Bank Pekao	A2	C	stable
Bank BPH	A3	C-	developing
ING Bank Śląski	A2	D+	stable
BZ WBK	A2	C-	stable
Citibank Handlowy	A2	D+	positive
Bank Millennium	A2	D	stable
Kredyt Bank	A2	D-	stable
BGŻ	A2	E+	stable
BRE Bank	A3	D-	stable
Lukas Bank	A2	C-	stable
Getin Bank	Ba2	D	stable

For definitions of ratings, see the glossary.  
Source: www.moody's.com.

Figure 54  
Financial strength ratings of Polish banks against  
other Central European banks



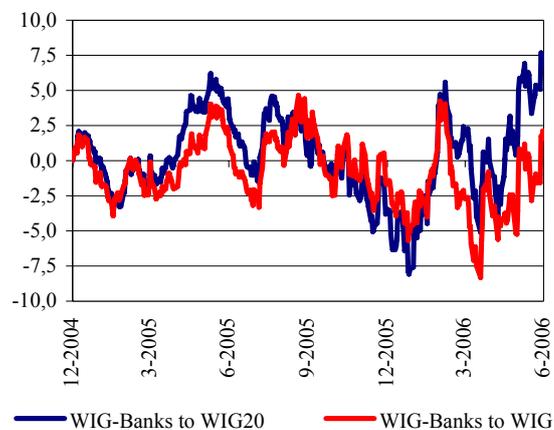
Source: based on www.moody's.com.

equal to that of Slovakian banks<sup>27</sup>. In the case of deposit ratings, banking sectors of the countries in the region, similarly to Polish banks, featured a majority of ratings corresponding to their country rating.

The rating of Polish banks is positively influenced by capital links with foreign strategic investors. Deposit ratings reflect the high probability of support coming from an investor in the case of possible financial problems. The level of credit risk related to liabilities of Polish banks has been assessed at a very low level, whereas the banks' capacity to repay short-term liabilities has been assigned the top possible rating. According to Moody's definition, the level of ratings assigned to the financial strength suggests that the environment in which Polish banks operate is relatively difficult to predict and unstable, which may lead to the necessity of external support in the case of smaller banks. The opinion is confirmed by analyses of rating agencies, where attention is paid to the fact that the performance of some asset groups of Polish banks has not been studied throughout a business cycle.

Market assessment of banks listed at the GPW is pictured by the WIG-Banks sectoral index<sup>28</sup> (see Fig. 55). In the first half of 2006, the index recorded a growth by 16.8% — a result twice higher than that obtained by the WIG20 index of large companies. Quotations of the banks' shares turned out to be less prone to the wave of falls that stormed through the GPW at the turn of May and June as well. It means that the market assessment of profitability and prospects of the banking sector is favourable.

Figure 55  
WIG-Banks sectoral index against equity market



Note: data as at session closing; differences calculated on index values standardised to 100 as at 30 December 2005; WIG-Banks and WIG are total return indices, WIG20 is a price index.

Source: NBP calculations based on Reuters.

## 5. Non-bank financial institutions

In the first half of 2006 non-bank financial institutions developed their business at a high rate. The increase in assets related to investment of households, i.e. to the purchase of investment fund participation units and life insurance policies with the insurance investment fund, was particularly high. The boom on the equity market, among other things, contributed to the popularity of those products.

The dynamic development of the life insurance sector was accompanied by a high growth in profit. Despite a slow growth rate in the gross written premium (hereinafter referred to as the premium), the financial results of the non-life insurance sector also improved. Pension companies, which manage mandatory contributions accumulated in the open pension funds — within the framework of the second pillar of the pension system — also recorded increased profit.

An analysis of the activity and financial performance of non-bank financial institutions allows for a statement that those institutions contributed to the maintenance of financial system stability.

### *Assets of non-bank financial institutions*

Similarly to the previous periods, assets of open pension funds, insurance companies, and investment funds in the first half of 2006 grew at a higher rate than banks' assets. Investment funds recorded a particularly high increase in assets (see Table 16).

The growth in assets of non-bank financial institutions was driven by further improvement in the condition of households, stemming from the accelerated economic growth. Demand for insurance products (particularly in the life insurance sector) and investment funds grows at a rapid rate in line with the increase in household income. On the other hand, the increase in employment and in average wages raised the value of mandatory transfers to open pension funds.

A historically high growth rate of the value of investment fund participation units, which — in the face of a decrease in the returns offered by traditional forms of saving (such as bank deposits or Treasury bonds) — encouraged to make investments, thus increasing the cash inflow to the funds,

Table 16

Assets of banks, insurance companies, open pension funds, and investment funds (PLN billion)

	Banks	IC	OPF <sup>1</sup>	IF <sup>1</sup>
12-2004	538 472	77 897	62 627	37 531
12-2005	587 024	89 562	86 079	61 284
6-2006	628 856	97 365 <sup>2</sup>	97 755	77 303

<sup>1</sup> Net assets.

<sup>2</sup> Balance as at 1st quarter-end 2006.

Source: NBP, KNUiFE, Chamber of Fund and Asset Managers, Analizy Online Sp. z.o.o.

Table 17

Bank deposits of insurance companies and open pension funds

	Deposits from IC and OPF (PLN million)	Ratio of IC and OPF deposits to banking sector assets (%)
12-2004	4 781	0.89
12-2005	5 689	0.97
6-2006	6 262	1.00

Source: NBP.

Table 18

Banks' claims on insurance companies and open pension funds

	Claims on IC and OPF (PLN million)	Ratio of claims on IC and OPF to banking sector assets (%)
12-2004	8	0.001
12-2005	6	0.001
6-2006	43	0.007

Source: NBP.

Table 19

Earnings of insurance companies (PLN million)

	1 <sup>st</sup> quarter of 2005	1 <sup>st</sup> quarter of 2006	Change (%)
Life insurance:			
net investment income	923	1 581	71.4
technical result	952	1 246	30.8
net profit	826	1 039	25.8
Non-life insurance:			
net investment income	268	417	55.6
technical result	573	452	-21.1
net profit	590	644	9.2

Source: KNUiFE.

should also be mentioned among important reasons behind the high growth in assets of investment funds and insurance investment funds. Intense marketing, including advertisements pointing to, among other things, high returns on investments, and the use of a wide distribution network (inter alia, via banks), also contributed to the growth in the funds' assets.

The increase in equity market indices also had a direct impact on the growth in assets of open pension funds, investment funds, and insurance companies, thanks to an increase in the valuation of assets comprising investment portfolios.

### ***Channels of influence of non-bank financial institutions on banks***

Thanks to a rapid growth of assets of non-bank financial institutions, their impact on financial markets increases. Thus, the role of the market channel of influence of non-bank financial institutions on the banking sector also grows. In practice, such influence may be exerted primarily through the bond market, because banks' exposure to equity price risk is very low. However, it appears that the impact of non-bank financial institutions on the bond market is lower than in the case of equity market.

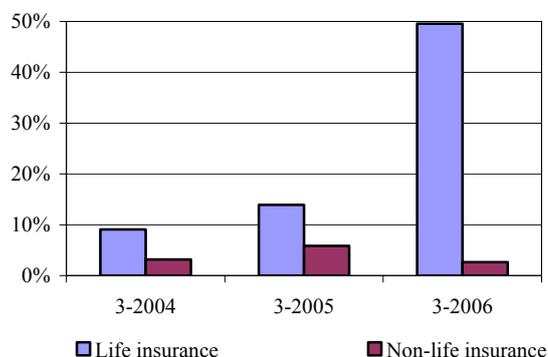
No major changes took place in banks' capital exposure towards pension companies and insurance companies in the first half of 2006. Owing to that, the impact of possible losses of these entities on banks' earnings remains limited.

The liquidity risk of the banking sector related to the possibility of withdrawal of bank deposits placed by insurance companies and open pension funds remained relatively low (see Table 17). Very low amounts of loans extended to insurance companies and open pension funds (see Table 18) caused the banks' credit risk related to operations with those entities to remain marginal.

#### **5.1. Insurance companies**

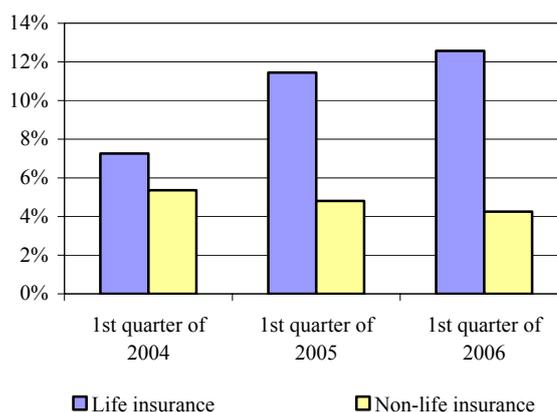
The insurance sector<sup>29</sup> recorded good earnings in the first half of 2006 (see Table 19), although the profit growth rate dropped, as compared to the previous year.

Figure 56  
Increase in gross written premium (y/y)



Source: KNUiFE.

Figure 57  
ROE in insurance sector



Note: the ratio has been calculated based on net profit for the first quarters in the years 2004-2006 (profit not annualised).  
Source: KNUiFE.

Table 20  
Premium in the insurance sector raised through banks (PLN million)

	2003	2004	2005	Change % 2005/2004
Life insurance	691	1 434	2 206	53.8
Non-life insurance	7	20	89	338.0

Source: KNUiFE, Polish Chamber of Insurance.

A better business climate was recorded by life insurance companies, which was reflected in increased premium by almost a half (see Fig. 56). On the other hand, the increase in sales of insurance products by companies in the non-life insurance sector was less pronounced than a year before; nonetheless, the technical result improved, similarly as in the case of life insurance companies.

The high profits of the life insurance sector were reflected in an improvement of the ROE (see Fig. 57). On the other hand, this ratio decreased in the non-life insurance sector; however, this should not raise any concerns, as the drop stemmed from an increase in insurance companies' capital (primarily in the largest company in the sector).

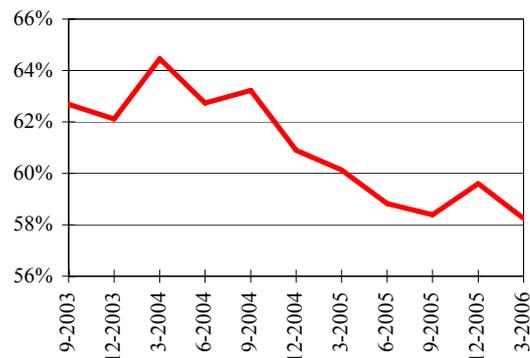
The level of profits of the insurance sector as well as its growth rate were determined by the results of the largest companies (companies in the PZU Group generated ca. 80% of the net profit earned in both insurance sectors). It should be noted, however, that smaller insurers also recorded an increase in profit. Another positive development was the decrease in the number of insurance companies that generated a net loss as well as their decreased share in the total sector's premium earned. This share amounted to 6.4% in the non-life insurance sector (down by 1.7 percentage points as compared to the first quarter of 2005), and to 5.2% in the life insurance sector (down by 5 percentage points).

### Key factors determining earnings of insurance companies

#### Life insurance

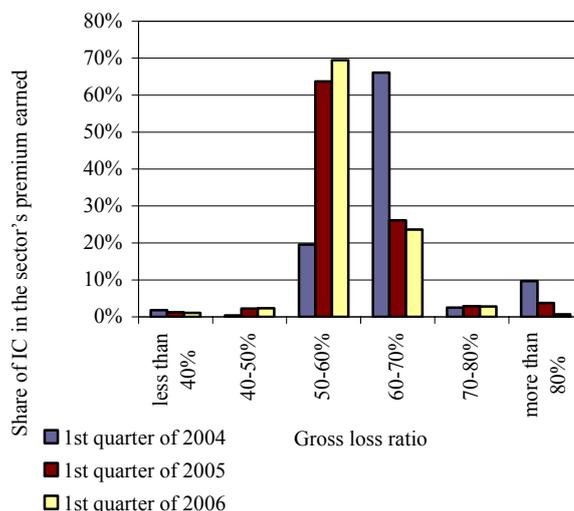
An exceptionally high growth rate in insurance policies with the insurance investment fund (UFK), and — at the same time — a small drop in revenue on traditional life insurance policies have been observed in the life insurance sector for some time now. Insurance policies with the UFK appear to be a less stable source of revenue of insurance companies than traditional life insurance policies, due to quite strong links of their sales to the developments on financial markets and the financial standing of households. Insurance policies with the UFK are mainly products with a one-off premium, where the policyholder assumes full investment risk. Thus, deterioration in the developments on the financial markets or in the financial condition of households may cause a large drop in the sales of this type of policies as well as induce customers to

Figure 58  
Gross loss ratio in the non-life insurance sector



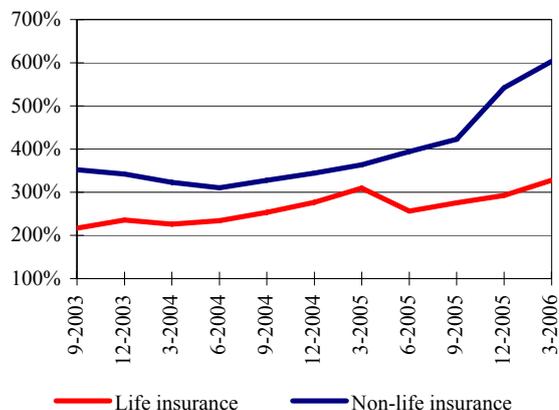
Source: KNUiFE.

Figure 59  
Distribution of premium earned of non-life insurers by gross loss ratio



Source: KNUiFE, Grupa PZU.

Figure 60  
Activity monitoring ratio



Source: KNUiFE.

cash in on policies taken out previously. Traditional life insurance policies are taken out typically for a longer term, and the premium is paid periodically (monthly or quarterly). Additionally, the investment risk in the case of traditional insurance policies is assumed by the insurer and, owing to that, changes in trends on the financial markets do not translate directly into the level of sales of policies or into premium revenues.

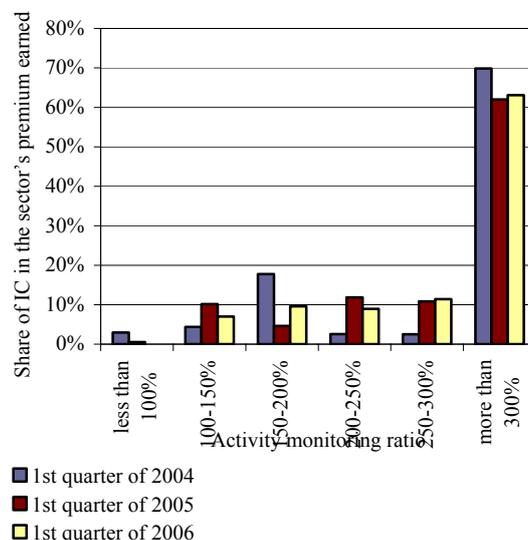
The life insurance sector, especially its profitability and structure of sales and distribution, is changing currently because of the increase in the number of insurance policies sold via banks (bancassurance). The growth rate of this process deserves special attention: the value of premium raised via banks in the years 2003–2005 grew more than threefold (see Table 20). The development of bancassurance exerts a positive impact on profit generation capacity of both the banking and insurance sectors. Life insurance companies raised 14.4% of the premium earned in 2005 via banks (22.6% of the premium in individual insurance), whereas banks attribute some increase in their net fee and commission income to the cooperation with insurance companies. In the case of banks, cooperation with insurers also contributes to a decrease in the loan portfolio risk, thanks to, inter alia, sales of insurance related to housing loans.

### Non-life insurance

Similarly to the developments in the first quarter of 2005, the premium growth rate in the non-life insurance sector was low (2.7%). It stemmed from a drop in the premium on automobile insurance, particularly in the premium on the voluntary comprehensive automobile insurance (by 6.2%<sup>30</sup>), although the number of cars increased over the period under analysis. The sales of comprehensive automobile insurance policies was adversely affected by imports of a large number of second-hand cars in the years 2004–2006, whose owners often do not decide to take out insurance due to a relatively low value of the car. The high imports of cars had a negative impact on the prices of used cars and on the sale of new ones, which decreased the demand for comprehensive automobile insurance policies.

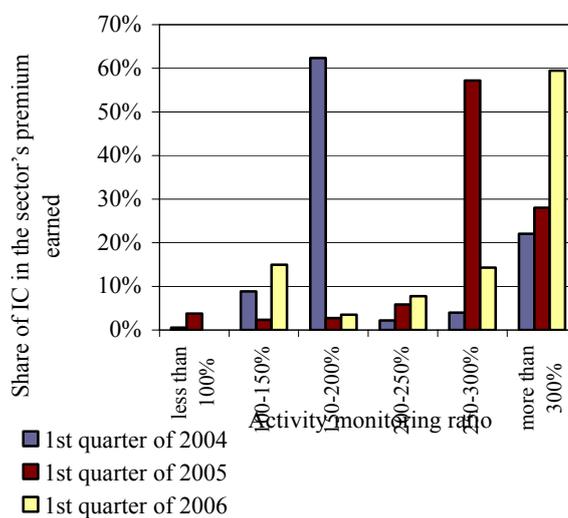
The situation was slightly better in other large non-life insurance subsectors, i.e. in accident insurance, fire and natural disaster insurance, theft insurance, and in insurance

Figure 61  
Distribution of premium earned of non-life insurers by activity monitoring ratio



Source: KNUiFE, Grupa PZU.

Figure 62  
Distribution of premium earned of life insurers by activity monitoring ratio



Source: KNUiFE, Grupa PZU.

against material damage. The increase in premium on these types of insurance was supported by the improvement in the condition of households and the rapid growth in the value of housing loans (one type of security required by banks whilst granting such loans is assignment of fire and natural disaster insurance).

Some smaller subsectors of non-life insurance also developed strongly, such as loan insurance (as a result of the increase in banks' lending to households), other (apart from automobile) civil liability insurance, financial risk insurance, and insurance guarantees. Owing to an increase in the premium on the above types of insurance, the dependence of earnings of non-life insurers on the relatively low-profit automobile insurance decreased.

Despite a low premium growth rate, the whole non-life insurance sector recorded a relatively high growth in the technical result. It stemmed mainly from a further drop in the gross loss ratio, thanks to, inter alia, the continued action of insurers aimed to limit the amount of damages paid. Positive changes also occurred in the distribution of the gross loss ratio: the share of insurers whose gross loss ratio reached a level within the top three gross loss ratio buckets in the premium earned of the sector decreased (see Figs. 58 and 59).

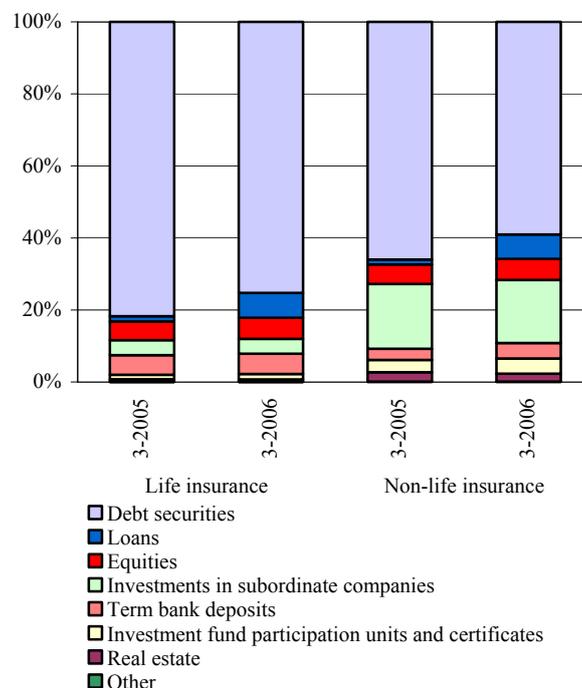
Apart from lower gross loss ratios, the increased profit of the non-life insurance sector was attributed to the continued process of decreasing the level of reinsurance, which was reflected in the increase of the premium retention ratio (by 1.5 percentage points to 87.3%). A decrease in the scale of reinsurance was possible due to, among other things, a large surplus of capital.

### *Solvency and capital position of insurance companies*

Capital of the insurance sector, comprising chiefly equity capital, considerably exceeded the statutory capital requirement. It resulted, inter alia, from high profitability and accumulation of profit in previous years. The value of capital exceeded the capital requirement over six-fold in the case of non-life insurers (2.7-fold when PZU SA is not taken into account), and over three-fold in the case of life insurers (see Figs. 60-62).

Activity monitoring ratios improved in both insurance sectors. However, the improvement was almost totally a result

Figure 63  
Structure of deposits of insurance companies



Source: KNUiFE.

Table 21  
Earnings (PLN million) and cost efficiency (%)  
of pension companies

	1 <sup>st</sup> half of 2005	1 <sup>st</sup> half of 2006	Change (%)
Revenues on open pension fund management	569	739	30
Open pension fund management costs	355	415	17
Technical result on open pension fund management	214	324	52
Net profit of pension companies	224	294	31
Cost efficiency <sup>1</sup>	62	56	-10

<sup>1</sup> Management costs to revenue on open pension fund asset management ratio.

Source: KNUiFE.

of an increase in the PZU Group, whose companies increased their equity due to profit accumulation. The ratios remained fundamentally unchanged in the remainder of the insurance sector, whereas an improvement was recorded in the group of insurance companies with the lowest equity relative to the scale of operations. This fact was reflected in the fulfilment of the capital requirement by all insurance companies at the end of March 2006, while in the previous year three non-life insurance companies and two life-insurance companies did not meet the capital requirement.

### Investments of insurance companies

Only minor changes took place in the structure of investments of insurance companies in the first quarter of 2006. The greatest change concerned the increase in the share of loans (up by 3.2 percentage points to 7.2%), mainly at the cost of Treasury securities (see Fig. 63). Exposure to more risky types of investment, e.g. shares or real estate, was still insignificant. However, a large share of Treasury securities in the structure of deposits of insurance companies may adversely affect their earnings (net investment income). This is particularly true in the case of smaller insurance companies, as they more often mark the debt securities to market. An interest rates rise in the second quarter of 2006 decreased the value of portfolios in some insurance companies, especially in the life insurance sector.

### 5.2. Pension companies and open pension funds

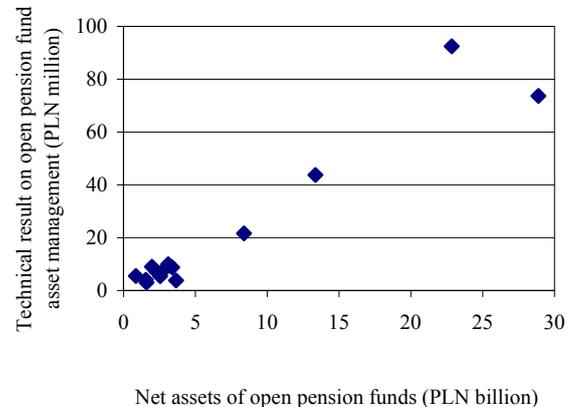
The earnings obtained by the pension companies and pension funds sector in the first half of 2006 facilitate a favourable assessment of their stability. The inflow of contributions to open pension funds caused a stable growth of their assets and an increase in the profits of pension companies from pension fund management.

### Earnings of pension companies

As compared to the corresponding period a year before, pension companies significantly increased their total technical result and net profit in the first half of 2006 (see Table 21). 14 out of 15 pension companies generated profit on management of open pension funds (13 companies a year

Figure 64

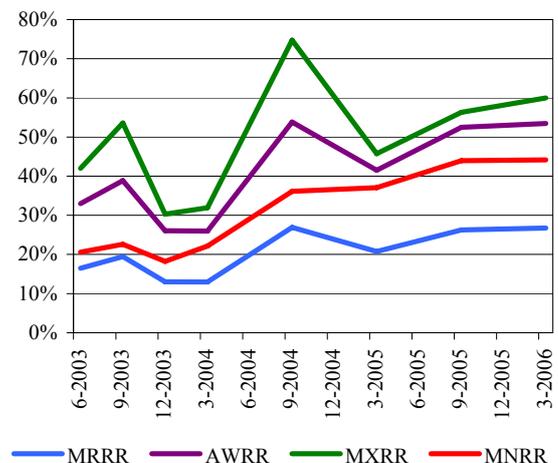
Technical result of pension companies vs. value of open pension fund assets managed



Source: NBP calculations based on KNUiFE data.

Figure 65

Rates of return of open pension funds



Average rate of return of open pension funds:  
MRRR — minimum required rate of return  
AWRR — average weighted rate of return  
MXRR — maximum rate of return  
MNRR — minimum rate of return  
Source: KNUiFE.

before). Profit of pension companies grew almost proportionally to the value of pension funds' assets managed<sup>31</sup>. The largest profit was recorded by pension companies that managed two largest open pension funds (see Fig. 64).

Apart from the impact of the increase in the assets of open pension funds, the improvement in earnings of pension companies in the first half of 2006 was driven by higher efficiency of pension funds management.

The increase in assets of open pension funds resulted from the inflow of current pension contributions to the funds, and from transfers of delayed contributions from the years 1999–2002 by the Social Insurance Institution (in the form of Treasury bonds). A better sentiment on the GPW in June 2006 than at end-2005 also favoured the increase in assets through higher valuation of portfolio shares. These tendencies offset the adverse impact of the turbulence on the Treasury securities market in the second quarter of 2006.

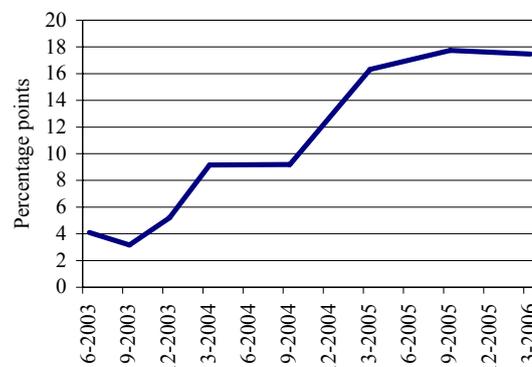
The improvement in efficiency of management of open pension funds' assets was largely attributed to the significantly slower growth rate of the so-called other encumbrances, including costs of direct sale services and general management costs (an increase of 11% as compared to the first half of 2005), relative to the increase in revenues (up by 30%).

#### ***Profitability of portfolios of open pension funds***

In the first half of 2006, all pension funds obtained rates of return on investment at a level significantly exceeding the minimum required rate of return (MRRR). The difference between the lowest rate of return achieved by open pension funds and the MRRR exceeded 17 percentage points and remained at a level close to that in 2005 (see Figs. 65 and 66). It demonstrates that the risk of necessity of making supplementary payments by pension companies, required in the case of a failure to obtain the MRRR, is very low at present. It reduces the risk of incurring the costs of additional payments by shareholders of pension companies, including those of banks and insurance companies.

Figure 66

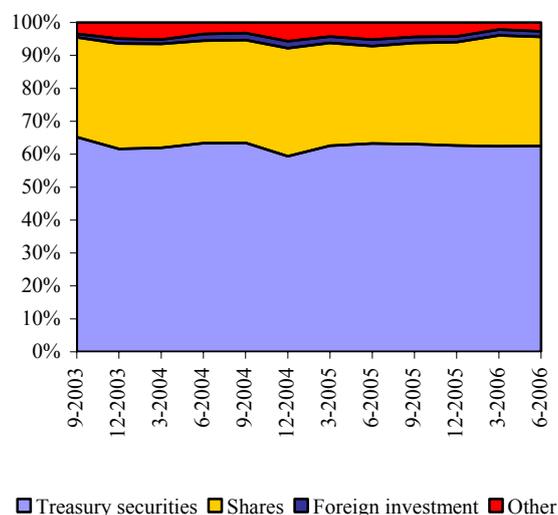
Difference between the lowest rate of return and MRRR



Source: NBP calculations based on KNUiFE data.

Figure 67

Structure of investment portfolios of open pension funds



Source: NBP calculations based on KNUiFE data.

### ***Portfolio structure of open pension funds and its impact on prices of financial instruments***

In the first half of 2006, open pension funds invested primarily on the Polish financial market, mainly in Treasury securities and shares (see Fig. 67).

Since no pension payouts will be made by open pension funds before 2009, no large-scale sale of assets by the funds should be expected (apart from the adjustment of duration of the Treasury securities portfolio to the expected price changes on financial markets). Therefore, as it has been the case so far, open pension funds should play a stabilising role on the market, in particular with regard to Treasury securities.

The prospects of an increase in the number of public share offers and new share issues in the second half of 2006 are bound to favour a moderate improvement in the diversification of the assets held. However, it should be borne in mind that foreign investment limits (and caps on the transaction costs borne by open pension funds) as well as poor development and illiquidity of other segments of the domestic financial market (e.g. non-Treasury debt securities) restrict the possibilities of improvement in the flexibility of portfolio management and of a fundamental diversification of open pension funds' portfolios.

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<sup>1</sup> Economic migration to EU countries had some impact on the decrease in the number of unemployed. However, no data is available to measure the scale of the phenomenon.

<sup>2</sup> Consumer loans cover the following items from the breakdown adopted in banking statistics: authorised overdrafts, credit card lending, and the so-called other loans (including instalment loans).

<sup>3</sup> See *Financial Stability Report — 2005*, June 2006, pp. 23–26.

<sup>4</sup> As of 2005, a new survey questionnaire applies to Household Budget Survey, where expenses for servicing mortgage loans have been included as a separate item for the first time. In 2005, the sample of households repaying mortgage loans was isolated based on the criterion of reporting positive values for the “mortgage loan repayment instalments” item. In the years 2001-2004 this subsample was isolated based on the declaration of the responder of holding a cooperative ownership right or ownership right to a mortgaged housing unit, and reporting any repayment amounts related to bank loans. However, calculation of repayment burden ratios in 2005 in the same manner, aimed to ensure full data comparability, is impossible, due to another modification of the questionnaire. As of 2005, the cooperative ownership right to a mortgaged housing unit has been deleted from the list of types of rights to an inhabited housing unit. Nevertheless, on the basis of additional calculations performed a conclusion may be drawn that changes in loan burden ratios in 2005, resulting from the change in the calculation procedure, are insignificant, thus their increase in 2005 reflects real processes.

<sup>5</sup> The average disposable income per capita in the group of households repaying mortgage loans in 2005 was higher by 34.8% than the average income of households with bank debt, and by 55.6% than the average income of total households (NBP calculations based on GUS data originating from Household Budget Survey).

<sup>6</sup> Due to a limited scope of data concerning the second quarter of 2006, the analysis presented in this subchapter is focused on the processes observed in the first quarter of 2006. Availability of data is also conditioned on the analysis being confined to the

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largest urban agglomerations, in particular to the Warsaw agglomeration, which features ca. 30% of new multifamily construction investment and the majority of modern office space (ca. 70%).

<sup>7</sup> The estimates presented come from “Warszawski rynek mieszkaniowy 2005/2006 r.” [www.reas.pl](http://www.reas.pl), and “Bunt przeciw zbyt drogim mieszkaniom”, the Rzeczpospolita daily of 8 June 2006. The Reas data on the increase in prices on the housing market at the beginning of 2006 are confirmed by statements of representatives of other companies performing real estate market analyses, e.g. Knight Frank.

<sup>8</sup> The terms “claims” and “loans” are used interchangeably. The data quoted refer always to claims.

<sup>9</sup> i.e., the commencement of sale of irregular loans to specialised investment funds at the end of 2005, and gradual posting of non-recoverable loans as memo items.

<sup>10</sup> 14 banks applied IFRS in the preparation of unit financial statements in June 2005, 19 banks in December 2005, and 25 banks in June 2006.

<sup>11</sup> Under Polish regulations, enforcement of a mortgage security on a housing property may be more difficult, due to the legal requirement of providing a replacement housing unit to the property owner. Since local governments, to which the requirement applies, are not able to fulfil the requirement due to a lack of housing units available, the requirement would practically fall on the bank that intended to collect on the security established.

<sup>12</sup> 38 commercial banks, 10 cooperative banks, and the National Association affiliating Credit Unions use the services of the CIB. According to the estimates of the Credit Information Bureau, the entities listed above grant a total of 90% of retail loans. Source: Official Gazette of the Credit Information Bureau, [www.bik.pl](http://www.bik.pl).

<sup>13</sup> Source: M. Samcik “Banki handlują nieściągalnymi długami”, the Gazeta Wyborcza daily of 19 June 2006.

<sup>14</sup> For the purpose of estimation, the loan amounts (irregular loans and total loans granted) have been reduced by the equivalent of provisions for *loss* loans.

<sup>15</sup> The analysis does not cover the general risk fund in banks applying domestic accounting principles.

<sup>16</sup> See *Financial Stability Report — 2005*, NBP, June 2006, p. 66.

<sup>17</sup> The Act on financial support to families purchasing own flats, adopted by the Sejm on 13 July 2006, Sejm paper 393.

<sup>18</sup> The methodology of calculations has been presented in the *Financial Stability Report — 2005*, NBP, June 2006, pp. 83–85.

<sup>19</sup> The VaR simulation has been conducted by the Monte Carlo method in a 10-day horizon

<sup>20</sup> The gains of some banks on operations in financial instruments were higher than those in the first half of 2005, whereas the low aggregated result of the sector stemmed from the loss incurred by one bank.

<sup>21</sup> It was shown in the last-year edition of the Review that in the previous year, the banking sector reported — for accounting reasons — lower profit on fees and commissions than in the corresponding period of 2004. Part of the fees and commissions charged was included in the net interest income on application of the effective interest rate (EIR) by banks. As at today, banks accomplished the introduction of the EIR.

<sup>22</sup> Based on FX tables of 10 major banks extending foreign currency loans /FX indexed to households.

<sup>23</sup> An increasing number of banks develop partner office networks. The costs of launch of those offices are partly covered by the banks, whereas the costs of remuneration of the personnel employed are in a majority of cases covered by the partner of a particular bank running a particular office (office employees are typically employed in the banks on a part-time basis, so that they have access to banking secrecy information necessary to perform operations with customers).

<sup>24</sup> In the years 2003–2004 banks also recorded an increase in employment costs; however, it was largely influenced by payments of compensations related to group redundancies. Only in 2005 raises of personnel costs stemmed from pay rises conditioned on the size of turnover, sales, and other measures adopted by banks in incentive systems (based on financial statements of several major banks).

<sup>25</sup> Domestic banks and subsidiaries of foreign banks, exclusive of branches of credit institutions operating in the territory of Poland, were subject to the analysis. At the end of June 2006, assets of domestic banks constituted ca. 99% of assets of the banking sector.

<sup>26</sup> In Table 13, regulatory capital is lower than core capital, because mandatory decreases of capital slightly exceeded the value of supplementary capital.

<sup>27</sup> The median of the financial strength rating for the Czech, Hungarian, and Slovenian banks amounted to C-, and to D+ for the Slovakian banks.

<sup>28</sup> A total of 12 banks, of which one foreign bank with a minor share in the index (0.31%).

<sup>29</sup> Due to the calendar of publications by KNUiFE of aggregated data for the insurance sector for the first half of 2006, the analyses presented in this section are based on the data for the first quarter of 2006.

<sup>30</sup> The data refers to the direct activities, i.e. exclusive of the active reinsurance.

<sup>31</sup> The monthly fee charged by pension funds for the management of open pension funds depends on the value of assets managed and is determined based on the principle of percentage commission, i.e. for funds of assets of up to PLN 8 billion — 0.45% of the asset value; from PLN 8 billion to PLN 20 billion — PLN 3.6 million plus 0.04% of the surplus of assets over PLN 8 billion; from PLN 20 billion to PLN 35 billion — PLN 8.4 million plus 0.032% of the surplus of assets over PLN 20 billion.

## 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). In the case of non-life insurance, the value of solvency margin is determined by the amount of premium collected and the claims paid; in the case of life insurance, it is determined by the value of technical and insurance provisions and the size of risk of the insurance company (the value of benefits paid in the case of death of the insured). In the calculation of the solvency margin, the level of reinsurance is also taken into account. The algorithm for determining the solvency margin is specified in Regulation of the Finance Minister on the method of determination of the solvency margin and the minimum amount of guarantee capital for insurance sectors and subsectors of 28 November 2003 (the Journal of Laws [*Dziennik Ustaw*] No. 211/2003, item 2060).
- Bancassurance** — cooperation of banks and insurance companies consisting in particular in distribution of insurance policies by banks.
- Balance of the value of provisions and revaluation** – the difference between charges to provisions and revaluation and releases of provisions and revaluation.
- Banks lending policy (net percentage)** — the difference between the asset-weighted percentage of banks that have eased/intend to ease their lending policy in the present/next quarter and the asset-weighted percentage of banks that have tightened/intend to tighten their lending policy in the present/next quarter. The data comes from the survey of banks conducted by the NBP (*Senior Loan Officer Opinion Survey*).
- Behavioural scoring** – a quantitative method of assessment of customer's creditworthiness that takes into account the history of utilisation of banking services by the customer (as opposed to the application scoring, which uses solely the data included in the loan application).
- 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 — from GUS national accounts.
- 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.
- Demand for loans (net percentage)** – the difference between the asset-weighted percentage of banks that have experienced/forecast an increase in the demand for loans in the present/next quarter and the asset-weighted percentage of banks that have experienced/forecast a decrease in the demand for loans in the present/next quarter. The data comes from the survey of banks conducted by the NBP ("Senior loan officer opinion survey").
- 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 possible default of a financial institution.
- 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.

**Gross loss ratio** — the ratio of the sum of gross claims and benefits paid (before taking into account the share of reinsurers) and the change in the balance of provisions for unpaid gross claims and benefits to gross premium earned.

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

**Income margin** — the percentage of disposable income of a household that is left after debt service payments are made and basic living costs are covered.

**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 debt index** — the difference between the percentage of enterprises that intend to increase their bank debt within the next quarter and the percentage of enterprises that intend to decrease their bank debt within the next quarter. The data comes from a survey of enterprises conducted by the NBP (the so-called quick monitoring).

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

**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 and shares, other securities and financial instruments of a variable rate of return, net gains/losses on financial operations, net FX gains/losses).

**New investment index** — percentage of entrepreneurs expecting to commence investment within the next 12 months, decreased by the percentage of entrepreneurs not intending to undertake new investment within the next 12 months. Data comes from a survey of enterprises conducted by the NBP (the so-called quick monitoring).

**Non-performing loans** — loans in arrears of at least 90 days.

**Non-performing loan ratio** — the ratio of non-performing loans to total loans.

**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.

**Premium retention ratio** — the ratio of net written premium (exclusive of premium ceded to reinsurers) to gross written premium.

**Premium earned** — part of the gross written premium payable to the insurance company for the risk incurred within a particular reporting period (determined as gross written premium in a

reporting period decreased by the balance of provisions for unearned premium as at the end of the reporting period and increased by the balance of provisions for unearned premium as at the beginning of the reporting period).

**Repayment capacity – forecast** — the difference between the percentage of enterprises that anticipate an improvement in financial condition or capacity for timely repayment of debts and the percentage of enterprises that anticipate deterioration of financial condition or capacity for timely repayment of debt. The data comes from GUS survey of the economic climate.

**Securities that may be used to close the 1-month liquidity gap** — Treasury bills and Treasury bonds with the maturity of over 1 month.

### *List of abbreviations*

<b>AC</b>	Comprehensive insurance of land vehicles, exclusive of rail vehicles (subsector III of non-life insurance)
<b>BIK</b>	Credit Information Bureau
<b>GUS</b>	Central Statistical Office
<b>GPW</b>	Warsaw Stock Exchange
<b>IC</b>	Insurance companies
<b>IF</b>	Investment funds
<b>IFRS</b>	International Financial Reporting Standards
<b>KNB</b>	Commission for Banking Supervision
<b>KNUiFE</b>	Insurance and Pension Funds Supervisory Commission
<b>LTV</b>	Loan-to-value ratio — ratio of the amount of loan to the value of property on which security is established
<b>MRRR</b>	Minimum required rate of return
<b>NBP</b>	National Bank of Poland
<b>NFI</b>	Non-bank financial institutions
<b>NIM</b>	Net interest margin
<b>OC</b>	Third-party liability insurance
<b>OPF</b>	Open pension funds
<b>PAS</b>	Polish Accounting Standards
<b>PF</b>	Pension funds
<b>ROA</b>	Return on assets — profit of an entity expressed as percentage of the average value of its assets
<b>ROE</b>	Return on equity — profit of an entity expressed as percentage of the average value of its equity (in the case of banks, defined as regulatory capital)
<b>UFK</b>	Insurance investment fund
<b>VaR</b>	Value at Risk