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## Executive Summary

The first half of 2005 did not bring any developments that could pose a threat to the stability of the domestic financial system. Good situation of financial institutions resulted from the continuously favourable tendencies visible among their customers, i.e. high profitability of enterprises and a rise in disposable income of households. The condition of corporates and households did not deteriorate despite a lower-than-expected rate of economic growth in the first half of 2005. An important factor favouring the maintenance of financial system stability was a lack of sudden price swings in domestic financial market quotations, which through most of the period remained consistent with investors' expectations.

The improved income situation of households following, among others, from the recovery in the labour market, coupled with intensified competition between banks in this group of customers both contributed to sustaining a high growth rate in the value of loans granted to individuals and, in particular, in the volume of housing loans. Amid still low corporate interest in taking out new loans, banks tended to intensify their focus on the retail market, often striving to win customers from other banks. Measures intended at halting the outflow of household deposits led, on the one hand, to a reduction in banks' deposit margins, and on the other, to a high nominal increase in the value of households' savings deposited with banks. Intense competition was also to be seen in the loan market, which was reflected in easing banks' lending conditions and criteria for granting loans to households.

Even with deposit margins reduced, the increased scope of banks' activity coupled with their improved operational efficiency allowed the banking sector to achieve in the first half of 2005 the highest nominal earnings since the beginning of 1990s. Moreover, all analysed profitability and performance ratios improved at the sector level. However, a possible warning signal is the rise in the value of household loans which are classified *satisfactory* and yet are being repaid with some delay. The deterioration in timely repayment of loans may be the upshot of the rapid growth in lending observed in the previous periods. Still, the banking sector displayed high resistance to disturbances, which is evidenced by the results of simulations accounting for different paths of banks assets quality worsening. The simulations suggest that the banks' capital buffer is large enough to survive even serious upheavals.

Good condition of the real sector also had a favourable influence on increasing the scale of operation and the earnings of non-bank financial institutions such as insurance undertakings and open-ended pension funds. The first half of 2005 saw improvement in the earnings of pension companies and insurance undertakings, which had a positive impact on consolidated results of banks, which are parent undertakings in many capital groups.

In view of available data, it can be expected that in the coming quarters investments will constitute an increasingly important contribution to GDP growth, which should breed a rise in corporate loans. Faster economic growth will also bear positively on households' capacity to service their debts and thus, in the longer perspective, should allow financial institutions to broaden their customer base. The continuation of the ascent in the volume of real property loans and the corresponding climb in sales of non-life insurance and the number of customers will also contribute to the expansion of insurers' operations.

The fact that in January 2005 the largest Polish banks started to follow the International Accounting Standards and International Financial Reporting Standards (IAS/IFRS) in preparing solo financial statements makes it difficult to properly interpret changes therein reported. Positive tendencies observed in the first half of 2005 have to be confirmed in next periods, when banks have completed the implementation of the new standards and it is possible to compare data reported according to the same principles in two subsequent periods. This perspective will also allow a fuller assessment of the impact of the IAS/IFRS on the stability of financial institutions. At present, it is only possible to estimate that the

differences between banks applying domestic and those following international standards are substantial, which suggests a considerable impact of new standards on the presented results and thus also on the assessment of the financial system.

## 1. Real sector performance

The fact that the rate of economic growth in the first half of 2005 fell short of its 2004 level did not bring about a worsening in the situation of banks' customers. The profitability and liquidity of enterprises remained high. The real rate of growth in households' income was accelerated, which in the situation of a relatively low growth rate of individual consumption resulted in an increase in their financial assets. Even though for some time now corporate demand for loans has apparently been growing, no significant rise in bank lending to this sector has been observed so far. At the same time, the loans to households have been building up quickly over the past few years. The processes that had been visible in the real economy prior to the first half of 2005 are not likely to pose a threat to financial system stability in the next few quarters, and the forecast tendencies should favour the improvement in the condition of financial institutions.

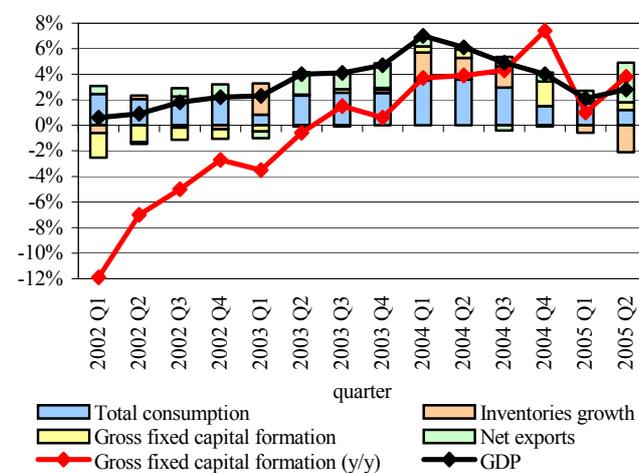
### 1.1. The corporate sector

In the first half of 2005, the economy was growing at a slower rate than in the previous year. This was mainly the result of last year's positive pre-accession shock, which wore off in the second half of 2004. The annual growth rate of GDP stood at 2.1% in 2005 Q1 and 2.8% in Q2 (data of the Central Statistical Office – GUS). In line with GDP's future path as accounted for in the projection prepared by the NBP, the rate of economic growth in the coming quarters should step up to reach approx. 3.5% in the whole of 2005<sup>1</sup>.

The slower growth of GDP in the first half of 2005 resulted mainly from a drop in inventories as well as a lower increase in consumption and investment as compared to their levels one year before (see Figure 1). In contrast to the first half of 2004, in 2005 net exports proved an important contribution to GDP growth.

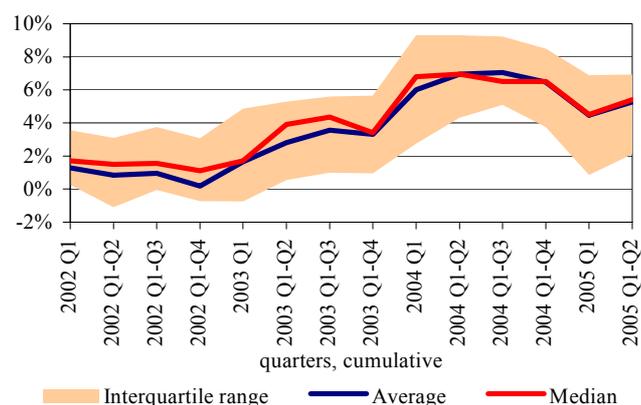
It is possible that enterprises actually expanded their activities, which finds support in the changes in loans and deposits. The annual growth rate of deposits went down to

Figure 1  
Movements in gross fixed investment vs. decomposed GDP growth (y/y)



Source: NBP estimates based on GUS figures.

Figure 2  
Dispersion of pre-tax profit margins



Note: The lower bound of the shaded area represents the first quartile of the distribution, while the upper bound represents the third quartile; the ratios have been calculated using data for particular sections of the economy.

Source: NBP calculations based on the GUS data.

Table 1  
Movements in corporate loans<sup>1</sup> (y/y) in %

	Total	PLN	EUR	USD
Current exchange rate				
March 2005	-4.2	6.4	-23.4	-33.7
June 2005	-2.4	2.9	-10.4	-23.9
Assuming fixed exchange rate <sup>2</sup>				
March 2005	-0.1	6.4	-10.9	-18.4
June 2005	0.6	2.9	0.7	-14.8

<sup>1</sup>Loans granted by monetary financial institutions except for the NBP

<sup>2</sup>Fixed exchange rate from the end of March 2004

Source: NBP.

13.8% in June 2005 from 32.8% twelve months before. In May 2005, the volume of loans to corporates granted by so-called monetary financial institutions increased for the first time since April 2004 (in annual terms, adjusted for exchange rate fluctuations). Banks also anticipate a continuation to the observed rising tendency in the demand for loans on the part of enterprises.

Despite some deceleration in GDP growth rate, the financial standing of enterprises is still very good. Throughout 2004 the profitability in the corporate sector was the highest since the beginning of transformation. In 2005 Q1 the average profitability ratio in subsections of the economy fell from 6% recorded one year before down to 4.5%, and then rose again to 5.3% in Q2 (see Figure 2).

Similarly to 2004, enterprises were reducing their indebtedness in foreign currencies, while increasing their debt in the zloty. At the same time the currency structure of foreign exchange lending was changing. In 2005 Q2, adjusting for exchange rate changes, the euro-denominated loans reported a growth in relation to the level recorded twelve months before (see Table 1). By contrast, the volume of dollar loans decreased. According to the NBP's studies, it was mainly exporters that reduced their indebtedness in the first half of 2005.

These tendencies in loans and deposits find reflection in a shift of corporate liquidity ratios. In the first half of 2005, these indicators stabilised at a high level (see Figure 3).

In comparison to 2004 Q4, the debt burden in 2005 Q1 dropped by 1.3 percentage points at an aggregate level. The drop in the borrowing burden ratio, however, was smaller and amounted to 0.1 percentage point. The analysis of shifts in debt and borrowing burden ratios leads to the conclusion that good financial situation of enterprises allows them to reduce their liabilities. This, however, primarily refers to liabilities other than loans (see Figure 4).

The tendencies in the distribution of debt burden ratio suggest that the largest reductions of indebtedness levels were observed in enterprises with higher debt burden ratio (this is primarily visible in that the average is rapidly drawing close to the median of the distribution – see Figure 5). This is

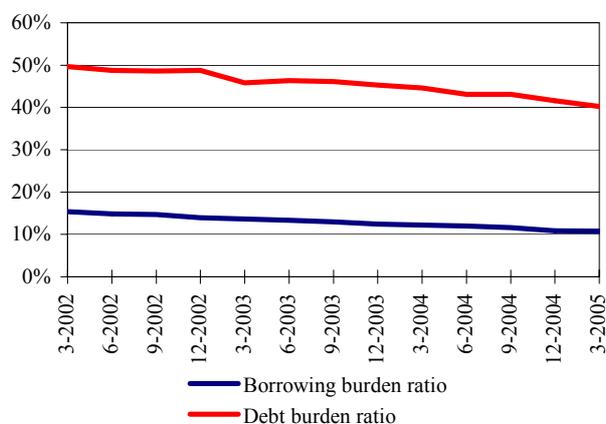
Figure 3



Note: The cash liquidity ratio is defined as the ratio of short-term investments to current liabilities; the quick ratio is defined as the ratio of short-term investments and short-term receivables to current liabilities.  
Source: GUS.

Figure 4

Corporate sector debt and borrowing burden ratios



Notes: The debt burden ratio is defined as the ratio of liabilities to total assets; the borrowing burden ratio is defined as the ratio of bank loans and advances to total assets; both ratios have been calculated using aggregate data for the corporate sector.  
Source: NBP calculations based on the GUS data.

favourable from the perspective of financial system stability, as an overly high level of financial leverage in enterprises significantly raises the lenders' risk.

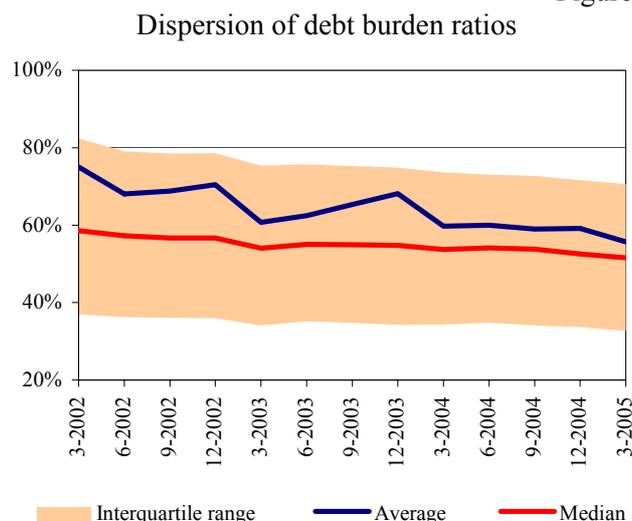
From the point of view of banking sector stability it is also favourable that the greatest increase in borrowing takes place in enterprises with lower borrowing burden ratios. The observation that this change indeed occurred in the analysed group is confirmed by the fact that both the average and median of ratios calculated at the micro level (individual data of borrowers) rose in 2005 Q1, though loan burden in the sector as a whole (aggregate data for the whole corporate sector) went down. The tendencies described above mean that indebtedness increased in those enterprises which so far had utilised bank credit to a lesser degree. As a result, these companies make a more effective use of their equity, without creating too much risk for their creditor banks (see Figure 6).

After a seasonal rise in 2004 Q4, the interest burden ratio returned to a level slightly above its value from the first three quarters of 2004 (see Figure 7). At the sector level, net interest income is still a few times smaller than net operating income, which is mainly due to a low utilisation of loans by enterprises.

There was a slight increase in banks' exposure to enterprises reporting losses, resulting from drops in the profitability of some companies (see Figure 8). The value of loans granted to enterprises reporting negative profitability in Q1 amounted to PLN 36 billion, which accounted for 34.4% of the total volume of corporate credit. In 2004 Q1 these values stood at PLN 34.4 billion and 30.7%, respectively. However, the situation in Q1 is not representative for the whole year due to seasonal nature of the profitability drop in many enterprises. Banks' exposure to corporates reporting a loss should thus be diminishing in subsequent months.

The foregoing analysis indicates that the overall credit risk connected with corporate sector financing did not increase. Some industries though, particularly those where loss-making companies could be found, saw an increase in risk. By contrast, the sliding number of bankruptcies in the corporate sector suggests that credit risk is actually decreasing (see Figure 9). Moreover, the data submitted by

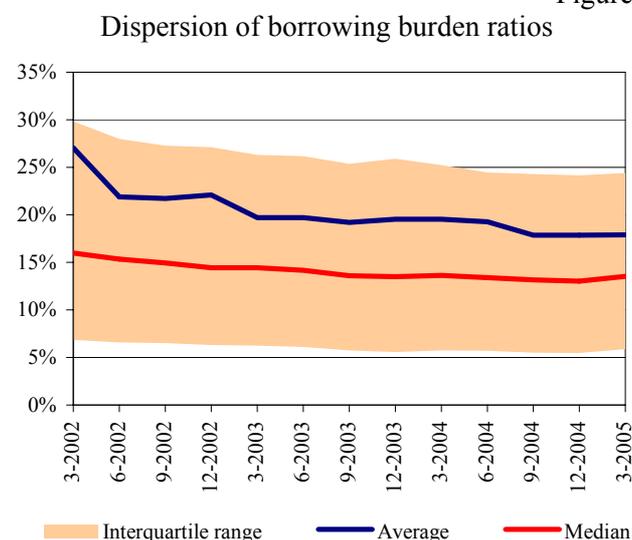
Figure 5



Notes: The debt burden ratio is defined as the ratio of liabilities to total assets; the ratio has been calculated using micro data for particular companies on the basis of GUS F-01 reports; the arithmetic mean represents the mean of debt burden ratios for particular companies; the mean of the distribution is substantially higher than the aggregate debt burden ratio, since only borrower companies were considered.

Source: NBP calculations based on the GUS data.

Figure 6



Notes: The borrowing burden ratio is defined as the ratio of bank loans and other advances to total assets; the ratio has been calculated using micro data for particular companies on the basis of GUS F-01 reports; the arithmetic mean represents the mean of borrowing burden ratios for particular companies; the mean of the distribution is substantially higher than the aggregate borrowing burden ratio, since only borrower companies were considered.

Source: NBP calculations based on the GUS data.

banks reveal that in 2005 Q2 the number of (corporate) borrowers rebuilding their creditworthiness increased, while the number of those losing their credit quality went down.

## 1.2. The household sector

The first half of 2005 brought an improvement in the financial situation of households. After a year of low real growth of wages, in 2005 Q2 it accelerated to 2.7% y/y, mainly thanks to the drop in inflation. Consequently, individual consumption, which in 2004 Q4 and the first half of 2005 was rising at below 2% (y/y), may accelerate in the second half of the year (see Figure 10).

The improvement in households' standing also resulted from the improved situation in the labour market. A clear falling tendency of unemployment, which had appeared in 2004, was also continued in the first half of 2005 (see Figure 11). At the same time, there was a gradual rise in the number of people employed. This better situation in the labour market may be conducive to an increase in consumption (including the purchase of durable goods), particularly in consumption financed by credit. That is because the improvement in the labour market has a positive impact on employment stability and people's assessment of their future financial situation.

The improved standing of households is reflected in a rapid growth in loans granted by banks to this group of customers. A particularly swift growth in loans was recorded in the housing loan segment. This growth was fuelled not only by a steep increase in the demand for housing and consumer loans, but also by the easing lending policies of banks<sup>2</sup>. The improved financial standing of households facilitated their compliance with minimum requirements for receiving loans, which led to a reduction in loan applications rejected by banks.

Growing lending to the household sector increased the loan burden of households. However, due to a simultaneous growth in their disposable income, the borrowing burden ratio was growing at a moderate pace. Its annual rise in 2005 Q1 amounted to 1.4 percentage points and was lower than in

Figure



Notes:

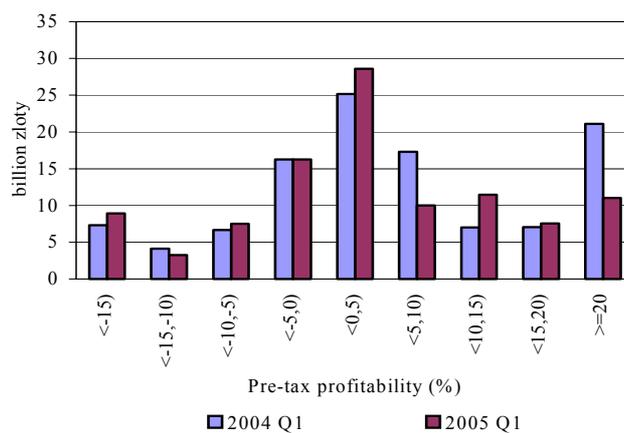
The interest burden on net operating income is defined as the ratio of interest included in financing costs to operating profits less operating losses.

The high value of this ratio in 2002 Q4 stems from the low level of net operating income in that quarter.

Source: GUS.

Figure 8

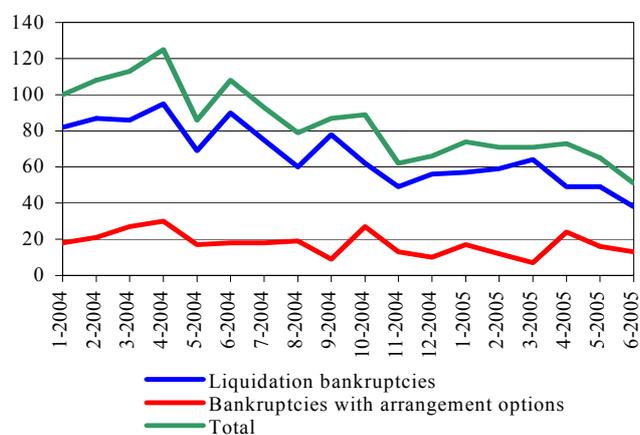
Distribution of bank loans and other advances by corporate profit margins



Source: NBP calculations based on the GUS data.

Figure 9

Number of rulings on bankruptcies and arrangements



Source: Coface Intercredit.

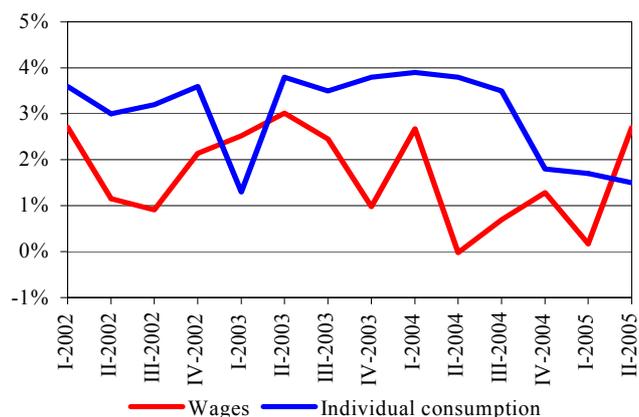
2004 Q1, when it had grown by 1.9 percentage points. The value of the borrowing burden ratio is one of the lowest in the European Union, which follows from a relatively low loan utilisation by Polish households. The total indebtedness at the sector level in Poland does not exceed 2.5 months' disposable income of households, while in the most of the developed EU countries the household debt is larger than a year's worth of disposable income. In Poland, however, bank loans are taken out by a smaller percentage of households than it is the case in many EU countries. Thus, the debt burden on those households which actually use loans is significantly heavier than the borrowing burden ratio calculated on the basis of aggregated data (about 30% of population declare indebtedness at financial institutions<sup>3</sup>).

The recovery in the financial standing of households is also reflected by a rise in their financial assets (see Table 2). The real growth in this sector's financial assets was at 6.2% at the end of June (compared with the same period of the previous year), while at the end of December 2004 the value of households' financial assets reported a real decrease. Households tended to deposit their savings at zloty bank accounts and to buy units in investment funds (as much as PLN 9 billion out of PLN 10.3 billion growth of assets invested by households in investment fund units accounted for net inflow of funds, while the remaining part of the growth stemmed from the increase in participation unit value). As in the previous period, deposits in Credit Unions were picking up quickly, though they do not yet constitute an important component in the financial assets of households.

The rise in loans outstripped the growth in households' financial assets. Consequently, the ratio of loans to the financial assets of households has risen by over one percentage point since December 2004, and reached 33.8%. At the sector level, household loans have almost threefold coverage in their financial assets (see Figure 12).

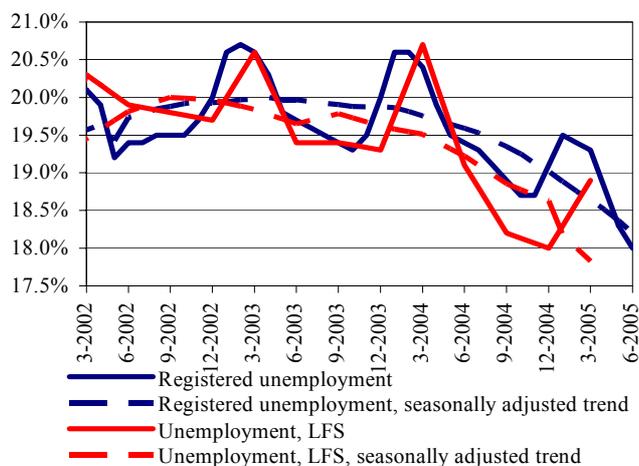
The effect of the drop in interest rates on loans, in particular housing loans, was that despite a rise in household indebtedness, the interest burden ratio stabilised at approx. 0.43% (see Figure 13). This value is still low in comparison to other EU countries, which results, as in the case of borrowing burden ratio, from low utilisation of bank credit

Figure 10  
Movements in real wages vs. movements in individual consumption (y/y)



Note: Wages deflated with CPI.  
Source: NBP calculations based on GUS data.

Figure 11  
Registered unemployment and unemployment according to Labour Force Survey



Source: GUS, seasonally adjusted by NBP.

by households in Poland.

As a result of the significant improvement in the financial standing of households, which continued in the first half of 2005, the credit risk in this sector decreased. Still, it has to be emphasised that this does not necessarily mean that the decrease in risk is evenly spread among all indebted households.

## 2. Financial markets in the first half of 2005

In the first half of 2005 price tendencies in the financial markets in Poland changed in relation to those observed in 2004, yet in most cases these were not sudden changes. The most significant one was the waning of the zloty appreciation tendency.

The most important domestic factors bearing on investors' behaviour included inflation expectations and the associated anticipations of the reaction of the central bank, as well as the uncertainty surrounding the direction of economic policy after the parliamentary election, which was conducive to a rise in risk premium. This rise was, among others, visible in the climb of premiums on 10-year Credit Default Swaps from 15 basis points at the beginning of March up to 25 basis points in May. Moreover, ever since the publication of data on GDP growth in 2005 Q1, market participants have been following the economic activity indicators more carefully<sup>4</sup>.

Another important factor exerting influence on price tendencies in Polish financial markets was the situation in world markets. In 2004, a low level of interest rates in the most developed countries brought about the so-called "hunt for yield" situation<sup>5</sup>. In these conditions, investments in Polish financial markets offered global investors a favourable ratio of potential rate of return to incurred risk. Attractive rates of return drew foreign capital to the Treasury bond and equity market.

The rise in short-term interest rates in the USA (between June 2004 and June 2005 the Federal Reserve raised its key interest rate by the total of 200 basis points) resulted in a significant narrowing of the gap between the yield on low-risk instruments (such as G7 sovereign bonds) and the yield

Table 2

Financial assets of households				
	June 2005 (in bn zloty)	y/y change (in bn zloty)	y/y change (in %)	Structure (in %)
Total, of which:	372.0	26.4	7.6	100
1. Bank deposits, zloty	181.8	12.5	7.4	48.9
2. Currency deposits	32.5	-3.4	-9.5	8.7
3. Assets of investment funds <sup>1</sup>	41.8	10.3	32.8	11.2
4. Life insurance companies	37.1	4.8	14.9	10.0
5. Deposits at credit unions	4.4	1.0	30.6	1.2
6. Treasury bonds	17.0	-0.1	-0.4	4.6
7. Treasury bills	2.5	-1.2	-32.3	0.7
8. Notes & coin in circulation (excluding vault cash)	53.8	3.3	6.6	14.5
9. Bank bonds	1.1	-1.0	-49.0	0.3

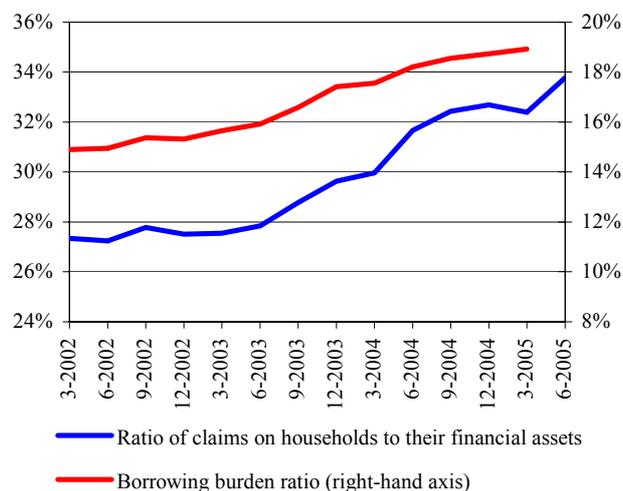
<sup>1</sup> Does not include data on funds offered to corporate customers only.

<sup>2</sup> Value of technical provisions of life insurance companies.

Source: NBP.

Figure 12

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



Note: The borrowing burden ratio represents the ratio of household lending (Polish residents) to annual gross disposable incomes.  
Source: NBP.

on investments outside the most developed countries (see Figure 15). Because the shifts in US interest rates were gradual and consistent with the expectations of market participants, the changes in foreign investor behaviour shaped by the rise in refinancing costs<sup>6</sup> were not very sudden and did not trigger any sudden shifts in Polish financial market (see Figures 17 and 22).

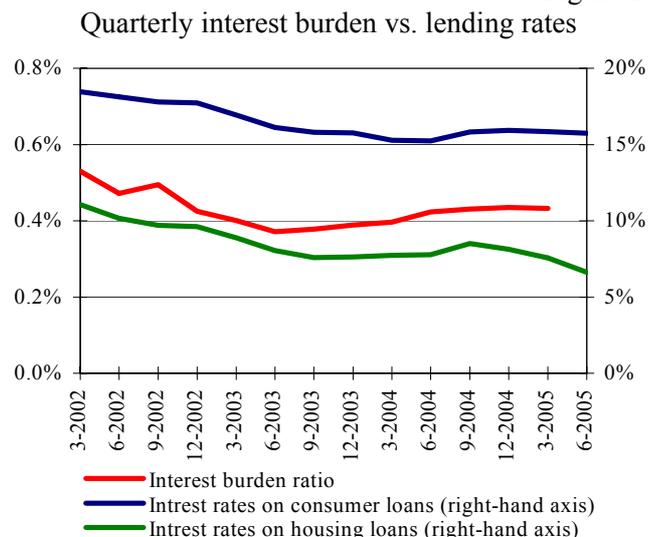
## 2.1. Interest rates

The level of short-term interest rates in the first half of 2005 was mainly shaped by central bank interest rates and market participants' expectations of inflationary processes and the respective reactions of the central bank. Inflation, which reached its maximum level in July 2004, was decelerating in the first half of 2005. This was due to the diminishing influence of transitory factors (food price increases, tax rate shifts) which had a one-off impact on the price hike in 2004.

Slowing inflation and the fact that the Monetary Policy Council adopted an easing monetary policy bias in February contributed to the rise in expectations for interest rate reductions. These expectations were reflected in short-term interest rates and FRA quotations (see Figure 16). This tendency was particularly evident in the quotations of longer-maturity FRAs, which at the turn of Q1 and Q2 pointed to the expectations for rate reductions of 75-100 basis points by the end of 2005.

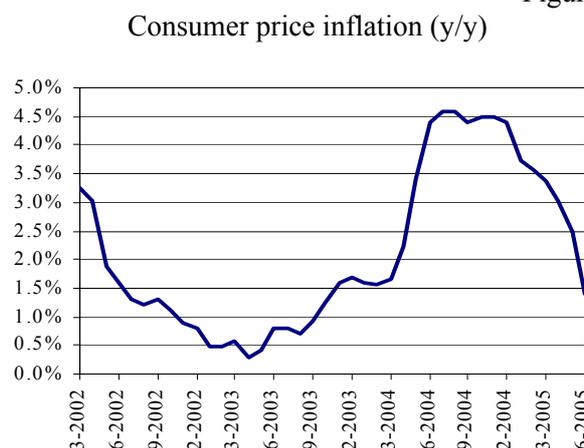
Expectations of interest rate reductions prevailed throughout the analysed period and also influenced the prices of longer-maturity financial instruments. As inflation and interest rates were sliding down so the yields on all Treasury bonds were also diminishing. After strong expectations for interest rate reductions over a 12-month horizon had formed at the end of Q1, the yield curve on longer-maturity Treasury bonds levelled off (see Figure 18). This could mean that market participants expected a long-term stabilisation of interest rates after the anticipated reductions. Further inflation and interest rate decline in Q2 resulted in a steady lowering of the whole yield curve.

Figure 13



Note: The interest burden is defined as the ratio of quarterly interest income from households (Polish residents), plus movements in outstanding interest due, to quarterly gross disposable incomes.  
Source: GUS, NBP.

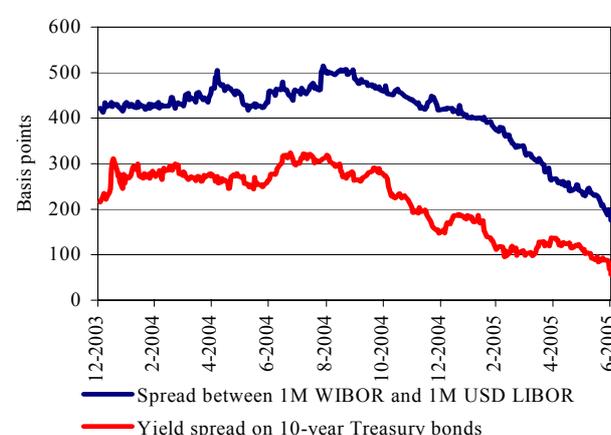
Figure 14



Source: GUS.

Figure 15

Differences in yields on instruments in Polish and US market



Source: NBP, Thomson Datastream.

Another factor bearing on Treasury bond price tendencies was the changing level of non-residents' investment in this market. This was visible at the beginning of March, when simultaneous changes in global markets<sup>7</sup> and an increase in uncertainty as to the feasibility of fiscal reform implementation in Poland persuaded foreign investors to sell Polish debt securities and cash in on the rise in bond prices and the appreciation of the zloty. The halting of foreign capital inflow into the bond market brought about a short correction and also contributed to slowing the zloty's appreciation tendency. Towards the end of the analysed period it could be seen that bond prices tended to rise once again, which stemmed from expectations for further interest rate decreases and also from the simultaneous expectations of zloty exchange rate stabilisation. The tendency toward bond price growth was strengthened by a new inflow of foreign capital.

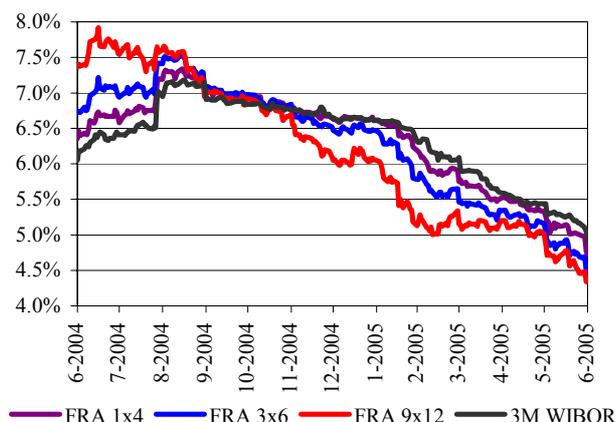
The rising trend in bond prices (decreasing yields), which had appeared in the second half of 2004, was consistent with market participants' expectations. As a result, bond price volatility through most of the analysed period was rather low. Transitory hikes of volatility only occurred during short-term corrections.

The emergence of a stable rising trend in bond prices persuaded some market participants to increase their exposure to interest rate risk. In the first half of 2005 this tendency was observed in all analysed groups of investors apart from domestic insurers and investment funds. Banks operating in Poland, despite an increase in the riskiness of their Treasury securities portfolio (increased duration), still display the most conservative approach to risk in this market (the duration of wholesale Treasury bond portfolio held by banks is considerably lower than the duration of total amount of the debt the Treasury incurred for the issuance of these bonds)<sup>8</sup>. At the same time, foreign non-bank financial institutions remain the group that is most eager to take on interest rate risks.

## 2.2. FX market

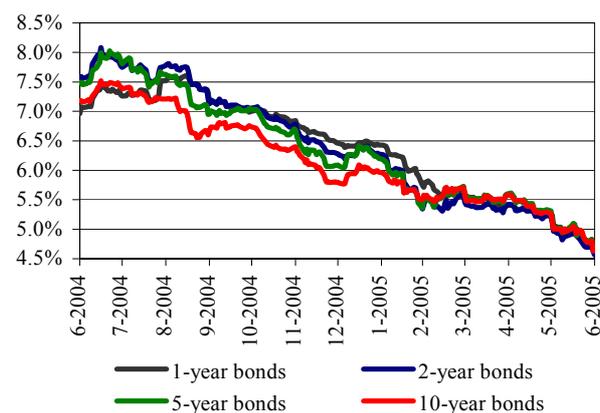
The first months of 2005 brought a halt to the zloty

Figure 16  
Quotations of 3-month FRA contracts vs. 3M WIBOR rates



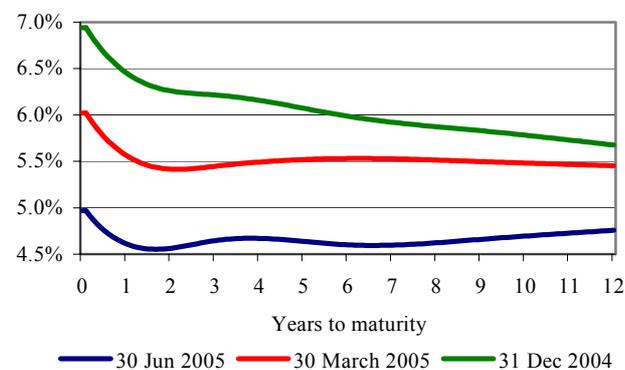
Source: NBP.

Figure 17  
Yields on notional zero-coupon Treasury bonds



Source: NBP.

Figure 18  
Changes in zero-coupon yield curve



Source: NBP.

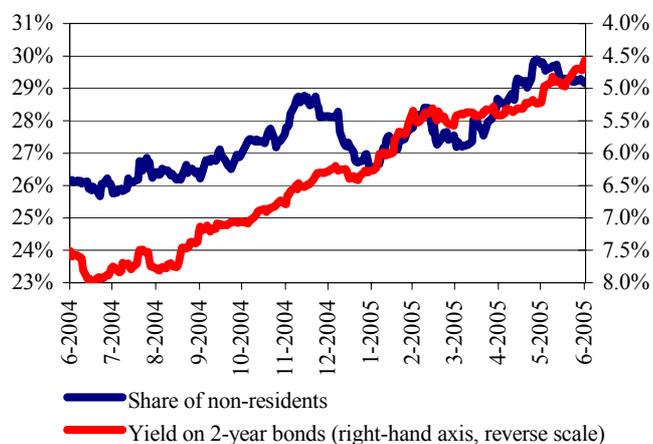
appreciation tendency which had been observed since March 2004. After the zloty had appreciated against the euro by as much as 20.7% between February 2004 and March 2005, in 2005 Q2 its exchange rate fluctuated between 4.0 and 4.3 zloty for one euro, assuming values close to its 5-year average.

The end of the appreciation tendency in March resulted, to a large extent, from the situation in world markets in general, and the correction in American bond market in particular (see Section 2.1), as this correction slowed the inflow of foreign capital into the bond market (see Figures 19 and 24). An additional factor undercutting the roots for further zloty appreciation were interest rates increases in the USA (125 basis points between June 2004 and the beginning of March 2005). These increases, in conjunction with expectations for interest rate cuts in Poland voiced at the time, limited the attractiveness of the Polish market for investors (see Figure 15)<sup>9</sup>. The rise in investment refinancing costs persuaded some foreign investors to liquidate their positions and cash in on the profit gained owing to the zloty appreciation. The impact of foreign investors' behaviour was particularly apparent in the similarity of zloty exchange rate moves and the shifts of other Central European currencies against the euro (see Figure 25). Another factor constraining the appreciation of the zloty against the euro was a rising weight of the uncertainty surrounding future economic policy, stemming from the fact that the general election was drawing closer.

The zloty appreciation in 2004 in 2005 Q1 was accompanied by a decrease in the implied volatility of zloty exchange rate, which fell to its lowest level since 2002 (6.3% in annual terms in case of one-month volatility of the zloty against the euro). Such a low level of implied volatility was rooted in the persistently strong appreciation tendency of the zloty and expectations that it would be continued.

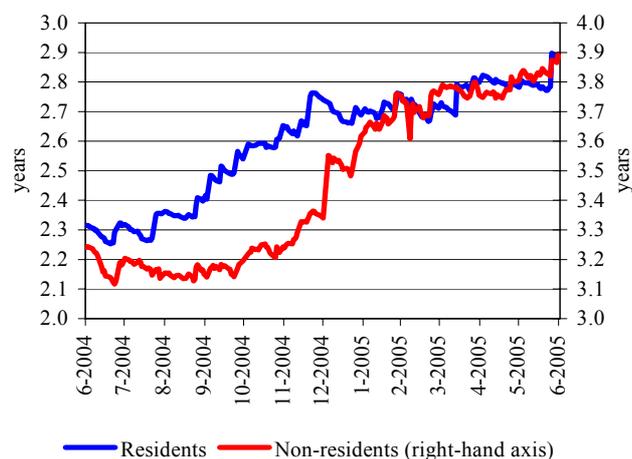
The fact that this appreciation trend had been broken in March allowed the implied volatility to rise, particularly so in short-maturity contracts. These quotations reflected market participants' conviction that there might actually occur a short-lived steep depreciation of the zloty. The low level of implied volatility at the time of tendency change suggested

Figure 19  
Share of bonds held by non-residents in wholesale Treasury bond portfolio (by nominal value) vs. yields on Polish Treasury bonds



Source: NBP.

Figure 20  
Duration of wholesale Treasury bond portfolios of residents and non-residents



Source: NBP calculations based on the data of the National Securities Depository (KDPW).

that it came as a surprise to most market participants. As a result the actual volatility of the exchange rate in March 2005 outstripped the implied volatility. Following a short period of growth, the implied volatility steadied at the level of 9-10% in annual terms, which was close to the historical volatility level and also the 3-year average of implied volatility. The stabilised level of implied volatility after the unexpected trend change attested to the lack of expectations of further abrupt swings in zloty exchange rate.

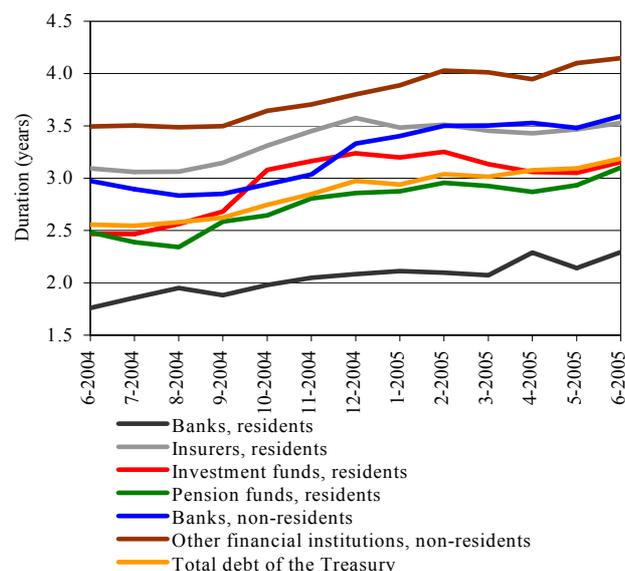
### 2.3. Equity market

The first half of 2005 marked an increase in the key indices of the Polish equity market. The value of the WIG index of Warsaw Stock Exchange rose by 6.4% and the WIG 20 – by 4.4%.

The most important factors shaping the price of shares were the earnings of companies and tendencies in world markets. Good performance of companies in 2004 (particularly raw material companies and banks) coupled with expectations for high dividend payments contributed to the continuation in Q1 of the equity price rising tendency which had started in 2004. The rising tendency was halted in March, when the realisation of profits by foreign investors and a correction in world markets (caused by record-high oil prices and heightened uncertainty as to the outlook for economic growth) triggered a series of falls in Central and Eastern Europe's markets. In May, after the correction ended, the stock exchange indices in Eastern and Central European markets returned to the path of growth.

The convergence of the changes in index quotations on Warsaw Stock Exchange and world bourses was one of the indications of a growing impact of the situation in world markets on the quotations on Warsaw Stock Exchange. In first half of 2005 index quotation changes on Warsaw, Prague or Budapest exchanges were similar (see Figure 28). The impact of foreign investors was also visible in the increase of their share in stock market turnover from 36% in the second half of 2004 to 43% in the first half of 2005.

Figure 21  
Duration of wholesale Treasury bond portfolios held by particular financial investors



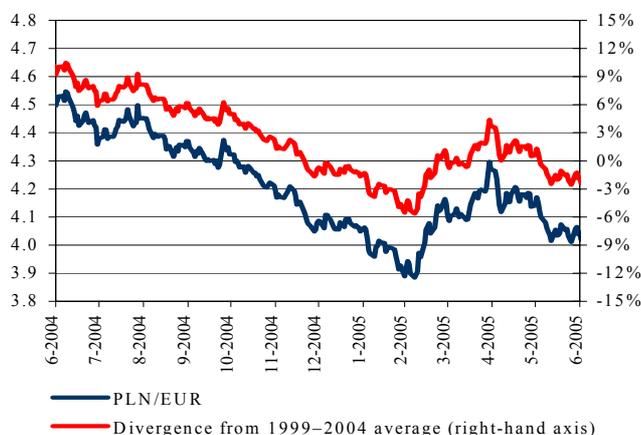
Source: NBP calculations based on the data of the National Securities Depository (KDPW).

Figure 22  
Exchange rates, EUR/PLN and USD/PLN



Source: NBP.

Figure 23  
Relative divergence of EUR/PLN exchange rate from average for 1999-2004



Source: NBP.

## 2.4. Potential threats arising from developments in financial markets

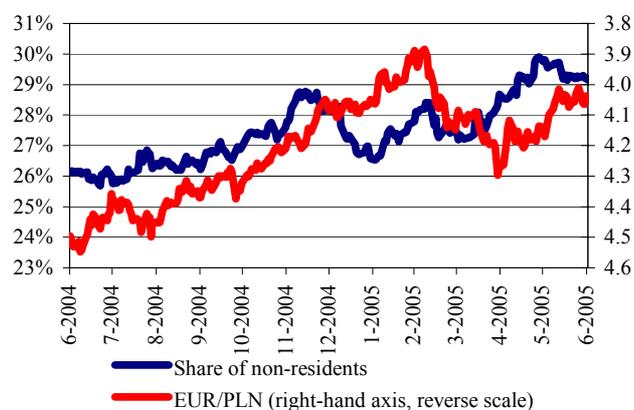
The quotations of financial instruments suggest that market participants do not anticipate any significant shifts to current tendencies visible in Polish financial markets. The yield curves for the bond market indicate that investors expect Treasury securities yield to stabilise at levels safeguarding the compliance with the convergence criteria. According to market expectations, the exchange rate of the zloty should not be subject to any significant changes. The scenario consistent with market expectations does not involve any threats to the stability of the Polish financial system.

Apart from describing the most probable scenarios, the analyses of financial system stability should also identify the sources of danger that can seriously affect the domestic financial system, even if their probability is not large.

Such threats may be connected with the developments in world markets or with the processes ongoing in the Polish economy.

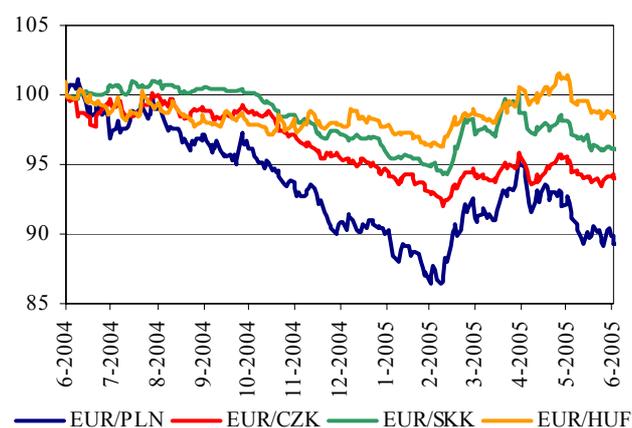
One of the global risk factors mentioned by representatives of many research centres<sup>10</sup> is the possibility of a substantial rise in yields on long-term US bonds. Even though the key interest rate of the Fed (the Federal Funds Rate) was raised by the total of 200 basis points between June 2004 and June 2005, the yield on bonds increased only slightly (see Figure 29). As a result, the nominal yield on US bonds currently remains below the forecast nominal growth of US GDP. This situation results from the combination of many different factors, one of them being the increased demand for US bonds following from the rise of foreign exchange reserves of some Asian countries and crude oil exporters. Another reason that is often pointed out here is the reduction of US companies' indebtedness, which limits the supply of long-term corporate debt instruments and contributes to shifting the demand towards Treasury bonds. Yet another reason quoted is the increased demand for long-term instruments on the part of non-bank financial institutions, which stems from the gradual rise in the so-called longevity risk.

Figure 24  
Share of bonds held by non-residents in wholesale Treasury bond portfolio (by nominal value) vs. EUR/PLN exchange rate



Source: NBP.

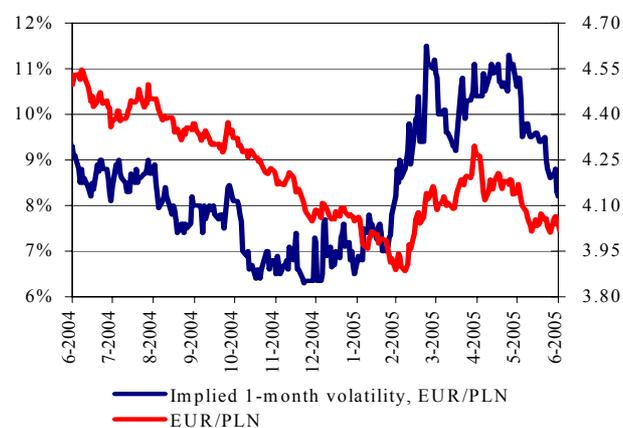
Figure 25  
Changes in exchange rates of Central European currencies



Note: Exchange rates at 30 June 2004, standardised as 100. Drop in index signals appreciation against the euro.

Source: NBP.

Figure 26  
EUR/PLN exchange rates and implied EUR/PLN volatility



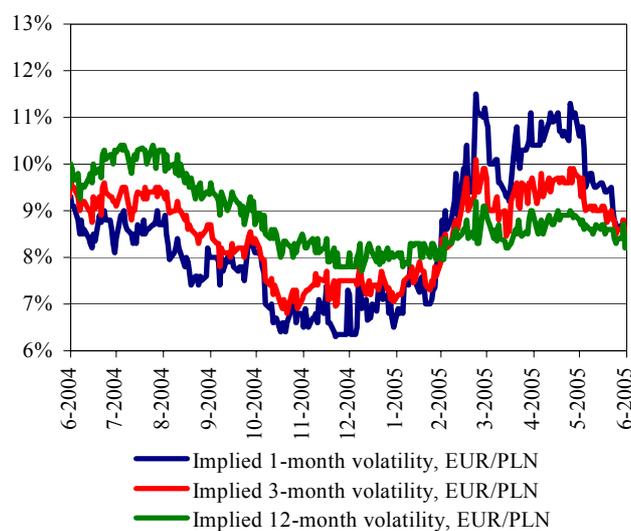
Source: NBP.

An increase in yields that would be unexpected by investors might be caused by many reasons. One of them might be a significant reduction in the inflow of foreign investment into the US Treasury bond market, triggered by the drive to diversify instruments in which the above mentioned countries invest their foreign exchange reserves. Another reason for an increased yield on bonds could be a significant unexpected drop in world oil prices, which would brighten up the prospect for economic growth (which, in turn, would increase the expected scale of interest rate increase in the United States) and the shift of capital from the bond to the equity market. The analyses of price trends in the oil market reveal that in the past few years the market has been attracting a large interest of financial investors<sup>11</sup>. Due to that, a possible impulse for a slump in crude oil quotations might come from liquidity problems of large investment funds holding significant positions in oil price derivatives.

Principal domestic risk factors for the situation in the Polish financial market include the possibility of a breakdown in the process of general government expenditure rationalisation and a lack of structural reforms that would accompany the necessary rationalisation. If these threats came true, this would delay Poland's compliance with the fiscal criteria of euro area membership.

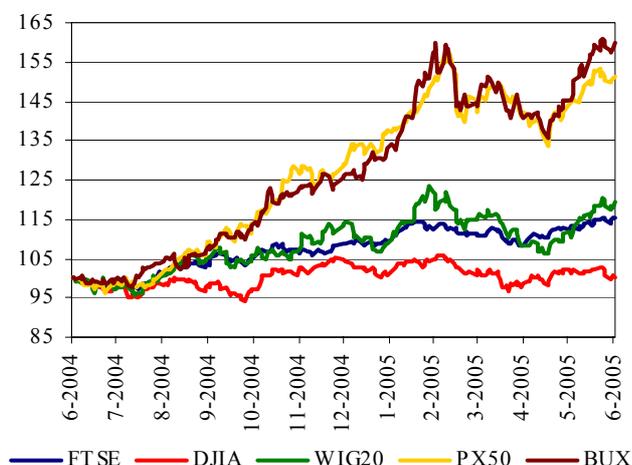
The crystallisation of one or more of the above presented risk factors might persuade foreign investors to cash in on their profits and sell out their Polish securities. This in turn would be reflected in a significant leap in volatility and large depreciation of zloty exchange rate and also in a hike in bond yields. The quotations of financial instruments in Polish markets in March 2005 proved that the world market developments causing increased losses for global investors provoked them to realise profits in the Polish market. In the event of capital being withdrawn by foreign investors, the liquidity of the domestic market is dampened (at the beginning of March 2005 the breadth of bid/offer spreads in the Polish Treasury bond market soared from approx. 5 to over 30 basis points). This, in turn, increases the scale of drop in prices of financial instruments.

Figure 27  
Term structure of implied volatility of EUR/PLN exchange rates



Source: NBP.

Figure 28  
Indices of most important world and Central European stock exchanges



Note: Value of indices at 30 June 2004 standardised as 100.

Source: Thomson Datastream.

### 3. Banking sector stability

The good situation of real sector entities, despite some economic deceleration in 2005 Q1, found reflection in very good earnings of the banking sector. Once again, the banking sector managed to improve the profitability and efficiency of its operations. Taken together with the progress made in other areas, including the increase of average capital adequacy and the improvement of loan portfolio quality, this meant that the financial stability of the banking sector should be assessed as high. However, it has to be borne in mind that both the historic comparability of data and the determination of reasons behind particular changes are made difficult by the fact that in 2005 certain banks for the first time adopted the International Accounting Standards and International Financial Reporting Standards (IAS/IFRS, further referred to as the IFRS) in their financial statements.

#### 3.1. Loan portfolio quality<sup>12</sup>

Loans to the non-financial sector are the primary source of credit risk in the Polish banking sector (see Tables 3 and 4). By value, corporate lending represents a slight majority in the total loan portfolio. However, there has been a continuation to the tendency observed for several years for household lending, and particularly lending to individuals, to gain in significance.

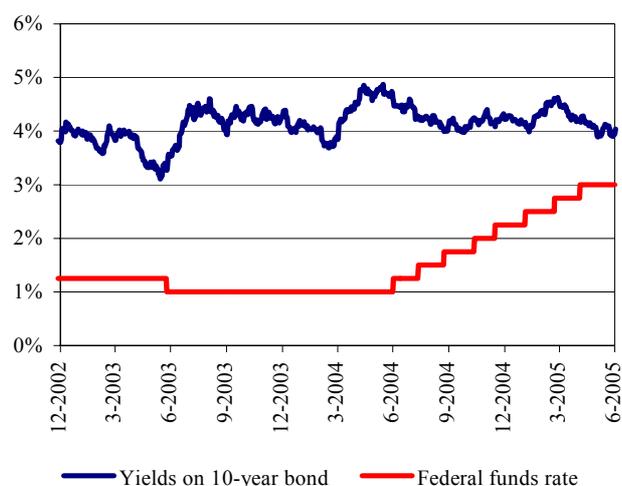
Another sizeable item in bank balance sheets are claims on financial corporations, particularly on other banks. However, the risk involved in lending to financial institutions is relatively small, as information on these counterparties is more readily available and they are required to meet the prudential standards set by the relevant supervisors. Moreover, the predominantly short-term nature of those exposures allows banks to form a more accurate prediction of the financial standing of their counterparties during the term of the contract.

Loans to general government institutions represent a minor part of banking sector assets. The credit risk on these loans is comparatively small.

The first half of 2005 brought an improvement in the

Figure 29

Yields on US Treasury bonds and the reference rate of the Federal Reserve



Source: Thomson Datastream, www.federalreserve.gov.

Table 3

Share of loans and placements by sector in banking sector assets (assets = 100%)

	2003	2004	6-2005
Financial corporations	15.7	19.8	22.0
of which: non-residents	7.9	10.5	11.0
Non-financial customers	44.4	42.0	40.9
General government	4.0	3.8	3.4

Source: NBP.

Table 4

Percentage breakdown of irregular loans, gross (total irregular loans = 100%)

	2003	2004	6-2005
Financial corporations	4.6	3.7	3.9
Non-financial customers	94.5	95.4	95.4
General government	0.9	0.9	0.7

Source: NBP.

Table 5

Irregular loan ratios for particular sectors (%)

	2003	2004	6-2005
Total	15.7	10.0	8.8
Financial corporations	3.0	1.3	1.1
Non-financial customers	21.2	14.7	13.2
General government	2.4	1.6	1.2

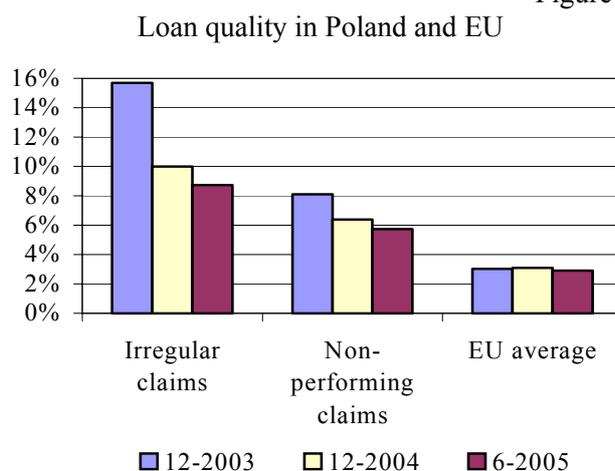
Source: NBP.

average quality of claims on all major groups of the banking sector's customers. As at the end of June, the irregular loan ratio (defined as the proportion of irregular loans in total lending to a given sector<sup>13</sup>) decreased to 8.8% overall, i.e., for all sectors together. The ratio was much lower for financial corporations and general government, at 1.1% and 1.2%, respectively, while for non-financial customers the ratio stood at 13.2% (see Table 5).

The improvement in loan portfolio quality resulted from the continuously good standing of enterprises and improved financial situation of households (which had the effect of improving the timeliness of loan servicing and reducing the number of irregular loans due to the borrower's economic standing). Also, loan portfolio quality was enhanced by further increase in banks' lending and in the value of placements at other financial entities. The impact of legal changes which took effect in January 2004, i.e. easier criteria of loan classification to particular risk categories, was slight. At the end of 2004 most banks declared that they had introduced necessary modifications to their loan quality classification systems and also shifted some part of their loan portfolio to lower risk categories and reclassified some loans as *satisfactory*<sup>14</sup>. This means that in the first half of 2005 the movements in the irregular loan ratio were chiefly the result of an improvement in borrower condition, rather than reflecting the combined effect of regulatory adjustments and customers' standing, as it had been the case in 2004.

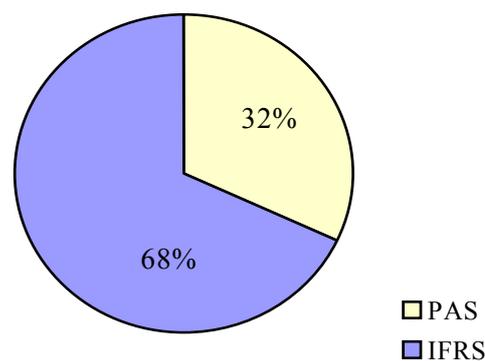
The adoption of the IFRS for the first time by a number of banks was another factor which had some impact on the improvement in irregular loan ratios. Starting from 2005 these banks have been introducing internal models of assessing the impairment of claims. These models will most likely yield results that are different from those obtained with the methods included in the domestic regulations on the rules governing the classification of loans to particular risk categories<sup>15</sup>. However, it is difficult to say how the adoption of the IFRS will affect the reported quality of loans, as banks are introducing particular standards gradually. A more complete assessment of the impact of the IFRS on irregular loans will only be possible at the end of 2006, when most banks complete the implementation of the new standards and

Figure 30



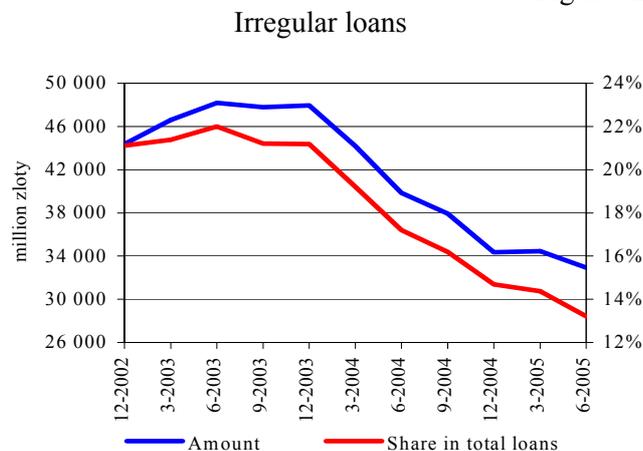
Notes: In 2003 and 2004 in EU-15. For comparisons with the EU, non-performing loan ratio should be considered. Non-performing loans are loans with over 90-day delinquency (see Footnote 13). This definition has been effective since 2004.  
Source: NBP, ECB.

Figure 31  
Assets of banks applying IFRS and PAS



Note: Banks observing the PAS (Polish Accounting Standards) encompass some commercial and all cooperative banks.  
Source: NBP.

Figure 32



Source: NBP.

on-site examinations devoted to the entire set of IFRS issues are performed.

The existing differences in the ways of portfolio classification between banks compliant with the Polish Accounting Standards (PAS) and those observing the International Accounting Standards render the data from the whole banking sector less informative than in the previous years. Consequently, apart from the average data, the chapter also includes data on portfolio quality in breakdown by accounting standards applied by particular banks.

### Loan quality, non-financial customers

Given the concentration of credit risk in claims on non-financial customers, and the fact that borrower defaults in this sector could potentially cause banks the highest losses, further analysis will concentrate on the quality of lending to corporates and households.

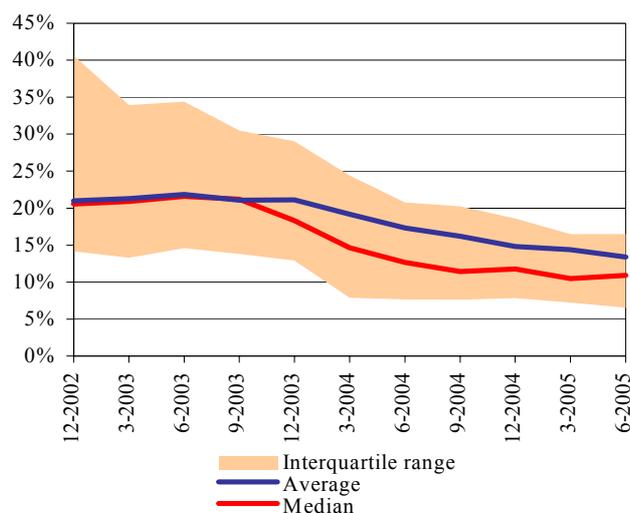
The first half of 2005 brought a decrease in the average level of irregular loan ratio in loans to non-financial entities as well as a decline in the dispersion of this ratio in the banking sector and a drop in the total amount of irregular loans (see Figures 32 and 33). Despite some improvement in loan portfolio quality (measured with the share of irregular loans), a more detailed analysis reveals that some negative tendencies did transpire in the first half of 2005. The amount of irregular loans to households, which had been falling since mid-2003, reported a slight increase (of 1.4%).

There was also an increase in the volume of loans classified to categories *satisfactory* or *special mention* but not serviced for a period shorter than 3 months (see Figures 34 and 35). This was particularly evident in the case of loans to households and can be attributed to the rapid growth rate of loans in previous periods (see Figure 36). On the other hand, the significant improvement in the quality of corporate loans is a positive development.

The quality of loan portfolio at banks observing the Polish and international accounting standards changed to a different degree. Loans classified *substandard* and *doubtful* decreased by about 1/5 in banks observing the IFRS, but they increased

Figure 33

Dispersion of irregular loan ratios, commercial banks



Source: NBP.

Table 6

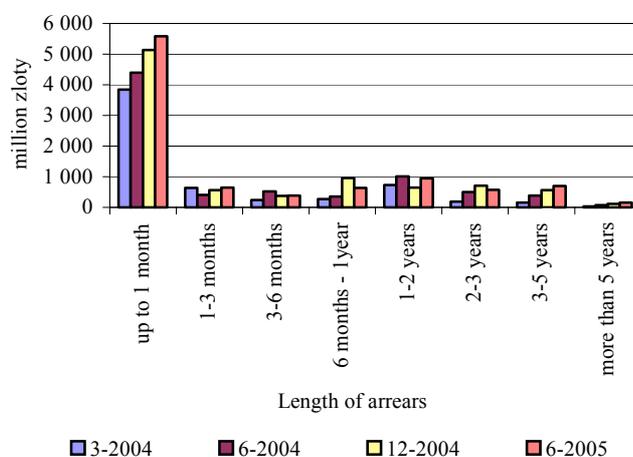
Irregular loan ratios for particular borrower groups of non-financial sector (%)

	2003	2004	6-2005
Corporates	27.4	19.5	17.2
Households	13.3	9.7	9.0
- of which individuals	11.1	7.2	6.8

Source: NBP.

Figure 34

Loans to households by length of arrears



Source: NBP.

in the other banks (see Figure 38). A factor that could have played a role in the differences in portfolio quality improvement that occurred between banks observing the IFRS and those observing the PAS was their different borrower structures. Banks compliant with the IFRS had more loans to corporates in their portfolio than the ones applying the PAS. Amid the persistently high earnings of enterprises in 2005 this could have had a stronger impact on the improvement in portfolio quality.

A slight growth in the volume of irregular loans of households in the first half of 2005 was to a large extent the result of decreased quality of consumer loans.

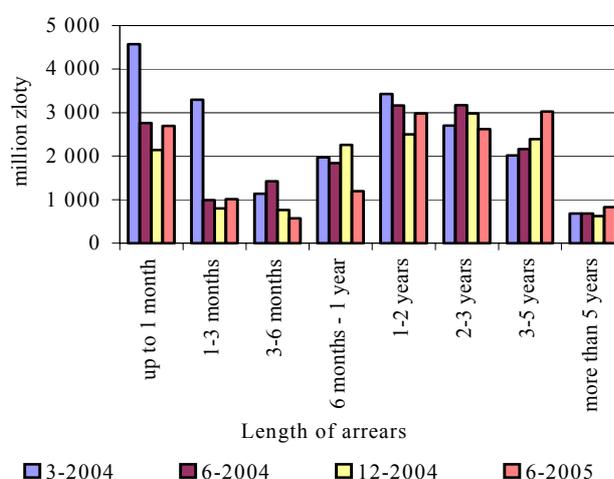
As signalled in the previous issues of the *Report*, credit cards have become more popular among less wealthy customers. The rapid growth in credit due to wider credit card use brought about a rise in irregular loans. However, the overall quality of these loans was better than the average quality of consumer loans (see Figure 37). In the future, the expansion of credit card use may be a little bit weakened due to the act regulating the maximum interest rate on loans, which is to take effect in February 2006<sup>16</sup>. The current interest on credit cards often exceeds the statutory curbs (four-fold value of lombard facility rate). After cutting down the charged interest rates banks may have problems with earning a margin that would cover estimated losses on loans granted to less wealthy borrowers. This may persuade banks to narrow their target group of customers, which for some potential customers would imply decreased possibilities of financing consumption.

Among loans to households, housing loans have traditionally stood out as loans of high quality. The increase in their share in total household loan portfolio, which has been visible for a long time now, has been contributing to the improving quality of the portfolio as a whole. From this perspective, this development should be assessed positively as it is conducive to banking sector stability (see Subsection *Credit risk arising from property market financing*).

Because banks use the criterion of the borrower's standing, for many years not all loans classified irregular have actually been non-performing loans<sup>17</sup>. This was also

Figure 35

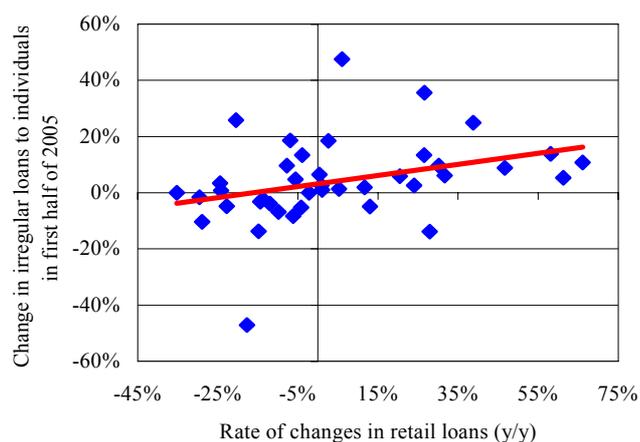
Loans to corporates by length of arrears



Source: NBP.

Figure 36

Change in irregular loans vs. loan growth rate



Note: Change in irregular loans is delayed 6 months. The rate of changes in retail loans in June 2005.  
Source: NBP.

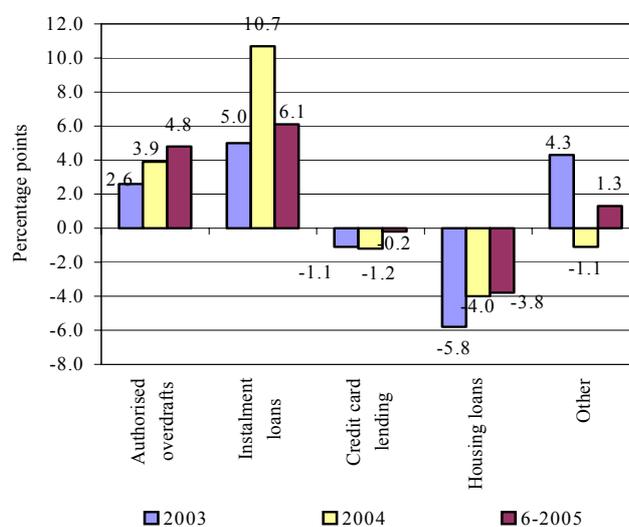
true at the end of June 2005 as the amount of non-performing loans was about 35% lower than the amount of loans classified irregular (see Figure 39). The adoption of the IFRS did not change this proportion in any significant way, which may indicate a gradual implementation of IAS 39 (*Financial instruments: Recognition and Measurement*) in particular loan portfolios of banks. It can be expected that in the coming quarters the amounts of irregular (i.e. deemed to be impaired) and non-performing loans will become similar. That is because the estimation of the impairment of the value of claims must be justified by objective evidence that the asset is impaired.

The level of indicators describing the average quality of loan portfolio is strongly affected by the fact that banks were keeping in their books the *loss* loans accrued in the previous years, which in fact could have been posted as memo items (estimated at about 75% of non-performing loans<sup>18</sup>). The fact that only a small amount of *loss* loans are posted as memo items<sup>19</sup> is one of the principal reasons that the irregular and non-performing loan ratios presented in the *Review*, even if lower than at the end of the previous year, still significantly diverged from their EU average. The average EU non-performing loan ratio (calculated for combined claims of banks on financial, non-financial and general government sectors) amounted to 2.9%<sup>20</sup>, while the respective ratio for Poland stood at 5.7%.

At the end of 2005 Q2 the Polish Securities and Exchange Commission issued first licences to establish securitisation funds, which will be, among others, authorised to buy irregular loans from banks. The funds will then have the power to delegate the collection of these loans to specialised debt recovery companies. Banks will be able to deduct the losses on the sale of loans from their taxable income. From the tax perspective, this form of balance sheet “cleaning” seems to be better for banks than simply writing off *loss* loans and posting them as memo items. It can be expected that in the few year's time irregular loans, which have been lingering in banks' balance sheets for several years, will be moved to specialised funds, while the irregular loan ratios will draw closer to the EU average. Fund market analysts expect that in the first period of the securitisation funds’

Figure 37

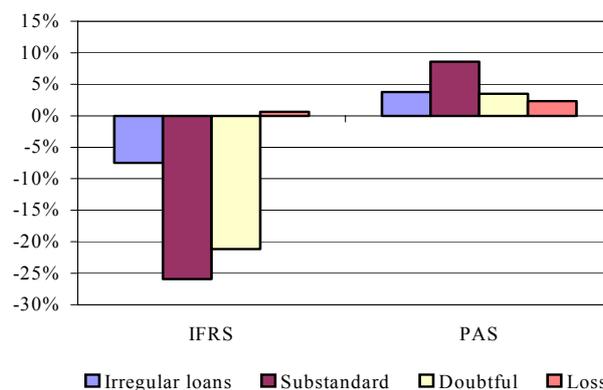
Irregular loan ratio  
(difference relative to average quality of personal loans to individuals, percentage points)



Source: NBP.

Figure 38

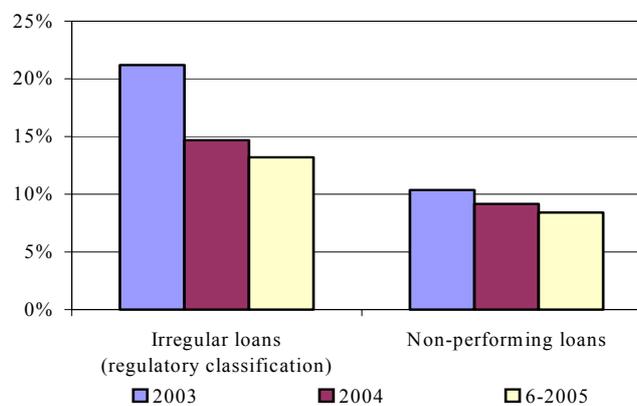
Percentage change in irregular loans in banks observing IFRS and PAS



Source: NBP.

Figure 39

Irregular vs. non-performing loans



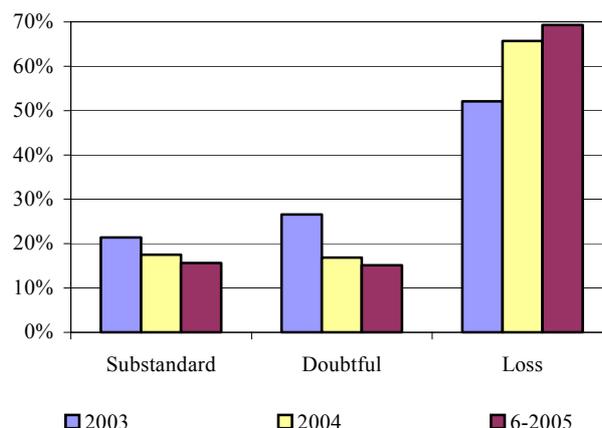
Source: NBP.

activity banks should show much interest in selling out irregular loans accrued in their balance sheets. In subsequent years, banks will be selling their new irregular loans on a regular basis.

Because of the high level of “old” *loss* loans, and the resultant high level of irregular loan total<sup>21</sup>, the volume of specific provisions (impairment provisions – in the case of banks compliant with the IFRS) has invariably been running high. The coverage of irregular loans with specific provisions is similar to that in EU countries (see Table 7). Almost 100-percent coverage of non-performing loans indicates that the losses of banks resulting from potential quality decline in loans with repayment delays over 3 months will not have a negative impact on the sector's earnings. The ratio of specific provisions to the sum total of *satisfactory*, *special mention* and irregular claims (the so-called coverage ratio of loan portfolio with specific provisions) is also very high. In June 2005, this ratio stood at 5.5%, i.e. 2.5 times more than the EU average. Still, it has to be emphasised that this is the result of a small volume of *loss* loans being posted as memo items. If the coverage ratio of loans with specific provisions is adjusted for *loss* loans and corresponding specific provisions, its level slides to 0.5%. The above indicators and international comparisons suggest that although banks in Poland are very well prepared for a worsening in quality of non-performing loans or those already serviced with delays, they may be negatively affected by a potential deterioration in the quality of loans currently serviced on a regular basis. However, lower loss absorbing buffers in the form of specific provisions do not pose a threat to financial stability due to banks' large equity, which would be able to cover potential credit losses (see Subsection 3.8). Nevertheless, the lowering level of specific provision coverage of loans has to be carefully monitored.

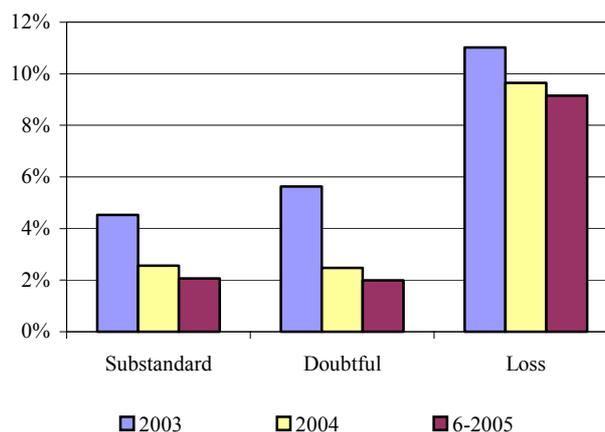
The degree of specific provision coverage of non-financial sector irregular loans differs depending on the quality of security accepted by the bank. With regard to *loss* loans, the larger part of which had been granted before 2002, banks established provisions covering around 4/5 of their value. The remaining claims are secured. With regard to *doubtful* and *substandard* loans, which were mostly granted

Figure 40  
Proportion of particular irregular loan classifications in irregular loan portfolio



Source: NBP.

Figure 41  
Proportion of particular irregular loan classifications within total loan portfolio



Source: NBP.

Table 7  
Coverage of loan portfolio with specific provisions (in %)

	2004	6-2005	EU 2004
Specific provisions / irregular loans	55.5	63.1	-
Specific provisions / non-performing loans	93.2	103.5	67.6 <sup>1</sup>
Specific provisions / <i>satisfactory</i> , <i>special mention</i> , irregular loans	5.5	5.5	1.95
(Total specific provisions – specific provisions for <i>loss</i> loans) / ( <i>satisfactory</i> , <i>special mention</i> , irregular loans) – <i>loss</i> loans	1.7	0.5	-

<sup>1</sup>Definition of irregular loans used by the ECB is consistent with the definition of non-performing loans used by the NBP.  
Source: NBP, ECB.

recently, the proportions between specific provisions and security are reversed as compared with *loss* loans (see Figure 42). This is, among other things, a result of changes in banks' lending policies and paying greater attention to the quality of security accepted.

#### Loan quality by section of national economy

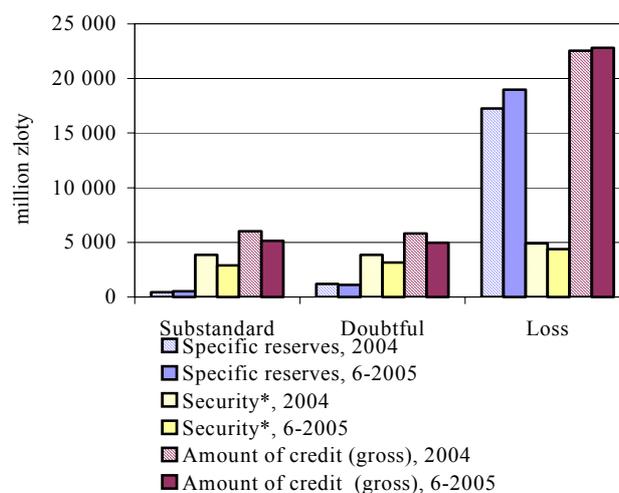
Positive quality changes encompass loans to entities from all sections of activity apart from agriculture<sup>22</sup> (see Tables 8 and 9). Loan quality, however, improved to a different extent in particular portfolios and there remain significant differences between individual sections.

The highest loan quality was recorded in lending to section *electricity, gas and water supply*. Loans to undertakings in this section represent a considerable part of the total portfolio (approx. 9% of large exposures) and substantially represent loans to power stations and to combined heat and power stations. Their repayment is secured with long-term contracts, which ensure that energy is sold at a predetermined price. For a long time now, the scheduled cancellation of these contracts has been raising concerns of banks, which fear that the approaching liberalisation of the energy market may have a negative impact on the debt servicing capacities of energy producers<sup>23</sup>.

The poorest lending quality was recorded in loans to undertakings from sections *hotels and restaurants, fishing, and agriculture*. Still, banks' exposure to these sections was very modest (in total – at below 2.8% of the so-called large exposures).

Overall loan portfolio quality was most affected by lending to undertakings in three sections of the economy, namely *manufacturing, distribution and repairs, and real estate, research and business activities*; in all, these represented over 70% of large exposures. In all above mentioned sections of activity loan quality improved significantly. In particular, improvement in section *distribution and repairs* should be emphasised, as its performance had been weaker in the past few years. Besides, improvement occurred in the section encompassing

Figure 42  
Coverage of irregular loans by security and specific provisions



\* Security deductible from provisioning base  
Source: NBP.

Table 8  
Structure of large exposures by section of activity (NACE) in %<sup>1</sup>

Section	Breakdown of total loans by section	Breakdown of total irregular loans by section
A – Agriculture	1.7 (1.9)	4.0 (3.1)
B – Fisheries	0.02 (0.02)	0.05 (0.04)
C – Mining & quarrying	0.8 (0.8)	0.2 (0.5)
D – Manufacturing	35.5 (35.6)	35.3 (33.9)
- Manufacture of food products	9.1 (10.3)	10.8 (9.8)
E – Electricity, gas & water supply	9.1 (7.9)	1.4 (1.0)
F – Construction	6.7 (6.3)	10.6 (8.7)
G – Distribution & repairs	23.0 (24.5)	23.5 (31.4)
H – Hotels & restaurants	1.1 (1.1)	3.3 (2.5)
I – Transport & communications	6.0 (5.6)	3.2 (2.4)
J – Financial intermediation	10.4 (10.3)	5.8 (4.3)
K – Real estate, renting, research & business activities	15.0 (15.0)	16.4 (14.6)
L – Public administration, defence & compulsory social security	13.0 (14.6)	0.3 (0.3)
M – Education	0.3 (0.4)	0.3 (0.3)
N – Healthcare	0.5 (0.5)	0.9 (0.9)
Other	0.8 (0.9)	2.3 (1.6)
Total (excluding sections J & L)	100.0	100.0
<b>Total amount</b> (excluding sections J & L), bn zloty	165.4 (166.9)	-

<sup>1</sup>Data at the end of June 2005, in brackets - December 2004.  
Source: NBP.

undertakings which implement investment projects in the real estate market (i.a. developers), i.e. section K, and also in the largest subsection of manufacturing, i.e. in *manufacture of food products* (about 1/10 of large exposures).

A qualitative measure of risk connected with lending to particular sections of the economy may be the so-called investment risk, which is assessed on the basis of current and forecast economic indicators combined with expert knowledge. In the second half of 2005 investment risk declined in industry and non-industrial sections alike<sup>24</sup> – in a 5-degree scale the level of risk moved from a higher-risk to lower-risk category (i.e. small and moderate risk). This is due, among others, to the improvement in corporate earnings in 2004 and their levelling-off at a high level in 2005. Lower assessment of risk is also connected with good outlook for enterprises and the opportunities of activity expansion opened up by Poland's EU accession.

The directions of movements in the scale of risk in sections of the economy find reflection in changes in the structure of banks' portfolios. Over the last year, the contribution of loans granted to undertakings from sections assessed as less risky (i.e. of small and moderate risk) has grown slightly stronger than the share of loans to entities from riskier sections (i.e. sections of heightened, high or very high risk). At the assumption of unchanged standing of undertakings in industries whose investment risk<sup>25</sup> has not been rated, it can be asserted that corporate loan portfolio risk should fall in the second half of 2005 (see Table 10).

#### *Loan quality by currency*

Loans in foreign currencies form a large part of banks' loan portfolios. This can mainly be attributed to the heavy demand for foreign currency loans in the past, when there were major differences in the lending rates applicable to borrowings in the zloty and to those in the most popular foreign currencies. After some decrease of customers' interest in taking out foreign currency loans in 2003, and also in the first half of 2004, which was, among others, due to the strong depreciation of the zloty in this period, the demand for currency loans recorded a rebound (see Table 11). The rise in

Table 9  
Structure of large exposures by section of activity  
(NACE) in %<sup>1</sup>

Section	Irregular loans by section	
	percentage of section portfolio	of which classified loss
A – Agriculture	33.8 (32.5)	29.9 (27.6)
B – Fisheries	39.7 (42.2)	37.7 (36.7)
C – Mining & quarrying	4.4 (12.6)	2.4 (2.1)
D – Manufacturing	14.4 (19.1)	9.1 (11.3)
- Manufacture of food products	17.1 (19.1)	10.5 (10.6)
E – Electricity, gas & water supply	2.3 (2.4)	1.0 (0.2)
F – Construction	23.0 (27.7)	13.6 (16.7)
G – Distribution & repairs	14.7 (25.7)	9.7 (17.6)
H – Hotels & restaurants	42.9 (46.3)	17.7 (19.4)
I – Transport & communications	7.6 (8.5)	2.3 (3.3)
J – Financial intermediation	8.1 (8.4)	5.5 (5.7)
K – Real estate, renting, research & business activities	15.8 (19.5)	9.4 (12.5)
L – Public administration, defence & compulsory social security	0.4 (0.5)	0.1 (0.1)
M – Education	14.2 (14.9)	4.0 (3.8)
N – Healthcare	27.0 (35.0)	13.2 (21.7)
Other	41.0 (37.2)	24.8 (23.3)
Total (excluding sections J & L)	14.4 (20.0)	8.9 (12.5)
<b>Total amount</b> (excluding sections J & L), billion zloty	23.9 (33.4)	14.7 (20.8)

<sup>1</sup>Data at the end of June 2005, in brackets – December 2004.  
Source: NBP.

Table 10  
Structure of large exposure portfolio by investment risk  
(in %)

Risk	second half of 2004	second half of 2005
Small	13	24
Moderate	21	16
Heightened	16	15
High	6	10
Very high	3	3
Non-classified portfolio	41	32

Source: Calculations based on IBnGR and NBP data.

the demand for foreign currency loans in the period of zloty appreciation may indicate that some borrowers decided to take out a loan acting on expectations for further appreciation, which increases the risk of a slump in quality of this portfolio in the event of zloty depreciation.

The limited scale of zloty exchange rate fluctuations against currencies in which most foreign currency loans are denominated (Swiss franc and euro) in the first half of 2005 favoured timely servicing of those loans, thus leading to further improvement in their quality. The quality of currency loan portfolio in the first half of 2005 was higher than zloty portfolio and the gap between irregular loans denominated in the zloty and foreign currencies increased in relation to the end of 2004 (see Table 12).

It seems that in the near future the credit risk arising from fluctuations in zloty exchange rates will be moderate. The first quarters of 2004 demonstrated that a dozen months or so of zloty depreciation had failed to generate any danger of a sharp deterioration in the servicing of foreign currency loans. Strong appreciation of the zloty in the second half of 2004 and its continuation at the beginning of 2005 allow the borrowers to save on loan servicing. Other factors encouraging an optimistic view of the effects of potential zloty depreciation for the credit risk of banks include: an increased customer awareness of risk inherent in foreign currency borrowing, a rise in the use of hedging instruments (e.g. foreign exchange forwards) by enterprises<sup>26</sup> and a cautious attitude of some banks in granting currency loans to households. The findings of a survey carried out by the NBP among the largest banks confirm that most currency loans granted to enterprises are secured with receipts from their export operations (so-called natural hedge) or in the form of derivatives. In turn, currency loans to households are granted to customers with higher repayment capacity than in the case of customers taking out a zloty loan of the same amount.

Thus, it would seem that loan portfolio quality of banks is more likely to be affected by the rate of economic growth and by movements in household disposable income, rather than temporary fluctuations of the exchange rate. Loan quality might only be affected more strongly by an unfavourable combination of exchange rate swings and a

Table 11  
Share of foreign currency and exchange-rate indexed loans in total loans to non-financial sector (%)

	2003	2004	6.2005
Foreign currency and exchange-rate indexed loans of which to:	31.8	25.2	26.3
Corporates	18.7 (33.4)	13.1 (25.3)	12.8 (25.4)
Households	13.0 (29.8)	12.0 (25.1)	13.5 (27.3)
- of which individuals	11.4 (35.7)	11.1 (30.6)	12.6 (33.2)

Note: Figures in brackets represent share of foreign-currency loans to corporates, households or individuals in total loans to that group of borrowers.

Source: NBP.

Table 12  
Irregular loan ratios by particular borrower group of non-financial sector and by loan currency (%)

	2003	2004	6-2005
Zloty loans, of which:	22.1	15.6	14.3
Corporates	27.6	19.3	17.2
Households	15.4	11.5	11.1
- of which individuals	13.6	9.1	9.0
Foreign currency loans, of which:	19.2	12.2	10.1
Corporates	27.1	20.2	17.3
Households	8.3	4.2	3.3
- of which individuals	6.4	2.8	2.3

Note: All figures in the table refer to residents.

Source: NBP.

slow rate of economic growth or disposable income.

### ***Credit risk arising from property market financing***

Large interest of households in housing loans and the resulting robust growth rate of this item of banks' assets both increase the impact of these loans on the quality of loan portfolio as a whole and also on banks' earnings. Housing loans or – to take a larger perspective – mortgage loans deserve particular attention due to their associated risk following from changes in the prices of real properties which serve as their security. Additionally, the risk associated with housing loans depends on the exchange rate movements to a much larger extent than in the case of other loans. This is because most housing loans granted to households (about 61%) are denominated in foreign currencies (see Table 13).

Table 13  
Ratios of irregular loans for property financing (%)

	2003	2004	6-2005
Property loans, of which:	7.4	6.3	5.8
1.1. Zloty loans	9.0	7.2	7.6
1.2. Foreign currency loans	6.0	5.2	4.1
2.1. Housing loans to households	5.4	3.3	3.0
2.2. Housing loans to corporates	10.5	9.7	11.1
2.3. Other property loans	14.0	16.2	14.0

Source: NBP.

### ***Box 1***

#### ***Situation in the residential property and office space market***

For several years now, housing prices in Poland have been increasing, though market analysts still do not foresee any risk of speculative bubble in the nearest future. The price increase started from a low level, and partly, it has been making up for the drops which had occurred in 2000-2001. The commercial property market and particularly the office space market, has been rather bearish, which was reflected in low rents.

Starting from the middle of 2003 the housing market prices were increasing relatively quickly (estimated at 5-15% y/y, depending on location). In the second half of 2004, after the expiry of increased interest in buying flats, resulting from fears for price increase after Poland's accession to the EU, the prices continued to rise but at a slower pace. Real estate market analysts expect further increase in the demand for housing matched with a moderate increase in the supply of new real property. Lack of current development plans in big cities will be hampering a more flexible response of developers to housing demand, which will, in turn, feed the price increase.

The year 2004 marked a rise in the interest of domestic and foreign investors in the office space market. The activity of investors outside Poland's capital city expanded. That was due to the fact that large enterprises were moving their head offices out of Warsaw. In the first half of 2005, despite a smaller demand for office space in Warsaw, vacant office space was reduced. In 2005 Q1, starting rents in Warsaw did not change, but the majority of office space owners tried to lure the tenants with diverse reductions, which rendered the real rents lower than the starting ones.

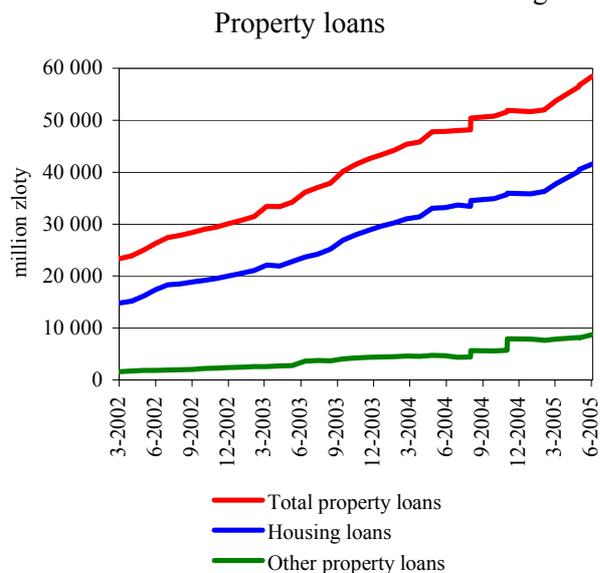
For several years now property loans have been growing significantly. Among other factors, this rise is being fuelled by the increased housing demand, as well as banks' efforts to attract long-term sources of income<sup>27</sup>. In particular, it is worth to highlight the following demand-side factors: growth of the disposable income of households, materialisation of a delayed demand for flats – released by decreasing interest rates and increasing accessibility of loans, materialisation of the demand

for housing resulting from the demographic boom of the second half of the 1970s, transitory escalation of demand resulting from fears of the increased housing prices in the primary market due to the increase of the VAT rate<sup>28</sup> on the sale of new flats and building services scheduled in 2008 and a probable impact of this change on secondary-market prices of housing. Among supply-side factors, an increase in the accessibility of housing loans should be mentioned – banks eased their lending policies, in particular, regarding housing loans for households<sup>29</sup>. In 2005 Q1, in view of the decreasing inflation and the reduction of the central bank's interest rates, banks lowered the interest rates on housing loans denominated in the zloty. Non-interest loan costs decreased, as well. Some banks have also eased their lending requirements. In the nearest future the banks plan to continue the easing of their lending policies in the housing loan segment, which under the existing demand factors will stimulate further increase in lending.

Despite the high growth of the loans for real property financing the structure of household loan portfolio still significantly differs from the average value registered in countries with more developed financial sectors and even in the majority of new EU members. In June 2005, the share of housing loans among loans drawn by households amounted to 33% (less than 10% in 1996), while the EU-10 average exceeds 60%<sup>30</sup>. The comparison of those values indicates a high growth potential. However, fast use of that potential under strong competition might threaten the portfolio quality during an economic slowdown.

Within the last two years the value of property loans granted by the banking sector has almost doubled (see Figure 43). Very high growth in 2002 and 2003 decreased significantly in 2004 (e.g. due to a lower zloty equivalent of foreign currency loans and temporary drop in the demand for foreign currency loans). In 2005 the growth rate started rising again. At the present, the growth of property loans (approx. 22% in nominal terms and about 30% in adjustment for the impact of changes in zloty exchange rate) and easing of lending criteria may raise concerns for the future quality of loans. At the moment, however, the quality of property loans is much better than the whole portfolio of loans granted to the

Figure 43



Source: NBP.

Table 14

Property loans (%)			
	2003	2004	6-2005
Share of property loans in non-financial sector loan portfolio, of which:	19.8	22.7	24.9
- housing loans to households	13.5	15.7	17.7
- housing loans to corporates	4.3	3.5	3.5
- other loans	2.0	3.5	3.7
Nominal growth in property loans (y/y), of which:	44.3	17.3	21.8
- zloty loans	31.4	27.7	21.5
- foreign currency loans	59.3	11.0	22.0
- foreign currency loans at constant exchange rates <sup>1</sup>	36.4	24.7	41.7

<sup>1</sup> Assuming all foreign currency loans were euro loans.

Source: NBP.

Table 15

Currency conversions of property loans in June 2005 (%)

Currency conversions	Corporates	Households
- from foreign currency to zloty	0.2	11.5
- from zloty to foreign currency	0.0	5.1
- from foreign currency to foreign currency	-	3.7

Note: The share is calculated as the ratio of converted amount to the value of loan in the given currency at the beginning of conversion period.

Source: NBP.

non-financial sector. The quality of housing loans to households is also visibly better than the quality of other property loans (see Table 14).

The banks which grant currency loans offer a possibility of changing the contractual currency (so-called conversion of the loan denominated in the zloty into a foreign currency loan or vice versa). This option is mostly used by households which are not hedged against FX risk (see Table 15). The conversion of a loan from one currency into the zloty enables customers to eliminate the foreign exchange risk. Such an operation does not always improve the financial standing of the borrower and thus the possibility of executing such an operation cannot be treated *ex ante* as a hedge against the FX risk. If the zloty depreciated between the moment the loan was taken out and the moment it was converted, then the zloty equivalent of the debt is higher than it was at the moment the loan was taken out. Consequently the amount of the interest payable after such revaluation is calculated at a higher (zloty) rate. When the conversion is performed after the zloty appreciation, benefits resulting from the reduction in the amount of debt denominated in the zloty are accompanied by higher interest payments resulting from higher nominal interest rates on loans denominated in the zloty as compared with foreign currency loans.

The structure of property loans by maturity shows that the majority of the currency loans will be repaid in 3-5 years' time at the earliest (see Table 16). As the currency structure of housing loans of households is dominated by the euro and Swiss franc – a currency whose exchange rate against the zloty moves closely with the euro exchange rate – it may be expected that in the longer term (i.e. after Poland's accession to the euro zone) banks' credit risk resulting from open currency positions of individual customers of banks will be limited.

### 3.2. Prospects for loan quality

#### *Enterprises*

Based on the analysis of all available data it may be conjectured that a slowdown in the growth of investments

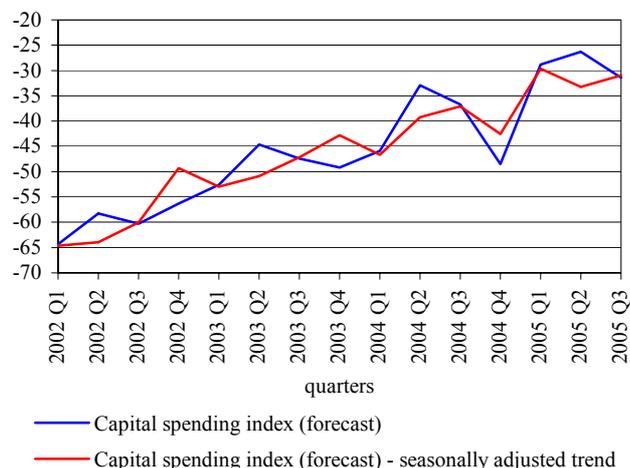
Table 16  
Structure of property loans by maturity (%), June 2005

Property loans, of which:	Zloty loans	Foreign currency loans
Up till one year	6.2 (12.9)	4.0 (7.6)
More than 1 less than 3 years	6.4 (13.3)	6.4 (12.4)
More than 3 less than 5 years	5.0 (10.4)	5.6 (10.9)
More than 5 less than 10 years	8.8 (18.3)	9.7 (18.8)
More than 10 less than 20 years	10.8 (22.4)	19.0 (36.6)
Over 20 years	10.9 (22.7)	7.2 (13.8)

Note: In brackets – the structure of property loans in the total amount of property loans in a given currency.

Source: NBP.

Figure 44  
Capital spending index – corporate forecasts



Note: The capital spending index shows the percentage of companies declaring they will commence investment projects in a given quarter, less the percentage not planning such projects in that quarter.

Source: NBP.

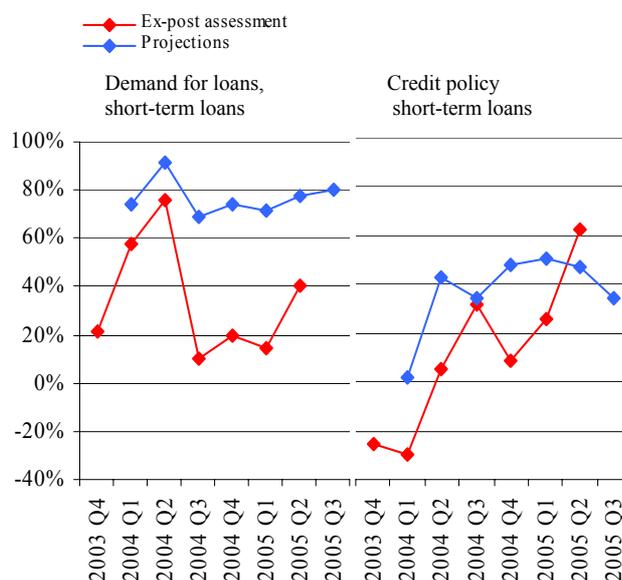
observed in 2005 Q1 (in year-on-year terms) was transitory. It may be expected that in the second half of 2005 the contribution of investments in the GDP growth will be much higher (see Figure 44). Taking into account the continuously good export performance, the GDP projection prepared by the NBP shows that economic growth should speed up to approx. 3.5% in the whole 2005 and to 4-5% in 2006 and 2007<sup>31</sup>.

In the following quarters, the lending to the corporate sector will most probably rise. Lending growth may be especially visible in the SME sector (see Figure 45), since most banks are easing their lending policies for this group of customers, particularly with regard to short-term loans. At the same time, banks point out that this easing contributes to the increase in the corporate demand for loans. On the other hand, in 2005 Q2 the banks operating in the sector of large enterprises recorded the strongest increase in the demand for loans for the past twelve months.

The growth in lending to the corporate sector will contribute to the decrease in the share of irregular loans in the portfolio of loans extended to the corporate sector, because the new loans will at first be classified as *satisfactory*. The improvement in the quality of loans should not only have statistical but also real grounds. This results from the still good financial standing of enterprises, as well as from bright prospects for economic development. Timeliness of loan servicing, as declared by surveyed enterprises, provides further evidence for good prospects for the quality of loans. The proportion of enterprises that anticipate no problems in servicing their loans in the nearest future stabilised at 89-90%, the highest level in the history of the survey.

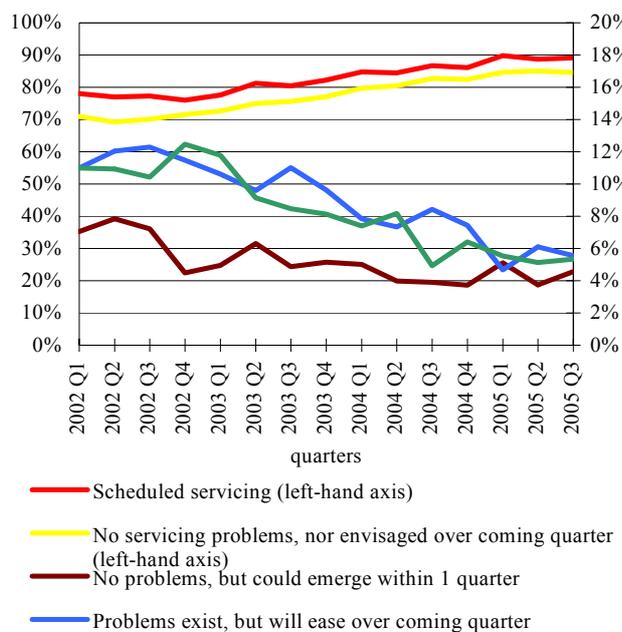
The improvement of quality does not have to be uniform throughout the portfolio as the enterprises in sections D (manufacturing) and M (education) assessed their future capacity to repay debts as worse than one year before. Since loans granted to enterprises from section D account for a large portion of the total loan portfolio, the overall irregular loan ratio may not be decreasing fast. However, a significant diversity across this section should be borne in mind, e.g. the standing of the food industry, whose companies constitute 25% of bank customers from this section, has improved.

Figure 45  
Demand for loans and lending policy of banks in the small and medium-sized enterprise sector – short-term loans



Notes: The charts show net percentage, which in the case of the demand for loans is the difference between asset-weighted percentage of banks declaring a rise in demand and the percentage of banks declaring a drop. In case of lending policy, the net percentage is the difference between asset-weighted percentage of banks declaring relaxation of their lending policy and the percentage of those declaring its tightening.  
Source: Senior Loan Officer Opinion Survey on Bank Lending Practices and Credit Conditions (3rd quarter 2005), www.nbp.pl.

Figure 46  
Loan servicing and likelihood of repayment problems in coming quarter (percentage of companies surveyed)



Note: Percentages refer to borrower companies; scheduled servicing refers to those borrowers that have no problems in servicing their loans and do not envisage any in the next quarter, along with those that do not have problems, although these could emerge within the next quarter.  
Source: NBP.

The materialisation of the presented scenario consistent with the GDP projection does not threaten the financial system stability. However, there are some risk factors which might expose financial institutions to losses. The following factors should be mentioned here: slowdown in GDP growth (e.g. as a result of the reduction in investments), deterioration of the fiscal situation and the delay in Poland's accession to the euro zone. Then the consumption might grow slower, and the capital investments might even drop down as a result of greater uncertainty as to the stability of economic growth. In case the risk factors will materialise the quality of loans may deteriorate.

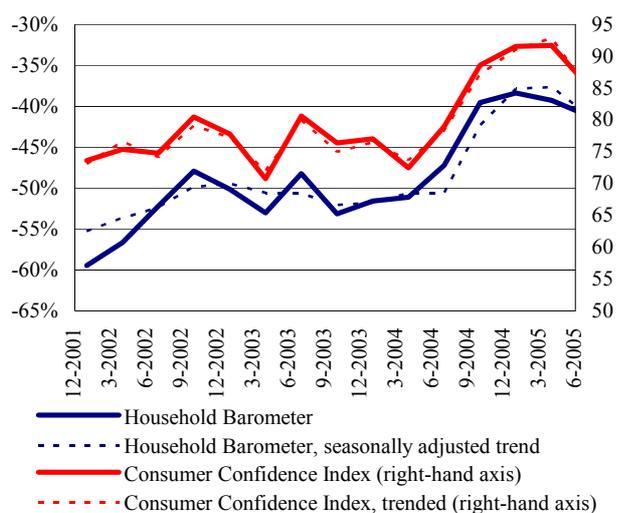
### Households

Strongly increasing demand for loans recorded by the banks, especially in the housing loan segment (see Figures 48 and 49) reflects a better-than-a-year-before financial situation of households. In 2005 Q2 the demand for housing loans increased significantly as assessed by the banks controlling 72% of assets in the surveyed group. Banks have been easing their lending policies for some time now, both in the area of housing and consumer loans. They also increasingly indicate that the easing of policies is one of the chief reasons for the growth in loan demand. In 2005 Q2 the easing of loan terms and credit standards was the main reason for the growth in demand for consumer loans.<sup>32</sup>

While the easing of lending terms (e.g. reduction of lending spread) does not influence the quality of loans but rather bears on the banks' profitability in the given period, the easing of lending requirements (i.e. reduction of the minimum income required by the bank) may persuade banks to start extending loans to persons with lower creditworthiness. That might result in the drop of the quality of loans and have a negative impact on future financial performance. Some signs of this process could be observed in the first half of 2005, as the value of loans in arrears but not yet classified as impaired increased (see Figure 34).

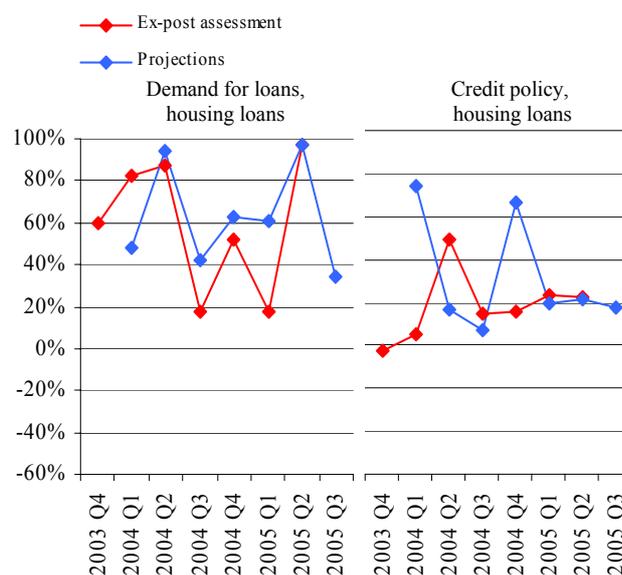
Deterioration of the quality of loans to the household sector may also occur should the risk factors materialise, in particular, in case of an increase in inflation, which would

Figure 47  
Situation of households over coming year



Source: Research Institute for Economic Development of Warsaw School of Economics, Ipsos.

Figure 48  
Demand for loans and bank lending policies – housing loans



Note: See note below Figure 45.  
Source: Senior Loan Officer Opinion Survey on Bank Lending Practices and Credit Conditions (3rd quarter 2005), www.nbp.pl.

bring about a drop in real wages and an increase in interest rates.

At the moment, however, it seems most probable that the improvement in the financial situation of households will lead to a corresponding improvement in the quality of the loan portfolio. The drop in the share of irregular loans in total household loan portfolio will partially result from the statistical effect of a rapid growth in lending, and especially the steep increase in property loans. The growth in loans has to be closely monitored, as it would be very difficult to control it with traditional monetary policy instruments due to the great weight of foreign currency loans. An overly rapid rate of lending growth might bring about some negative consequences, which would become visible in several years' time in the form of increased irregular loan ratio.

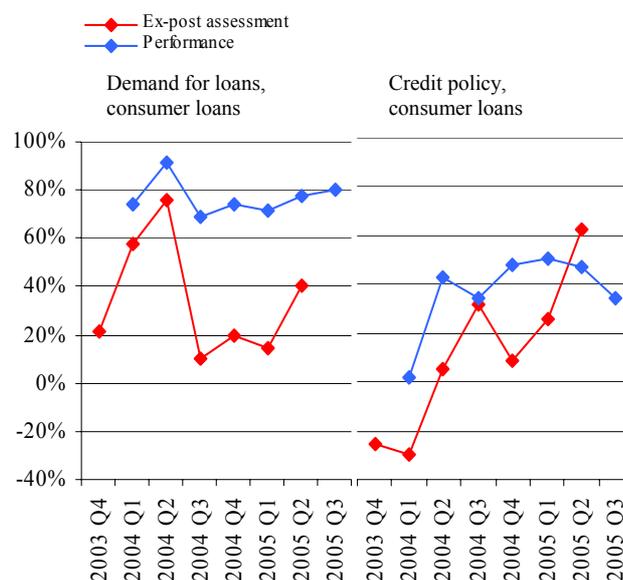
### 3.3. Foreign exchange risk

The foreign exchange instruments constitute a significant part of bank assets and liabilities. In the first half of 2005 the proportion of FX assets in the total assets slightly increased due to the increase of FX claims on domestic non-financial entities and foreign financial institutions. This growth could be linked with an inflow of foreign capital to the Polish Treasury bond and equity markets (see Chapter 2), which observed through most of the first half of 2005. Foreign investors were buying the Polish currency in order to buy Polish instruments, which caused an inflow of foreign currencies to banks, which in turn, placed them with foreign financial institutions. This process, however, did not increase banks' exposure to FX risk because the banks compensated the expansion of their open balance sheet position by off-balance sheet transactions. The inflow of funds related to the EU programs constituted an additional factor increasing the proportion of foreign currency instruments.

The instruments denominated in the euro and US dollar dominated the structure of the FX assets and liabilities. Just like in 2004, the share of dollar instruments in the assets increased. As a result, in June 2005, the US dollar assets exceeded the value of assets denominated in the euro. This change resulted from dollar appreciation against the euro (of

Figure 49

### Demand for loans and bank lending policies – consumer loans



Note: See note below Figure 45.

Source: Senior Loan Officer Opinion Survey on Bank Lending Practices and Credit Conditions (3rd quarter 2005), www.nbp.pl.

Table 17

### Banks' foreign currency assets and liabilities, by share of total assets<sup>1</sup> and liabilities (%)

	12-2004		6-2005	
	Total	of which: non-residents	Total	of which: non-residents
Foreign currency assets	22.3	10.0	23.3	10.2
- non-financial sector	10.4	0.3	10.8	0.2
- financial sector	9.9	8.6	10.3	8.8
Foreign currency liabilities	14.9	5.4	16.3	5.3
- non-financial sector	8.5	0.4	9.4	0.5
- financial sector	5.2	4.2	5.1	3.8

<sup>1</sup> Share of total assets prior to consideration of specific provisions and value adjustments.

Source: NBP.

11% in 2005) and the continuation of the growing trend of dollar claims on banks outside the euro zone. This trend may reflect the increased interest of American and London-based entities serving American undertakings in the Polish securities market.

In 2004, despite a large scale of their FX operations, commercial banks reduced their exposure to the direct FX risk, just as they had in the previous years, by maintaining open FX positions at a low level. For that reason the FX Value at Risk was also low – the total amount of 10-day VaRs did not exceed 0.2% of the banks’ capital base (see Figure 50). The diversity of banks as regards the FX risk was also insignificant (see Figure 51). Thus, the direct FX risk did not constitute a threat to the stability of the banking sector.

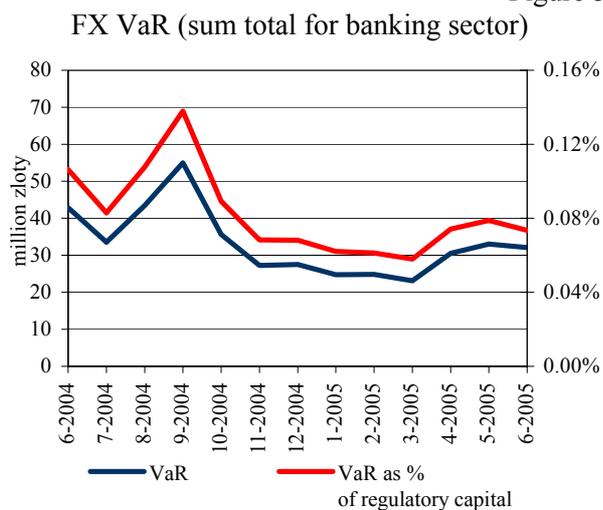
The significant share of FX items in the loan portfolio entails a risk of an increase in credit losses resulting from the deterioration of the financial standing of some borrowers in case of zloty depreciation. However, the recent experience (i.e. changes in the zloty exchange rates in 2003 and 2004) has shown that the depreciation of the zloty which lasted for a dozen months or so did not have any negative impact on the quality of the loan portfolio.

### 3.4. Interest rate risk

Banks remain the most conservative investors in the market of the Polish Treasury bonds, as the relative level of the risk they undertake, measured by duration, is significantly lower than in the case of other institutional investors operating in this market. However, prompted by the falling trend in the yield on Treasury securities (increasing prices) and persistently strong expectations for further decreases in interest rates, banks too have been extending their portfolios’ duration since the middle of 2004 (see Figure 21). The average maturity of Treasury securities held by banks has stabilised over the past year (see Figure 52).

The analysis of the banks’ income on transactions on financial instruments sensitive to interest rate changes confirms that banks have decided to take on interest rate risk. In the first half of 2005, profit on operations on debt securities

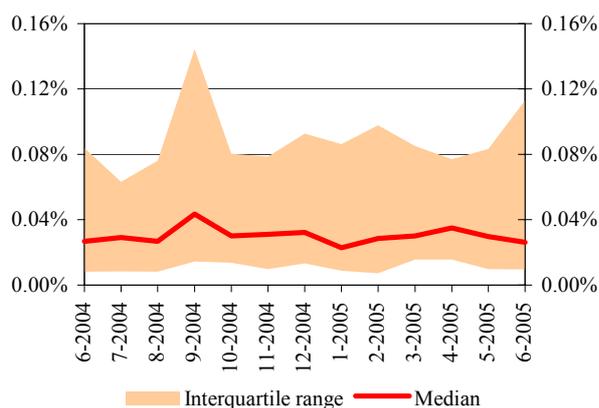
Figure 50



Source: NBP.

Figure 51

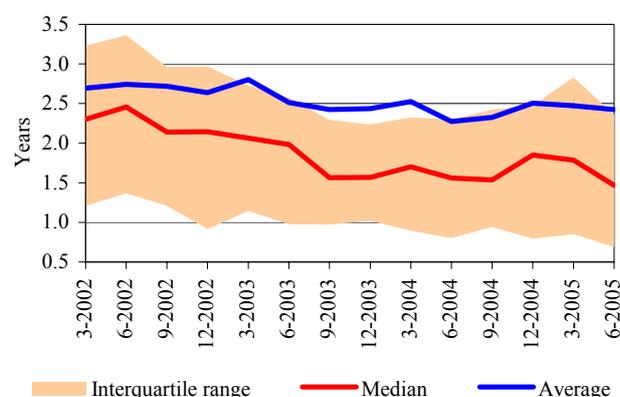
Distribution of FX VaR, expressed as percentage of commercial bank regulatory capital



Source: NBP.

Figure 52

Average maturities of debt securities



Source: NBP.

exceeded the income obtained from transactions on interest rate-sensitive off-balance sheet instruments. That proves that banks did not hedge themselves fully against the undertaken risk (see Figure 53). The analysis of the distribution of both categories of result confirms that the majority of banks use derivatives to partially hedge against the risk of changes in bond prices (see Figures 54 and 55).

### 3.5. Equity price risk

The share price risk remained low in the first half of 2005, even though the stock exchange boom encouraged investors to increase the exposure in the share market. However, there was a slight rise in value of equities in banks' balance sheets. The average value of shares included in banks' balance sheets was very low and at the end of June 2005 it did not exceed 1.1% of the total value of the securities portfolio.

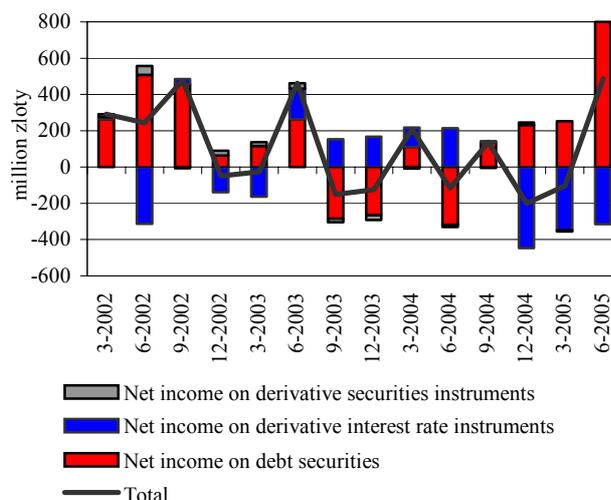
Several banks held much more shares in their securities portfolio (between 5% and approx. 14%). However, due to high profits from basic banking operations in the first half of 2005, or a small size of a bank, this did not influence the stability of the system. However, the simulation performed on the sector's assets shows that the proportion of banks where a 10-percent decrease in the value of equity securities would cause a 5-percent drop in pre-tax earnings increased from 9% to 15%, as compared to 2004 (see Figure 56).

### 3.6. Liquidity risk

The liquidity of banks, in the medium term, depends on stable sources of financing their lending activity, such as customer deposits. Financing through market instruments (i.e. interbank deposits) is most often gained over a shorter period of time and might be more expensive for banks. The so-called funding gap<sup>33</sup> is a measure of market funding utilisation. The analysis of distribution of the funding gap shows that in the case of about half of all banks the loans granted to customers exceed deposits taken from customers. Still, the average value of the funding gap is negative. This means that banks which fund themselves from other sources than customer deposits are small banks. They acquire funds from financial institutions,

Figure 53

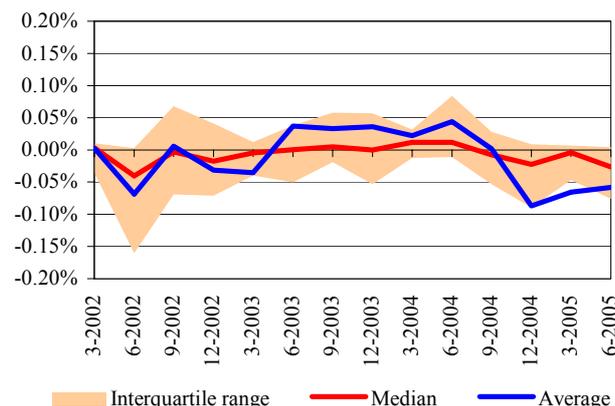
Selected items of bank profit & loss related to interest-rate sensitive instruments



Source: NBP.

Figure 54

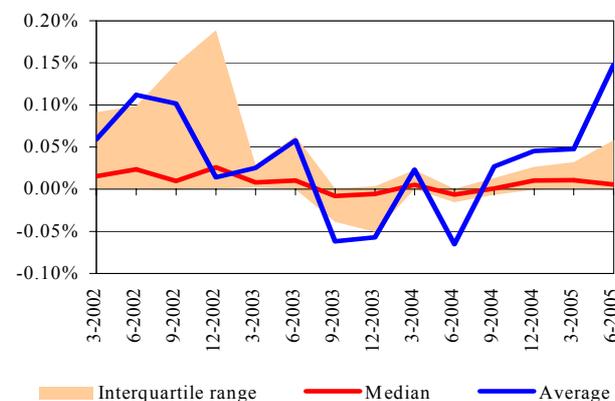
Dispersion of the ratio of net income on interest-rate off-balance instruments to assets



Source: NBP.

Figure 55

Dispersion of the ratio of net income on financial debt securities to assets



Source: NBP.

including strategic investors, through term deposits and loans.

In the first half of 2005, there occurred a decline in the share of the most stable funding source, i.e. deposits taken from non-financial sector (a drop of 1.7%), while at the same time the share of liabilities towards the financial sector increased by 1%. In turn, the growing trend of the share of corporate deposits within the liabilities to the non-financial sector was slowed down. In the first half of 2005 this share amounted to 26.9% on average (24.1% in the first, and 26.7% in the second half of 2004). By contrast, the value of deposits placed by individuals increased. The deceleration of the growth rate of corporate deposits' share is a positive development, as their value is much more volatile than the value of household deposits. It should also be emphasised that the projected increase in corporate investment might increase the volatility of this category of deposits.

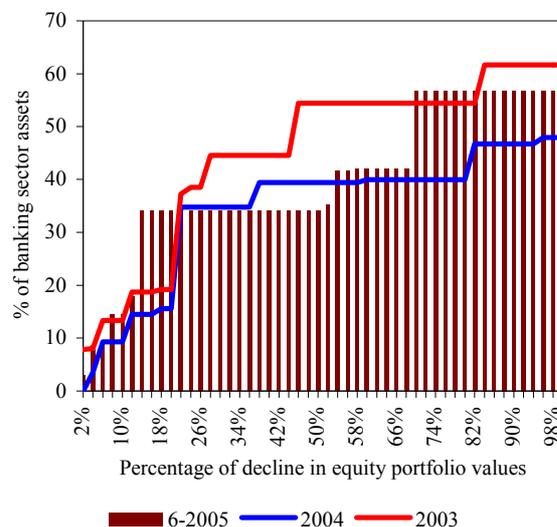
The proportion of liquid assets, which may be used by banks to gain short-term liquidity, in the total assets went up to 28% in the first half of 2005 (from 23% at the end of 2004). The rise in the value of liquid assets mainly resulted from the increase in short-term claims on banks and the increase in the value of debt securities (including money market bills) held by banks. The fact that the level of liquid assets still exceeded the value of the least stable bank funding source, i.e. liabilities towards the financial sector, indicated that there were no significant risks to banking sector liquidity.

A short-term measure of liquidity risk is the liquidity gap, which shows the difference between the value of liabilities and the value of assets sorted into maturity buckets. Within the surveyed period the value of a one-month gap oscillated around PLN 110 billion, i.e. about 20% of assets. As compared with the situation at the end of 2004 (PLN 115 billion), in June 2005 the liquidity gap was somewhat lower (PLN 112.9 billion, i.e. about 21%)<sup>34</sup>. The drop in the value of the gap – in the face of a lack of more significant changes in the value of securities which may constitute a source of funds needed for closing the gap – caused a minor increase in the securities coverage of the gap (of 2%, up to 79%).

In case of any liquidity problems banks have several ways of gaining funds in the financial market; these include the sale

Figure 56

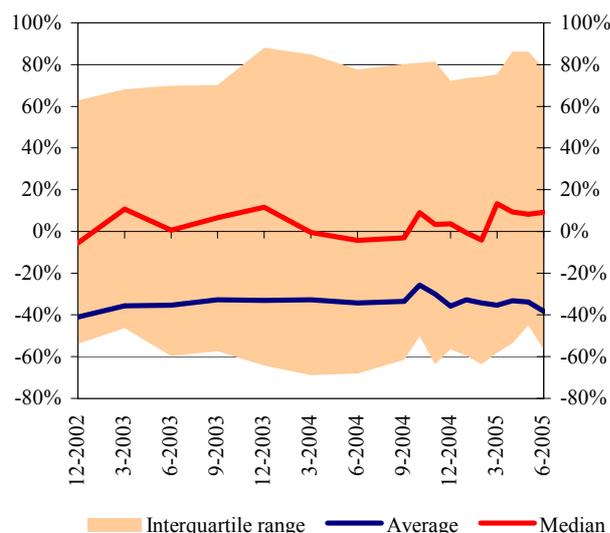
Percentage of commercial bank assets corresponding to banks suffering 5% decrease in net earnings (or increase in net loss) under projected scenario of decline in equity portfolio values



Source: NBP.

Figure 57

Distribution of financing gap (commercial banks)



Source: NBP.

of securities or borrowing on the interbank market. For that reason, the liquidity of the market of secured and unsecured interbank deposits (including FX swaps), bond market and FX market is an important factor in banks' liquidity management. The importance of FX market liquidity is emphasised by the fact that short-term FX claims on foreign financial institutions constitute a significant part of the liquid assets (27%, in June 2005). In order to use them effectively for the management of the zloty payment liquidity, it is necessary to exchange them easily into instruments denominated in the zloty without incurring high costs.

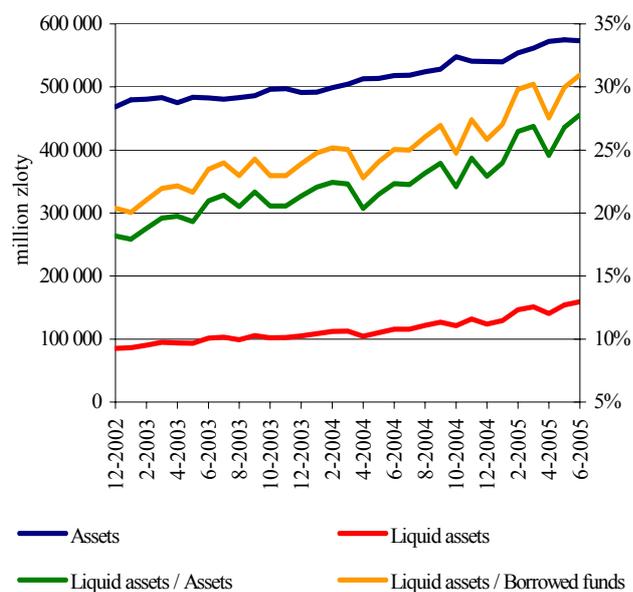
In the first half of 2005 the level of spreads on the bond market, i.e. a market liquidity measure, which represents the difference between the bond purchase (taking of deposit) and sale offers (placement of deposit), slightly decreased: by 2 basis points in case of 2-year bonds and 1 basis point in case of 5-year bond. The beginning of March was an exception. For 4 days the spreads on 5-year bonds increased from 2-3 to 30-50 basis points. That was caused by a correction on the bond market (see Chapter 2). In the same period the spreads on FX swaps also increased. The increase of spreads in that period shows that in the situation of a change in market tendencies accompanied by shifts in the portfolios of foreign investors the liquidity of domestic financial markets drops down significantly. This may make liquidity management difficult for the banks. Outside the correction period the spreads were low. Basing on that, it can be seen that under the market conditions persisting through the most part of the first half of 2005 banks were able to gain the liquidity through transactions in the Treasury securities or FX swap markets without incurring excessive costs.

### 3.7. Earnings

After a very good income was achieved in 2004, the first half of 2005 was even better for the banking sector. The nominal income was the highest since the beginning of the 1990s. There was also improvement in all profitability and efficiency ratios (see Tables 18 and 19).

Among other things the improvement in earnings coming from traditional sources of banking operations (interest

Figure 58  
Liquid assets vs. total assets and borrowed funds

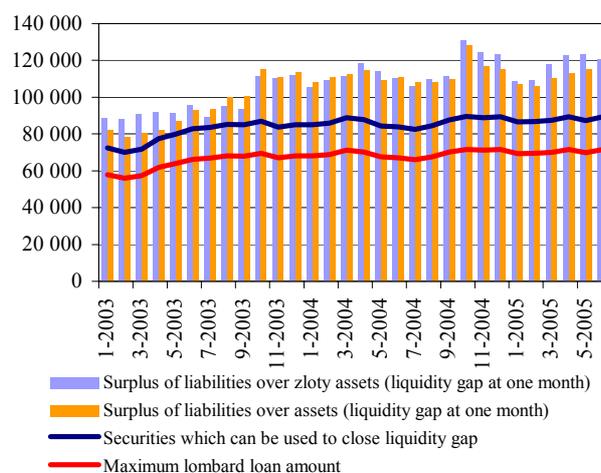


Notes: *Liquid assets* comprise balances on nostro accounts at the NBP and other banks, overnight deposits, interbank placements maturing in up to one month (excluding those at the NBP), and Treasury and NBP debt securities admitted to public trading (excluding held-to-maturity securities and those committed to the Bank Guarantee Fund).

*Borrowed funds* comprise liabilities to the central bank, financial corporations, non-financial customers and general government, repurchase agreements, securities issued and outstanding and other liabilities (excepting provisions, capital and earnings).

Source: NBP.

Figure 59  
Liquidity gap at one month vs. securities held and maximum lombard loan amount



Source: NBP.

income) and income from transactions on financial instruments contributed significantly to the improvement of banks' earnings. The burdening with depreciation charges for tangible and intangible assets, as well as net provisions for irregular and impaired loans decreased significantly. However, it has to be emphasised that the proper analysis of changes in the banking sector capacity to generate profits, as well as the factors which may influence their level and structure, is made difficult by the introduction of the IFRS. The banks which prepare their financial reports in accordance with the IFRS have a significant share in the banking sector assets and so they exert a significant influence on the profit and loss accounts of the whole banking sector. At present, it is not possible to assess to what extent changes in the earnings and their structure result from the implementation of the IFRS and to what degree they come out of banks' operations.

### Net income from banking activity

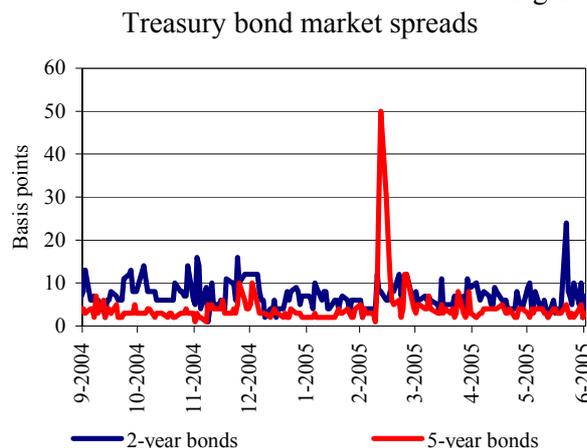
#### Net interest income

The amount of net interest income of the banking sector generated in the first half of 2005 was higher compared to the first half of the previous year by about 11%. However, the ratio of income to assets remained on an almost unchanged level (1.61%).

Income of the banking sector from operations with financial non-resident institutions was higher in the first half of 2005 than in the previous year. It may have resulted from the inflow of foreign capital to the Polish Treasury securities market and stock exchange. Interest income on securities, primarily NBP money market bills, was also higher. The rise resulted from the fact that the Ministry of Finance decreased (by more than 40%) its deposits in the central bank. The increased liquidity of the banking sector was absorbed by the NBP through the issuance of bills (the average value of outstanding bills in the first half of 2005 was more than two and a half times higher than in the comparable period of 2004).

The rise in the interest income on operations with entities of non-financial sector, which is the key source of banks' interest income, was minor (at about 0.5%). It resulted, among

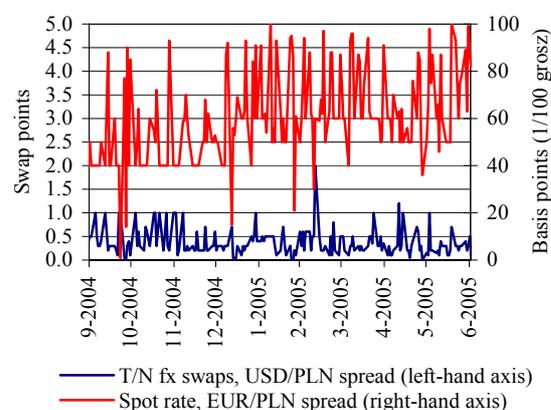
Figure 60



Source: Reuters.

Figure 61

### FX spot market and FX swap market spreads



Source: Reuters.

Table 18

### Selected items of banking sector profit & loss

	first half of 2004 (bn zloty)	first half of 2005 (bn zloty)	Change (%)
Interest income	14.10	17.15	21.6
Interest expense	6.08	8.23	35.4
Net interest income	8.02	8.93	11.3
Net fee income	4.03	3.81	-5.5
Net gains/losses on financial operations	0.45	0.80	77.8
Net FX gains/losses	1.54	1.87	21.4
Net income from banking activity	14.30	15.91	11.3
General expense	8.04	8.51	5.8
Depreciation	1.22	1.16	-4.9
Net movements in provisions and valuation allowances	1.00	0.70	-30.0
Pre-tax earnings	4.25	5.68	33.6
Net earnings	3.72	4.65	25.0

Source: NBP.

other things, from a moderate rate of increase in lending. Though loans to households, and particularly housing loans, went up fast, corporate indebtedness went down at the same time (see Table 20). Different pace of loan changes for individual groups of borrowers brought about a change in the structure of interest income (see Table 21). The rising demand for loans from individuals was accompanied by a rise in the significance of income on loans in the total interest income.

The consequence of a low inflow of household deposits and the households seeking alternative possibilities of investing their savings was a further change in the structure of interest expenses, i.e. an increase in the share of interest expenses on corporate deposits (see Table 22). The above mentioned good condition of the corporate sector coupled with the fact that investment activities have been postponed results in a rise in deposits on their accounts, which has not been interrupted for a few quarters now. In a short term, changes in banks funding, i.e. a gradual substitution of household deposits with corporate deposits, result in financial benefits due to the fact that corporate deposits bear a lower interest rate (more than half of them are current deposits). In a longer run, however, it is an unfavourable development as the majority of corporate funds accumulated on the accounts will be used as investment activity grows. Gaining additional deposits from households will require banks to increase expenditure both on product promotion and interest. A number of bigger banks are now launching advertising campaigns or have just finished campaigns promoting current and saving accounts.

Both the application in 2005 of the valuation of financial instruments according to the amortised cost, which method accounts for the effective interest rate, and the fact that recoverable value of claims started to be assessed according to the IFRS constituted potentially important sources of modifications in the revenue and cost structure of banks. The following aspects of these changes should be noted, in particular:

- Irrespective of the applied accounting standards, the value of interest income was distorted by recognising fees and other charges on extended loans as interest income. In banks declaring the preparation of financial statements according to the IFRS, interest expenses

Table 19  
Selected performance indicators (%)

	first half of 2004	first half of 2005
Net interest margin (NIM) <sup>1</sup>	1.60 (3.16)	1.61 (3.23)
Net non-interest income	1.25 (2.41)	1.26 (2.47)
Net income on banking operations <sup>1</sup>	2.85 (5.57)	2.86 (5.69)
Operating costs <sup>1,2</sup>	1.84 (3.77)	1.74 (3.60)
Net provisioning charges <sup>1</sup>	0.20 (0.72)	0.13 (0.37)
Tax <sup>1</sup>	0.15 (0.35)	0.18 (0.35)
ROA <sup>1,3</sup>	0.85 (1.13)	1.02 (1.74)
ROA <sup>1,4</sup>	0.74 (0.82)	0.84 (1.51)
ROE <sup>3</sup>	10.2 (13.5)	12.9 (21.6)
ROE <sup>4</sup>	8.9 (9.7)	10.6 (18.7)

<sup>1</sup> In % of assets.

<sup>2</sup> Operating costs = general expense + depreciation charges.

<sup>3</sup> Indices calculated on the basis of pre-tax earnings.

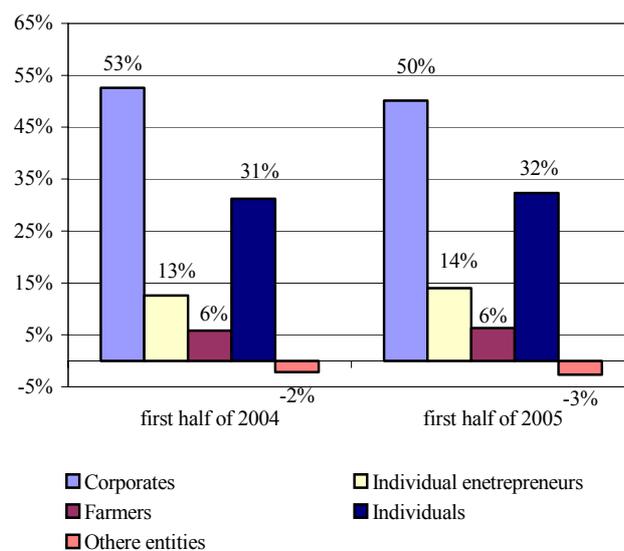
<sup>4</sup> Indices calculated on the basis of net earnings.

Note: In brackets annualised data.

Source: NBP.

Figure 62

Structure of net interest income on non-financial sector (%)



Source: NBP.

Table 20  
Rate of change in loans and deposits of non-financial sector (%)<sup>1</sup>

	6-2004	6-2005
Total loans	6.4	4.4
- corporates	0.3	-3.8
- households	15.3	14.7
Total deposits	4.4	6.5
- corporates	37.5	23.1
- households	-1.9	2.2

<sup>1</sup> Change in average amount of loans/deposits in comparable half-years.

Source: NBP.

could have potentially<sup>35</sup> been influenced by allocation of the so-called transaction costs, i.e. personnel and other direct costs related to the extension of loans, to the effective rate of interest.

- Banks applying the PAS recognise interest due on loans classified as *satisfactory* and *special mention* in the profit and loss account. In the case of loans classified *irregular*, interest is recognised as of the date of its receipt. When applying the IFRS, banks accrue interest on the accrual basis from the so-called recoverable value of a loan (present value of future cash flows) taking into account the degree of the loan's impairment and possible cash flow from security used. Therefore, individually determined methods of assessing recoverable value by banks influence the banks' interest income. The results of credit models applied by banks may be sensitive to the characteristics of loan portfolio structure (kind of loan, maturity date, currency, etc.). The Ordinance of the Minister of Finance regarding principles of establishing provisions for the risk related to banks' activity, which regulates these issues in banks applying the PAS, does not differentiate methods of loans classification and the volume of provisions to be established depending on the above mentioned characteristics of loans. This is the reason why there may appear differences in interest income between banks applying the PAS and IFRS.

#### Non-interest income

Banks' non-interest sources of income in the first half of 2005 accounted for approx. 44% of income from banking activity (see Table 63). The structure of the income from banking activity shows that banks focus on traditional activities.

The major component of non-interest income is *net fee income*. The value of this item is greatly influenced by new accounting standards and the application of valuation of claims according to amortised cost taking into account the effective interest rate, which is an element of the domestic accounting

Table 21  
Structure of net interest income on non-financial sector with loan structure considered (%)

	First half of 2004	First half of 2005
Income on loans granted to individuals, of which:	47.4	49.1
- authorised overdrafts	8.5	7.5
- housing loans	11.6	12.0
- connected with credit card operations	2.8	2.9
- loans for instalment purchases	10.2	8.0
Income on loans granted to other borrowers of non-financial sector	52.6	50.9

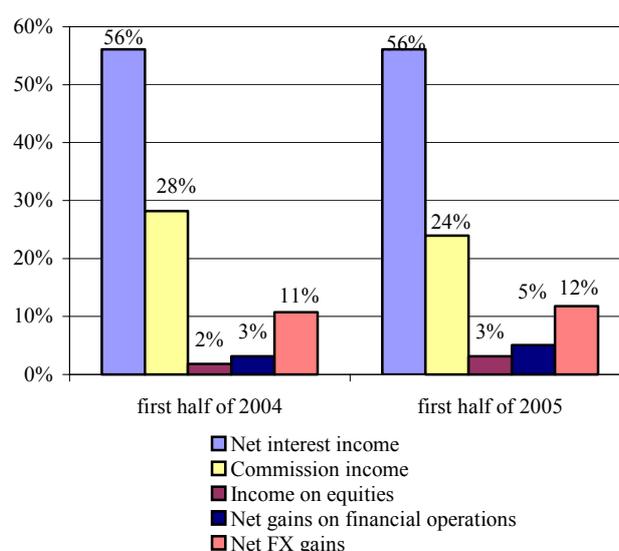
Source: NBP.

Table 22  
Structure of interest expense, non-financial sector with loan structure considered (%)

	First half of 2004	First half of 2005
Interest on demand deposits	13.5	13.2
- households	5.6	5.2
- corporates	7.9	8.0
Interest on term deposits	86.5	86.8
- households	65.6	62.9
- corporates	20.9	23.9

Source: NBP.

Figure 63  
Structure of net income from banking activity (%)



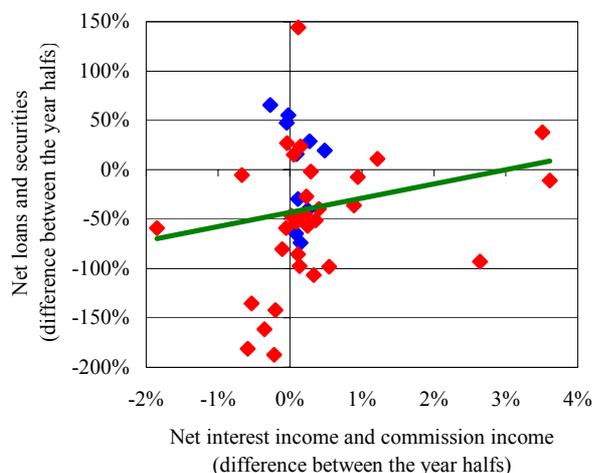
Source: NBP.

provisions<sup>36</sup>. Once the valuation according to amortised cost is applied, the methodology of entering the fees in the accounting books changes. So far, fees were recognised as income and as a one-off event mostly as of the date of extending the loan or gradually during the loan maturity (allocation of income over time). Starting from 2005, banks have more possibilities of recognising fees in the profit and loss account, the most important of which, from the point of view of data comparability in time, is the so-called adjustment of the effective interest rate. According to this method, fees are shown as part of interest income. It is impossible to assess what part of the fees is shown in interest income as banks allocate fees according to the so-called accounting policy pursued by each bank individually.

Despite introducing into the domestic accounting principles the principle of valuing claims according to amortised cost accounting for the effective interest rate, there occurred major differences in the first half of 2005 in fee growth rate between banks applying the PAS and IFRS. In banks applying the IFRS the growth rate was negative, in the remaining banks – positive and similar to the rate from the first half of 2004. It seems that banks applying the IFRS, for which the introduction of financial instrument valuation instruments according to amortised cost, taking into account the effective interest rate, is just one of the elements of complex changes, have applied it to a greater extent than the remaining banks. Therefore, in their case there has been a difference in net fee income earned in the first half of 2004 and 2005. In subsequent quarters, the differences between banks should diminish as an increasing number of banks will be applying the new method of financial instrument valuation. However, it will be impossible to obtain full comparability owing to the differences in accounting policies of individual banks.

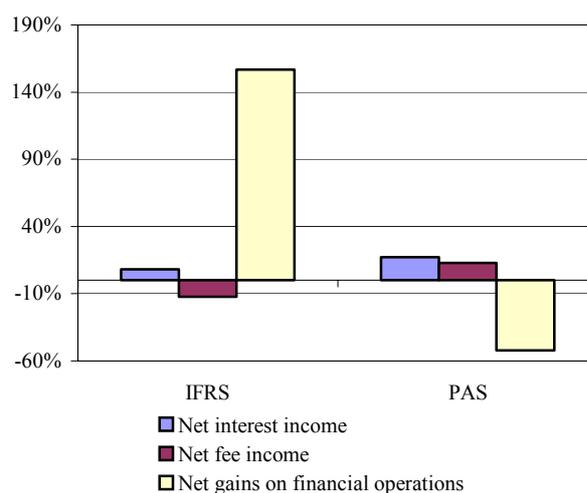
A joint consideration of net interest and net fee income allows eliminating, to a certain degree, the problem of the lack of data comparability resulting from the change in the methods of financial instrument valuation. The sum of net interest income and net fee income in proportion to the assets of the sector amounted to 2.3% in the first half of 2005 (2.3% one year before). This means that the growth of the bank lending did not offset the fall in spreads on interest rates (the

Figure 64  
Relationship between changes in net loans to all sectors and changes in net interest margin and net fee income



Note: Axes show changes in extended credit and securities minus deposits (so-called net loans) on the one hand, and NIM and net fee income on the other between the first half of 2004 and 2005. Changes in net loans in % of original values.  
Source: NBP.

Figure 65  
Percentage change in selected items of net income from banking activity in banks applying IFRS and PAS



Note: Change in net income in the first half of 2005 and 2004.  
Source: NBP.

difference between average interest on loans and deposits)<sup>37</sup>.

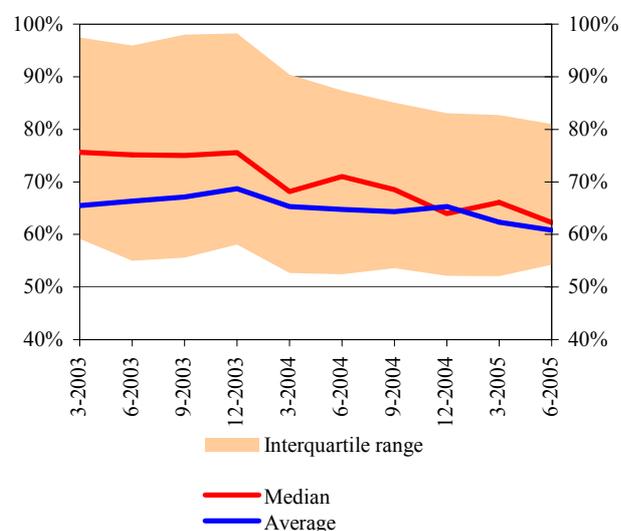
In the first half of 2005, the banking sector achieved a higher net gain on financial operations than the year before (a rise of about 78%). The significance of this element in generating the net income from banking activity has also increased. The increase in this item of banks' profit and loss account results both from the level of prices of instruments and the application of the IFRS for the first time.

Differences have been recorded in the rate of growth of income from transactions on financial instruments between banks applying international and Polish accounting standards. The income from transactions on financial instruments was higher in the case of banks applying the IFRS and lower in those applying the PAS. The differences may have been influenced by the structure of the debt securities portfolio. In the first half of 2005, the average maturity of debt securities portfolio in banks applying the IFRS was almost twice as long as the one of the remaining banks' portfolio. In addition, unlike in the banks applying the PAS, maturity of the portfolio in banks applying the IFRS was becoming longer, which means that their portfolio was more sensitive to the changes in interest rates. A fall in the yield (a price rise) on Treasury securities in the first half of the year contributed, to a greater extent, to recording income on the rise of the portfolios' value by banks applying the IFRS.

Banks applying the IFRS have made significant shifts in their securities portfolio: moving securities from the category instruments *held to maturity* and instruments *available for sale* to the category of instruments valued at fair value, i.e. instruments *held for trading*. The change in the securities classification resulted from the attempt to obtain more freedom in disposing of the portfolio as a premature sale of securities *held to maturity* is hedged with several restrictions and may result in unfavourable financial effects for the banks (in particular, when there is a rise in interest rates).

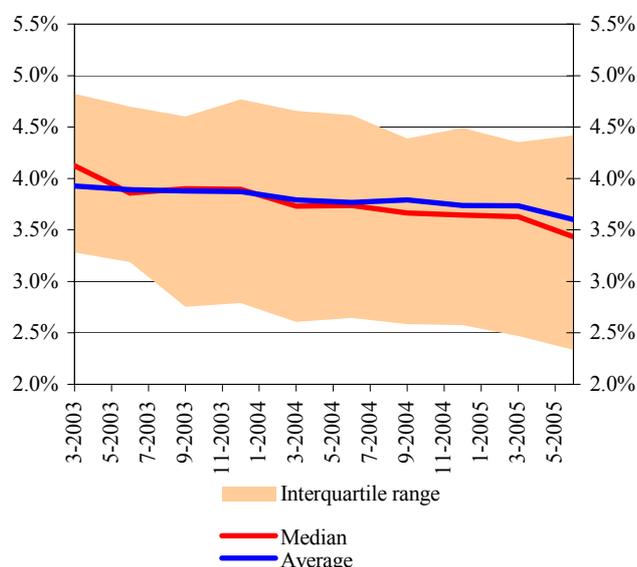
Banks that started applying the IFRS from 2005 were obliged to prepare the opening balance in which they were allowed to reclassify financial instruments without restrictions. Such a classification did not have to reflect the classification made earlier according to the PAS. From the point of view of

Figure 66  
Ratio of general expenses and depreciation costs to net income from banking activity (commercial banks)



Source: NBP.

Figure 67  
Ratio of general expenses and depreciation costs to assets (commercial banks)



Note: Annualised data.

Source: NBP.

financial income the shift between portfolios positively affected the banks' financial income as the value of securities valued according to the adjusted purchase price was lower than the value of those valued at fair value.

It may also be possible that in spite of restrictions resulting from the PAS, there was a change in some banks applying these standards in securities classification as a result of an earlier sale of some securities *held to maturity* to realise profits on the rise in the market value of fixed rate Treasury securities. The mandatory shift of the remaining portion of the portfolio to the category valued at fair value positively influenced the banks' income.

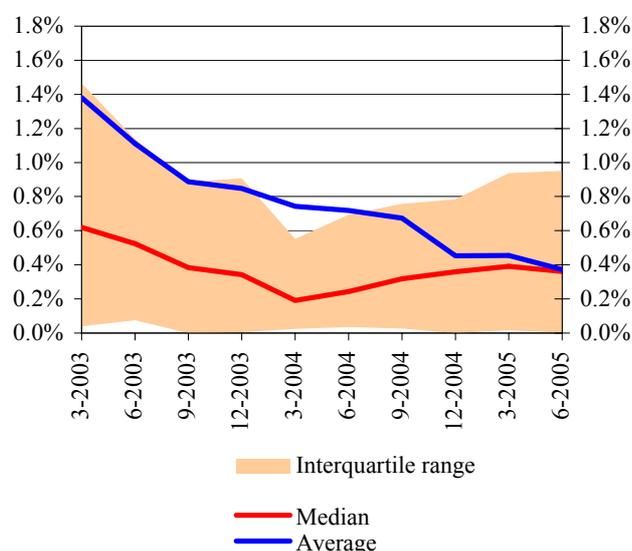
### Allocation of income from banking operations

Conclusions from the analysis of the allocation of income from banking operations in the first half of 2005 are not straightforward. The change in accounting standards seems to have strongly affected costs, which makes it difficult to conclude on the reasons for changes.

Expanding the scale of the banking sector activities led to a rise in operating expenses (general expense and depreciation) both in banks applying the PAS and IFRS (of 4.4% on average). A downward trend of the ratio "operating expenses/assets" was, however, maintained, which should be recognised as a favourable development from the point of view of Polish banks' competitiveness in the EU market. The average "cost/income" ratio has also improved. It went down from 64.8% in the first half of 2004 to 60.8% in the first half of 2005 and approximated the average level of banks in the EU (59.3% in December 2004). The efficiency of individual banks was highly differentiated but improved in most large banks. The quoted data suggest that there was an improvement in the efficiency of the banking sector activities in the last half year. However, they remain under a strong influence of one-off changes resulting from the application of new accounting standards, among others, in the case of depreciation charges. Therefore, the data should be interpreted prudently and the direction of changes should be reviewed on the basis of 2006 data.

Figure 68

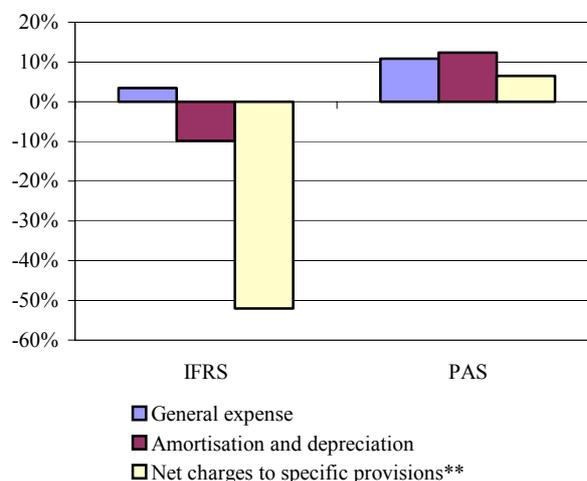
Ratio of net provisioning charges to assets (commercial banks)



Source: NBP.

Figure 69

Percentage change\* in selected cost items in banks observing IFRS and PAS



\*Change in costs between the first half of 2005 and the first half of 2004.

\*\*Net provisioning charges in the case of bank observing the PAS / impairment charges in case of banks observing the IFRS

Source: NBP.

In the first half of 2005, unlike in the previous years, the average burden of the banking sector related to depreciation charges went down. Significant differences were noted between banks applying the PAS and IFRS: in the first group of banks, the burden related to charges increased, in the latter – it decreased. The fall in the rate of fixed assets and intangible assets depreciation in banks applying the IFRS resulted from the introduction of a possibility of valuing fixed assets at fair value. Banks that took this possibility made adjustments of depreciation charges, most likely because of extended useful economic life of fixed assets.

In the first half of 2005, the banking sector made fewer net charges to specific and impairment provisions (a drop of approx. 30%). The situation was different in the case of the rate of net charges to specific provisions on irregular loans in banks applying the PAS and in the case of loans subject to impairment charges in the remaining banks, which reflected the multi-direction changes in the quality of portfolios of these groups of banks. Banks applying the PAS increased net charges to specific provisions compared to the first half of 2004, while banks applying the International Accounting Standards made about 50% less charges for impairment provisions. Owing to the fact that in the opinion of banking supervision and consulting firms most banks declaring the application of the IFRS are still in the process of constructing credit models or setting up parameters to the models, the differences in the rate of impairment provisions must have resulted, to a greater extent, from the borrower structure of loan portfolios rather than from the application of the IFRS. Banks applying the PAS, being smaller entities, had smaller possibilities to co-operate with big enterprises, whose financial position was better than the position of small and medium-sized enterprises. The portfolios of these banks also contained more loans for households, whose quality did not improve as fast as the quality of corporate loans.

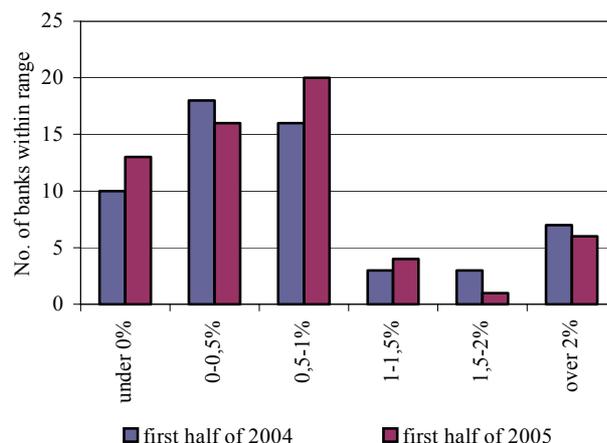
**Differences in earnings among commercial banks**

Financial income recorded in the first half of 2005 by individual commercial banks varied to a great extent, which influenced their profitability ratios<sup>38</sup>.

In the first half of 2005, compared to the first half of 2004,

Figure 70

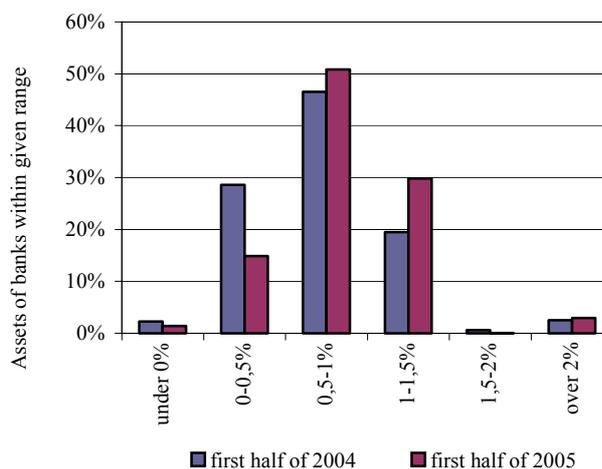
Distribution of commercial banks by ROA



Source: NBP.

Figure 71

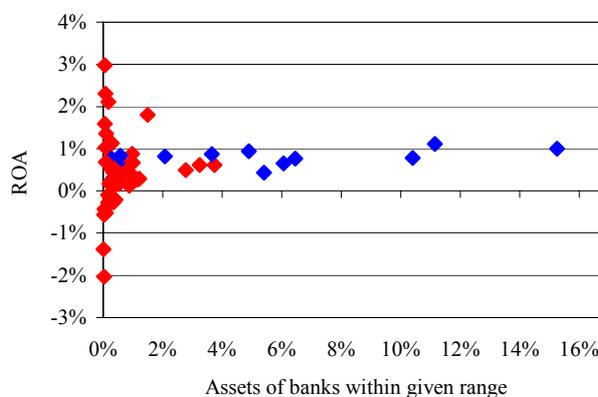
Distribution of commercial bank assets by ROA



Source: NBP.

Figure 72

Commercial banks' ROA vs. given bank's share in sector assets



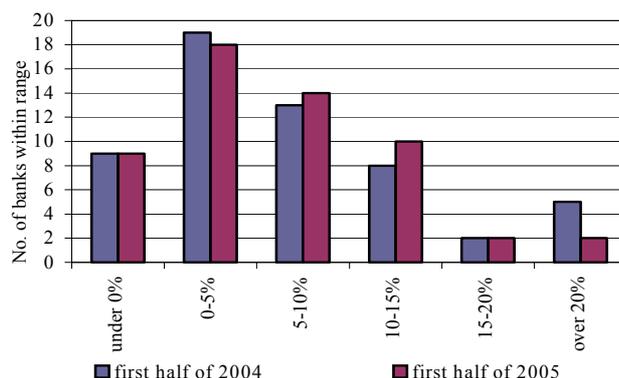
Note: Blue dots stand for banks observing the IFRS, red dots – for other banks

Source: NBP.

the share of banks with the lowest profitability (i.e. of ROA below 0.5%) in assets of the banking sector decreased significantly although the number of commercial banks that posted a loss increased to 13. The biggest dispersion of results was recorded in the group of small banks which are to be found in the extreme ranges (the lowest and the highest ROA). Banks that posted a loss in the first half of 2005 are those that have been operating for a short time (six banks started their activities at the end of 2004 or beginning of 2005), have pursued rehabilitation programs or are withdrawing from the Polish market. Small banks with the highest return on assets are, like in the previous periods, primarily retail and car finance banks. The diversity of return on assets in the group of medium and large banks is smaller, which probably results from smaller differences in their business profiles. These banks are present in the same market segments.

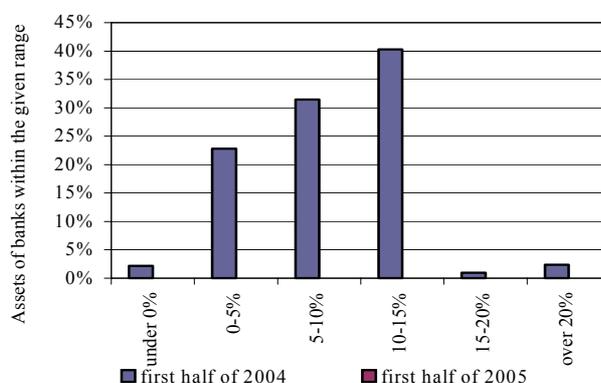
The improvement in profitability is also noted in the analysis of banks' assets distribution according to ROE. In the first half of 2005, the assets of banks with ROE below 5% went down considerably while the proportion of banks with ROE ranging from 5% to 15% in assets of the sector increased significantly.

Figure 73  
Distribution of commercial banks by ROE



Source: NBP.

Figure 74  
Distribution of commercial bank assets by ROE



Source: NBP.

Table 23

Direction of change in main items of profit & loss in the first half of 2005 and 2004

Profit & loss item	Banks observing IFRS	Banks observing PAS	Main reasons for differences between the two groups
Net interest income	↑	↑	-
Net fee income	↓	↑	IAS 18: fees and commissions are included in the calculation of the effective interest-rate; this method can also be used by banks applying domestic accounting regulations
Net gains/losses on financial operations	↑	↓	Securities are moved from category valued at amortised cost to fair valued category; longer average maturity of Treasury securities portfolio
Remaining net non-interest income	↑	↑	-
General expense	↑	↑	-
Depreciation	↓	↑	IAS 16: Tangible fixed assets are valued at fair value; change in expected useful economic life of fixed assets
Net specific / impairment provisions	↓	↑	borrower structure of loan portfolios; IAS 39: internal assessment of recoverable amount of loans and impairment charges
Pre-tax earnings / Net earnings	↑	↑	-

### 3.8. Capital position of banks and loss absorbing capacity

In the first half of 2005, there was an improvement in the capital position of the sector – regulatory capital grew by about 8.7%. The payments of dividends from reserve capital, which were small in terms of the whole sector, carried out in certain banks to raise return on capital, were to some extent offset by appropriating part of 2005 net profits and the profit undergoing approval procedure to regulatory capital<sup>39</sup>. Another reason for the growth in the sector’s regulatory capital was the fact that the provision for general risk in banking activity of banks applying the IFRS was dissolved and part of the profit was allocated to increasing core capital, instead. A significant rise in supplementary capital was recorded as a result of the rise in the value of securities *available for sale* and recognising this change in the revaluation reserve. In addition, the appropriation of part of the 2004 profit to reserve capital and obtaining new share capital by certain banks also contributed to the growth in the sector’s regulatory capital.

To sum up, the growth in the sector’s capital base was mostly caused by regulatory changes and the application of the IFRS for the first time. The contribution of an autonomous rise in the value of capital funds may be assessed at about 20%. In the future, certain fluctuations in the volume of regulatory capital may be expected as it will remain under the influence – greater than until the end of 2004 – of the changes in financial instruments valuation in the banks’ balance sheets. The volatility of regulatory capital will be limited when the Committee of European Banking Supervisors (CEBS) approves the so-called prudential filters, i.e. adjustments increasing or reducing capital shown in the balance sheet and when the filters are introduced in the Polish law by the Commission for Banking Supervision<sup>40</sup>.

The changes in the volume of individual items of regulatory capital did not significantly affect the structure of the banking sector’s capital base. Core capital continued to prevail (about 96%), which is favourable from the point of view of absorbing potential losses. In this regard, the capital adequacy ratio calculated on the basis of core capital was only slightly lower than the ratio calculated on the basis of regulatory capital (see

Table 24

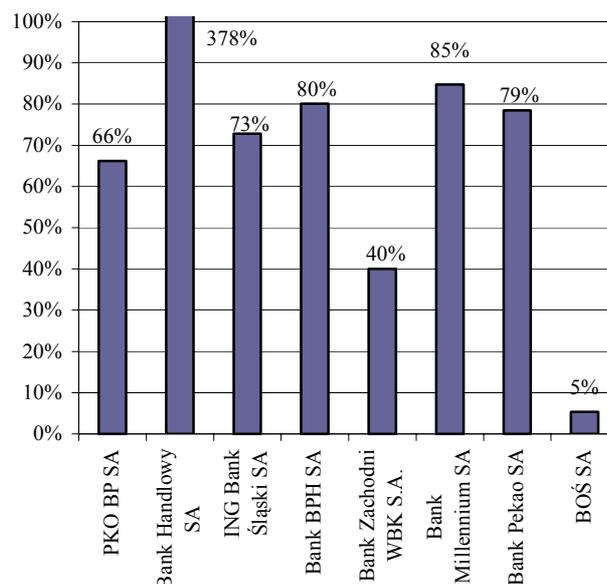
Regulatory capital and capital adequacy ratio

	2004	6-2005
Regulatory capital <sup>1</sup> , million zloty	43 065	46 793
- of which: core capital	42 822	44 956
Capital adequacy ratio (%)	15.4	15.4
Capital adequacy ratio when only core capital is taken into account (%)	15.3	14.8

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

Figure 75

Ratio of paid-out dividend to net earnings in 2004 in largest listed banks



Source: NBP calculations based on PAP data.

Table 24). Both values exceeded the regulatory minimum.

In spite of a growth in the regulatory capital, the average capital adequacy ratio did not change at the end of the first half of 2005 because the banks' enhanced credit activity led to a rise in the capital requirement. The value of the requirement regarding credit risk was also influenced by the change in the way of its calculation, i.e. assigning a 100-percent risk weight to claims secured by a mortgage on residential property, in the part exceeding 50%-60% of its value (depending on the applied method of valuation). Owing to the fact that the value of mortgage loans extended by banks in some cases amounts to 100% of the housing price (LTV 100%) banks will have to move a significant part of the mortgage loans portfolio extended by the end of 2004 (about 30%) from 50% weight risk to 100%, i.e. allocate additional capital to cover them.

The above mentioned payments of high dividends and the reduction in capital in a few banks led to a decrease in their capital adequacy ratios, which have, however, remained on a high level (not lower than 14%). At the end of the first half of 2005, most banking sector assets belonged to banks whose capital adequacy ranged from 12% to 20% (see Figure 78). Lower capital adequacy ratios were characteristic for smaller banks but in all cases they exceeded the 8% regulatory minimum<sup>41</sup>. The concentration of bank assets in very well capitalised institutions attests to the fact that the stability of the system was not jeopardised. The below presented assessment of loss absorption capacity in the future also looks optimistic.

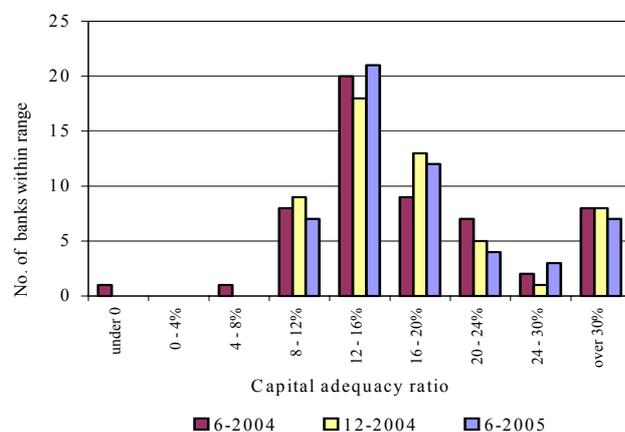
### Simulations of loan loss absorption capacity

Three simulation analyses were carried out to establish whether the capital of banks was sufficient to absorb potential loan losses arising from credit risk.

The results of the *first* simulation answer the following question: what proportion of loans classified *satisfactory* and *special mention* would have to migrate to *doubtful* (or to loans with the assessed impairment of 50%) for the capital adequacy ratios of particular banks to drop to 8%?

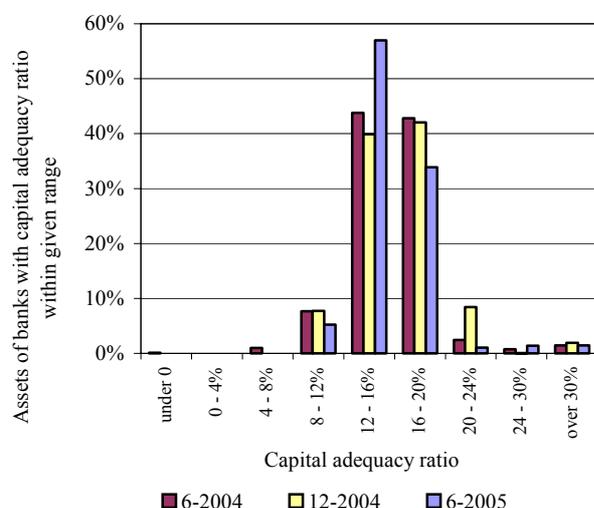
The simulation performed using June 2005 data yielded slightly better results than that using data input for the end of

Figure 76  
Distribution of commercial banks by capital adequacy ratio



Source: NBP.

Figure 77  
Distribution of commercial bank assets by capital adequacy ratio



Source: NBP.

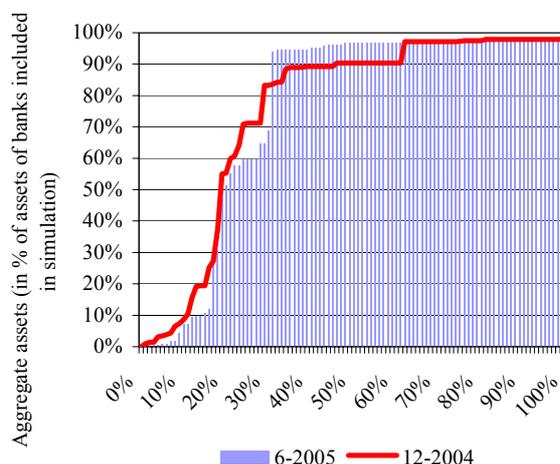
2004. One of the key differences was the reduction in the share of the least capitalised institutions in the sector assets (in the left hand part of Figure 79 the solid line is placed above the bars). To give an example, the capital adequacy ratio would drop to 8% in banks with assets representing 1/5 of total banking sector assets, if approx. 17% of their *satisfactory* and *special mention* loans changed into *doubtful* ones. By comparison, in December 2004, such a situation would have occurred if the quality of 15% of *satisfactory* and *special mention* loans had deteriorated. On the other hand, the earnings of certain large and medium-sized banks that reduced their regulatory capital deteriorated (in the middle part of the chart in Figure 78 the solid line dropped below the bars). The deterioration in these banks' loan portfolios quality, like in 2004, would have to be quite substantial to lead to a fall in the capital adequacy to the regulatory minimum.

The purpose of the *second simulation* was to determine the level of the capital adequacy ratio following a slump in the quality of irregular assets and a slide in the value of loan security. The first scenario adopted assumed that all claims on non-financial customers classified *substandard* and *doubtful* migrated to *loss*. In the second and third scenarios, it was additionally assumed that the value of loan security fell by 25% and 50%, respectively. Ten largest banks were taken into account in this exercise.

The results of the simulation show that in the first half of 2005, the loss absorbing capacity of the banks improved considerably compared to the end of 2004 (see Figure 79). This was attributable both to a fall in irregular receivables in the banks' balance sheets and a rise in regulatory capital of seven out of ten banks analysed. For the first time since 1996 (the beginning of time series), do the banks' capital adequacy ratios remain above the 8-percent regulatory minimum in all scenarios.

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 2005). These borrowers belong to the power sector. It was assumed in the simulation that loans extended to these companies are reclassified as a *loss* and the cost of specific provisions established for this purpose erodes the

Figure 78  
Assets of commercial banks with 8% capital adequacy ratio under assumed scenario of *satisfactory* and *special mention* loans migrating to *doubtful*



Simulation assumptions:

- Calculations refer to portfolio of loans to non-financial customers classified *satisfactory* and *special mention*, as at the end of June 2005 (line) and December 2004 (bars).
- Numerator and denominator of capital adequacy ratio adjusted by full amount of specific provisions against *doubtful* loans. (It is assumed that the loans are unsecured and that the 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 risk-based capital.)
- No releases of specific provisions envisaged (it is thereby assumed that there is no improvement in the quality of the loans classified irregular at the end of June 2005 and December 2004).
- No consideration given to banks with a capital adequacy ratio of under 8% or over 100%.

Source: NBP.

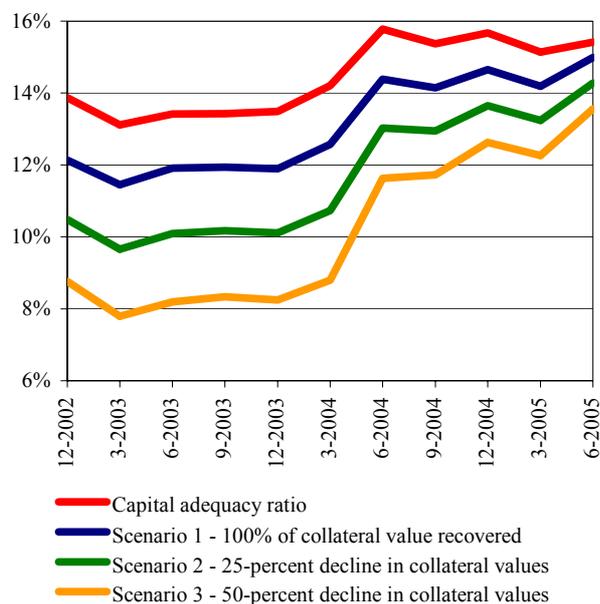
banks' regulatory capital, which results in a fall in the capital adequacy ratio.

The bankruptcy of three major borrowers would affect 23 banks and would raise the cost of establishing specific provisions by about PLN 4.2 billion. This group of banks owned a total of 83% of banking sector assets. The fall in the capital adequacy ratio in particular banks would range from 0.1 to 3.7 percentage points, but only in one smaller bank the capital adequacy ratio would drop below 8%. Capital adequacy ratios in most of the 23 banks analysed would exceed 11.5%. The bankruptcy of major borrowers, in spite of a considerable reduction in banks' capitals, would not pose a threat to the system. The comparison of the results with the effects of the simulation performed using the data from December 2004, proves that there is a slight rise in the banks' sensitivity to exposure towards major borrowers (in the simulation performed using 2004 data, no bank recorded a drop of the capital adequacy ratio below 8%). This results from an increase in bank loans taken out by one of the analysed companies that changed the structure of financing its activity.

Simulations performed on June 2005 data show that banks' potential loss absorbing capacity is considerable. However, it should be remembered that the numerous regulatory changes relating to the identification of irregular claims (a modification of the definition of irregular claims in 2004, implementation of the IFRS in 2005) have limited the historic comparability of simulation results.

Figure 79

Average capital adequacy ratio at ten largest commercial banks assuming all claims on non-financial customers classified *substandard* and *doubtful* are reclassified as *loss* loans



Simulation assumptions:

- All irregular claims on non-financial customers are reclassified as *loss*.
- Loans classified *satisfactory* and *special mention* remain unchanged.
- Numerator and denominator of capital adequacy ratio reduced by shortfall in specific provisions, and in Scenarios 2 and 3 also by decline in value of security (25% of value of security deductible from provisioning base in Scenario 2 and 50% in Scenario 3).
- Average capital adequacy ratio calculated for aggregate portfolio of all banks.
- Analysis conducted for ten largest banks as at the end of June 2005. Where banks were involved in mergers and acquisitions in the analysed period, analysis includes all component banks prior to merger.

Source: NBP.

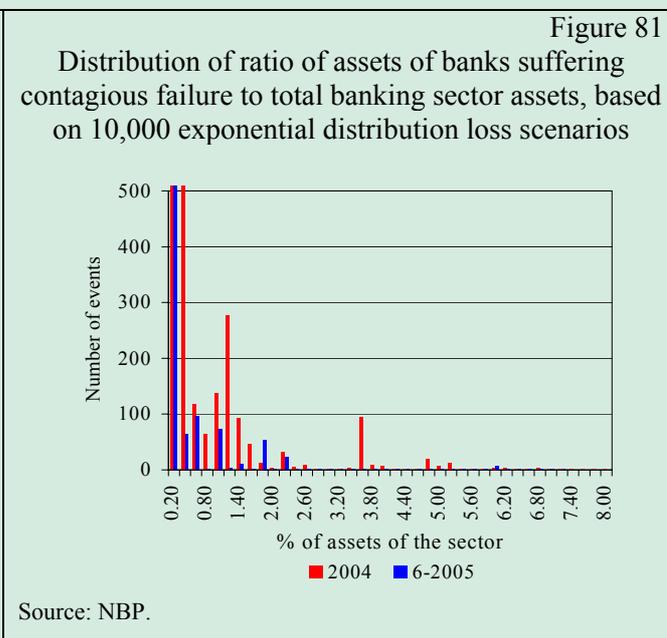
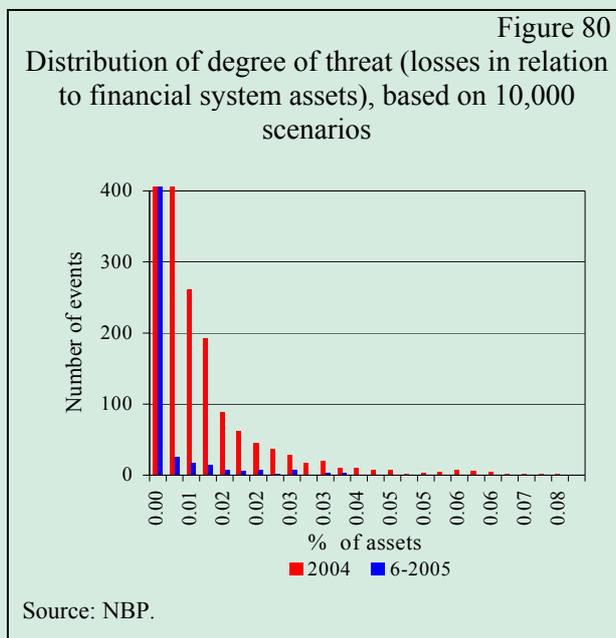
## Box 2

### Domino effect

Deterioration in the financial standing of a bank, in extreme cases, leading to its bankruptcy, may cause problems for other financial institutions (the so-called domino effect). Below presented results of research of domino effect are focused on how problems stemming from banks' insolvency are transmitted through the market of interbank deposits. Factors that may affect the changes in the level of risk include: the ratio of the amount of deposits to the capital of banks and the size of banks' capital buffer, which is indicative of their loss-absorbing capacity.

Differences in the level of capital and risk, and also in their mutual relationships between the end of 2004 and mid-2005, found reflection in the changes in the threat of domino effect in the banking sector. There was a reduction in the threat of domino effect caused by failures to repay deposits in the interbank market due to losses related to credit and market risk. This conclusion is supported by the results of simulation consisting in random reductions of banks' capitals and analysing potential effects of their insolvency, at the assumption that all deposits in the interbank market have to be repaid immediately. It was assumed that random drops in capital have exponential distribution. The distribution parameter was chosen for each bank individually so that the probability of a loss larger the bank's capital requirement equalled 1%.<sup>1</sup> In June 2005, in 99 out of 100 cases the value of unrepaid interbank deposits connected

with a bankruptcy caused by other bank's insolvency (so-called contagious failure) would not exceed 0.004% of sector assets (in 2004 the value was 0.03%).



Also, a drop was observed in the contribution of banks that would suffer failure as a result of other bank's insolvency in the total banking sector assets. In June 2005 this contribution would not have exceeded 1.6% in 99 out of 100 scenarios of capital reduction.

Table 25

Total losses of banks suffering contagious bankruptcy and degree of threat of bankruptcy caused by failure of individual commercial and affiliating banks

12-2004				6-2005							
Commercial banks		Affiliating banks		Commercial banks		Affiliating banks					
thousand zloty	% of assets	thousand zloty	% of assets	thousand zloty	% of assets	thousand zloty	% of assets				
1)	6 520	0.0012	1)	2 690	0.0096	1)	10 867	0.0020	1)	8 164	0.0260
2)	16 261	0.0030	2)	6 586	0.0235	2)	10 867	0.0020	2)	11 708	0.0373
3)	77 504	0.0142	3)	33 241	0.1187	3)	21 775	0.0040			
4)	100 763	0.0185				4)	12 028	0.0022			
						5)	1 350	0.0002			
						6)	39 653	0.0073			
						7)	194 807	0.0359			
						8)	11 139	0.0021			

Note: Cases refer to fundamental bankruptcies triggered by domino effect. Percentage of assets refers to total banking sector assets.  
Source: NBP.

However, the higher capital buffer would not absorb the losses caused by domino effect as effectively as it was the case in 2004. That is because of a higher number of banks that placed at other banks deposits that exceed the amount of their capital and also the amount of half their capital. This is evident in the results of the following simulation performed for particular commercial and affiliating banks (see Table 25). It was assumed that a given bank goes bankrupt and does not repay any deposit from the interbank market. Next, it was checked if other banks also fail because of they cannot recover these deposits. Even though the loss measured with deposits unrepaid by contagiously

bankrupt banks might be higher after 2005 Q2 than at the end of 2005, it would remain extremely low (0.036% of banking sector assets).

<sup>1</sup> To learn more about the research method used see *Financial Stability Report 2004*, www.nbp.pl

### 3.9. Market assessment of banks

#### *Rating agencies' assessment*

The good financial position of banks is confirmed by the ratings assigned by rating agencies. In the first half of the year, the ratings of the largest Polish banks were stable, while three banks (Millenium, BZ WBK, ING Bank Śląski) received upgrades. The assessment of the financial strength of ING BSK is higher due to the good evaluation of risk management and positive results of the restructuring activities undertaken by the bank. Moody's upgraded the financial strength rating of BZ WBK owing to the bank's growing share in the market, in particular connected with financing the property market. The long-term deposit rating for Bank Millenium was increased in view of the growing integration of its activities with a strategic investor and a rise in its retail market share.

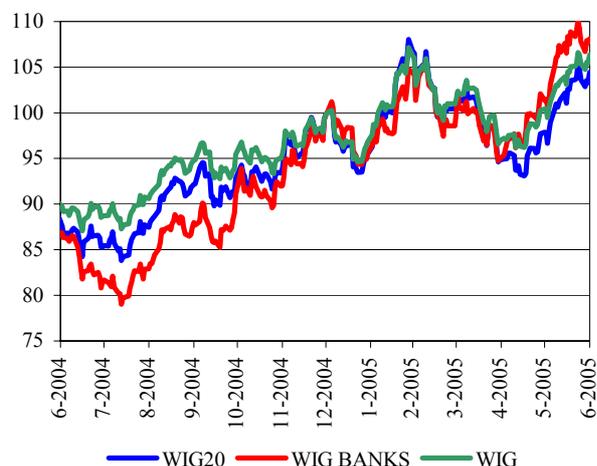
Deposit ratings of all banks evaluated by Moody's indicate low credit risk to the banks' counterparties, which reflects both their current financial position and the rating agency's views of the likelihood of their owners providing support. However, only three banks have financial strength rating of "C", indicating a sustained capacity to operate without external support<sup>42</sup>.

#### *Market valuation of banks*

The banks' good financial position is confirmed by their valuation on the Warsaw Stock Exchange. In the first half of 2005, the growth of WIG-Banks index (8.1%) was higher than the growth of WIG (6.3%) and WIG20 (4.4%). The banking sector index rose faster than the index of the whole market primarily in Q2, which mainly resulted from the anticipated improvement in earnings of the listed banks.

Figure 82

WIG-Banks index against the key WSE indices



Source: Thomson Datastream.

Table 26

Moody's ratings for ten largest Polish banks (July 2005)

Bank	Long-term rating	Short-term rating	Financial strength rating
BGŻ	A2	P-1	E+
Bank Handlowy	A2	P-1	D+
Bank Millenium	A2	P-1	D-
Bank Pekao	A2	P-1	C
Bank BPH	A3	P-2	D+
BZ WBK	A2	P-1	C-
BRE Bank	A3	P-2	D-
ING Bank Śląski	A2	P-1	D+
Kredyt Bank	A2	P-1	E+
PKO BP	A2	P-1	C-

Note: Financial strength rating describes the bank's intrinsic safety and soundness as an independent economic institution, while deposit ratings refer to the likelihood that the bank will repay its obligations, taking account of the probability and extent of possible support to the bank from third parties such as owners or official institutions. The better the financial strength rating, the less the likelihood that the bank will require assistance from third parties.

Source: www.moodyseurope.com.

#### 4. Non-bank financial institutions

In terms of total assets, banks are the most important constituent of the Polish financial system<sup>43</sup> (see Table 27). However, a dynamic growth in the assets of open-ended pension funds, insurance undertakings and investment funds results in the fact that the role of non-bank financial institutions in the financial system has been increasing. As at the end of 2004 their share in the financial system's assets amounted to nearly 26%.

In some cases non-bank financial institutions (among others, insurance undertakings, pension funds and investment funds) are incorporated in the capital groups in which banks are parent undertakings. Thus, it should be taken into account that capital interdependencies between non-bank financial institutions and the banks can represent the channel of transferring losses from the subordinate undertaking to the consolidated results of the parent undertaking. For this reason the financial performance of pension companies and insurance undertakings are presented in the following chapters<sup>44</sup>.

However, based on the analysis of banks' share in the financial institutions' equity (see Table 29), the banks' share in the equity of insurance undertakings and pension funds were not significant, apart from four exceptions related to the pension companies. Thus, possible losses of banks' subordinated undertakings should not pose a significant threat to the financial institutions of the banking sector.

The banking sector's exposures to the non-bank financial institutions were also marginal. In June 2005, the total *credit exposure* to insurance undertakings and pension funds was PLN 160 million, which represented approx. 0.03% of the balance sheet total in the banking sector. The low value of loans taken by insurance undertakings and open-ended pension funds results from the regulatory limitations and the specific operations of these entities. These institutions operate with a low financial leverage and in normal circumstances they do not need to use additional funds. The banks' liabilities arising from the deposits placed by the insurance undertakings and open-ended pension funds were also relatively small (PLN 5.1 billion) and represented approx. 0.9% of the total balance sheet of the banking sector (see Table 28).

Table 27

Assets of banks, insurers, pension and investment funds (million zloty)

	Open-ended pension funds <sup>1</sup>	Insurance undertakings	Investment funds	Banks
12-2004	62 627	77 877	37 723	537 788
3-2005	67 444	81 445	40 777	561 249
6-2005	72 834	n.a.	45 127	573 320

<sup>1</sup> Net assets.

Source: Commission for the Supervision of Insurance and Pension Funds, NBP, www.analizy.pl.

Table 28

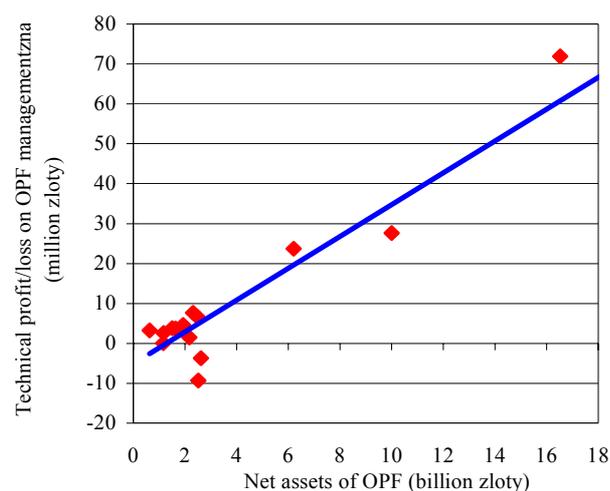
Banks' liabilities to open-ended pension funds and insurance undertakings

	Liabilities to open-ended pension funds and insurers (million zloty)	Liabilities as proportion of total banking sector assets (%)
12-2004	4 781	0.89
3-2005	5 053	0.90
6-2005	5 060	0.88

Source: NBP.

Figure 83

Technical profit/loss of pension companies vs. assets held by pension funds managed



Source: Commission for the Supervision of Insurance and Pension Funds.

The impact of non-bank institutions on the banking sector through capital links and credit exposures, or deposits obtained from the non-bank financial institutions indicates that they do not pose a threat to the banking sector stability. However, the market risk channel should be taken into account, i.e. transferring to the banks the disturbances in the financial markets arising from the mass sales of financial instruments by other financial entities.

Table 29

Banks' share in ordinary capital of insurance undertakings and pension companies

Insurance undertaking (IU) / Pension company (PC)	Banks holding stakes in IU or PC	Share in capital (%)	Ratio of the bank's share in core capital of IU or PC to core capital of the bank (in %)
Commercial Union Polska - TUnŻ SA	Bank Zachodni WBK SA	10.0	0.39
WTUŻiR Concordia Capital SA	Gospodarczy Bank Wielkopolski SA	5.1	0.62
TUnŻ WARTA VITA SA	Powszechna Kasa Oszczędności Bank Polski SA	6.4	0.1
Commercial Union Polska - TU Ogólnych SA	Bank Zachodni WBK SA	10.0	0.1
TUW Concordia Wielkopolska	Gospodarczy Bank Wielkopolski SA	1.2	0.31
TUW CUPRUM	Dominet Bank SA	2.9	0.49
Polskie Towarzystwo Reasekuracyjne SA	BWE SA	11.9	58.1 <sup>1</sup>
	DZ Bank Polska SA	4.4	2.4
	BISE SA	6.7	8.7
Towarzystwo Ubezpieczeń Wzajemnych TUW	Gospodarczy Bank Wielkopolski SA	0.3	0.03
	Banki spółdzielcze	0.2	n.a.
Commercial Union PTE BPH CU WBK SA	BPH SA	10.0	0.3
	Bank Zachodni WBK SA	10.0	
ING Nationale-Nederlanden Polska PTE SA	ING Bank Śląski SA	20.0	0.8
Pekao Pioneer PTE SA	Bank Pekao SA	65.0	0.23
PTE Bankowy SA	Powszechna Kasa Oszczędności Bank Polski SA	100.0	4.5
PTE Polsat SA	Invest-Bank SA	19.97	2.1
PTE Skarbiec-Emerytura SA	BRE Bank SA	100.0	5.7

<sup>1</sup> The share of assets of Bank Współpracy Europejskiej SA in banking sector assets stood at 0.07% at the end of 2004.

Source: Commission for the Supervision of Insurance and Pension Funds, websites of insurance undertakings and pension companies, NBP.

#### 4.1. Pension Companies and Open-ended Pension Funds

In the first half of 2005, the financial performance of pension companies improved as compared to the first half of 2004 (see Table 30). The increase in the sector's financial performance was impacted by the growth in assets of open-ended pension funds managed by pension companies, which resulted not only from the favourable prices of financial instruments but also from the increase in the number of people employed in the economy, increase in total wages as well as from the transfer of a larger tranche of bonds regulating the delinquencies in the payment of premiums by the Social

Table 30

Aggregate profits of pension companies (million zloty)

	first half of 2004	first half of 2005	Change (%)
Technical profit	196.3	213.9	9.0
Net earnings	206.7	223.5	8.1

Source: Commission for the Supervision of Insurance and Pension Funds.

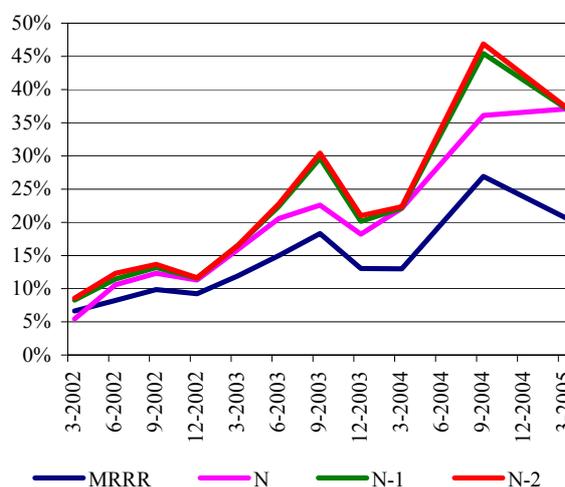
Insurance Institution (ZUS) in 1999–2002. As a result of the aforementioned factors, in the first half of 2005, the open-ended pension funds' net assets increased by more (by PLN 10.2 billion, i.e. 16.3%) than in the first half of 2004 (by PLN 6.9 billion, i.e. 15.5%). This triggered the growth in the profit from managing them and as a result it raised the net earnings of pension companies. The pension company's management fee for the management of a pension fund is correlated with the value of the open-ended pension fund's net assets (see Figure 83). Then, it can be expected that in the coming years (until the first customers of open-ended pension funds obtain the right to pension), the pension company's financial performance will increase, unless there are no significant corrections in the equity and bond market<sup>45</sup>. Pension companies as a whole achieved positive results for the first time in 2002 and since then more and more companies have begun to generate profits. In the first half of 2005, 13 out of 15 pension companies generated positive earnings.

For banks, insurance undertakings and other shareholders of a pension company not only the financial results achieved by the pension companies are important but also the open-ended pension funds' investment performance. In the case of investment results lower than the minimum required rate of return (MRRR) the pension company has to effect additional payments to the pension fund<sup>46</sup> (first from the so-called reserve account and then from its own funds).

If these additional payments were high and triggered a drop in the pension company's capital below the statutory minimum (EUR 5 million), it could negatively impact the financial standing of shareholders, among others, the banks and insurance undertakings. For this reason it is important to monitor the results of open-ended pension funds in terms of the probability of additional payments at the upcoming dates of calculating the minimum required rate of return.

It seems that for some time the risk of additional payments has not been high, which is confirmed by the growing difference between the investment results of open-ended pension funds which had the lowest return and the minimum required rate of return (see Figure 84). In the first half of 2005, the difference was still growing.

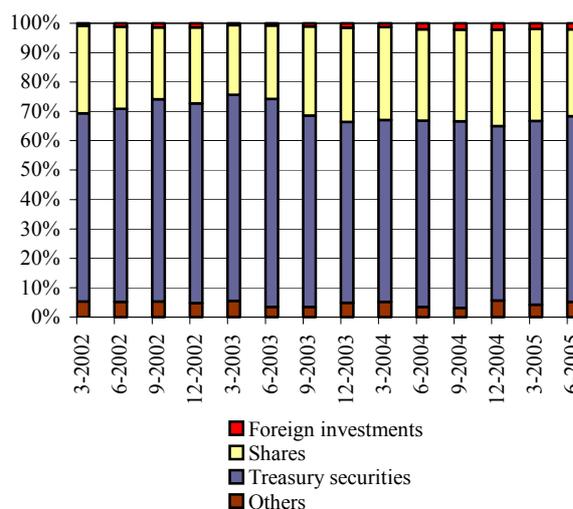
Figure 84  
Investment performance vs. minimum required rate of return



Note: N/ N-1/ N-2 represent the worst, second worst and third worst pension fund by investment performance.

Source: Commission for the Supervision of Insurance and Pension Funds.

Figure 85  
Structure of open-ended pension funds' investment portfolio



Source: Commission for the Supervision of Insurance and Pension Funds.

*Structure of open-ended pension funds' portfolios and their impact on prices of financial instruments*

Similarly to the previous years, the investments of pension funds focused on the market of Polish financial instruments, i.e. Treasury securities and shares. Their share in both markets is relatively high: 15.3% in the market of T-bills and Treasury bonds, and 9.1% in the market of shares, i.e. 21.4% of the free float at the Warsaw Stock Exchange<sup>47</sup>. Thus, a potential impact of open-ended pension funds on the price of Treasury securities and on the quotation of shares can be significant if they need to dispose of the securities. However, certain restrictions with regard to investing in other assets and abroad as well as low liquidity of other domestic markets are limiting the flexibility of the management of pension funds' portfolio (see Figure 85).

#### 4.2. Insurance undertakings

In 2005 Q1, the financial performance of insurance undertakings significantly improved (see Table 31). The life insurance sector recorded over a 100-percent growth of the so-called technical result (i.e. from insurance operations) and of the net financial result. In the case of non-life insurance a significant improvement in the technical result (256.8%) was not matched by the equally high growth in the net result (38.9%). This discrepancy was caused, among others, by lower profits from other operations (non-insurance operations).

Average profitability in the sector improved, yet the changes were more visible in the life insurance undertakings (see Figure 86). In spite of high nominal growth in the net profit, the ROE ratio in the non-life insurance undertakings decreased as compared to the corresponding period of the previous year. It was triggered by a significant increase in capital (by PLN 3.2 billion, i.e. 33.6% y/y) as a result of earmarking the profit from 2004 for increasing the reserve capital (mainly in the largest undertaking) and the revaluation reserve as a result of increase in the fair value of the portfolio of investments in subordinate undertakings.

As compared to the previous periods, in 2005 Q1, the gross

Table 31

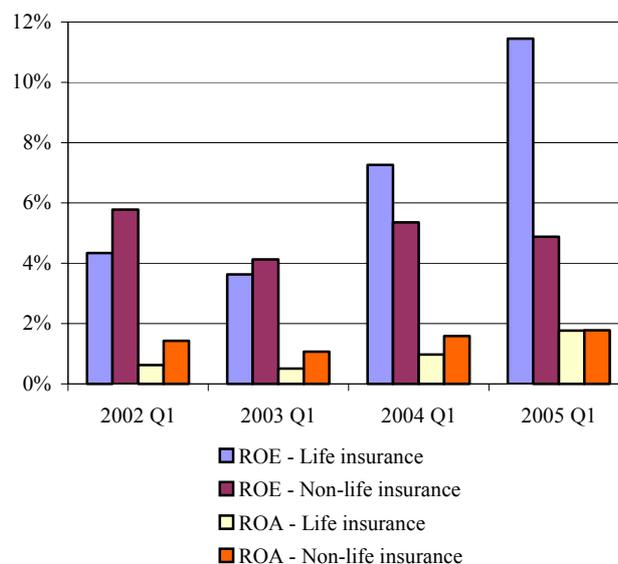
#### Technical result and earnings of insurance undertakings

	2004 Q1	2005 Q1	Change (%)
<b>Technical result</b>			
Life insurance	442 616	944 355	113.4
Non-life insurance	76 101	271 548	256.8
<b>Net earnings</b>			
Life insurance	403 440	822 860	104.0
Non-life insurance	421 684	585 646	38.9

Source: Commission for the Supervision of Insurance and Pension Funds.

Figure 86

#### Return on assets (ROA) and return on equity (ROE)



Source: Commission for the Supervision of Insurance and Pension Funds.

claims ratio was also favourable (see Figure 87). This ratio largely affects the technical result – the main constituent of the insurance undertakings’ financial performance. It is worth highlighting that this ratio did not increase in the life insurance undertakings. It is especially important as in this sector the growth trend of the aforementioned ratio has been observed for a long time, which is related to the need to disburse funds due from the expiry or liquidation of the policies sold in the 1990s. It seems, however, that the phase of mass withdrawals from the policies sold in the 1990s has been finished.

In the case of non-life insurance the continuation of the long-term trend of decreasing the gross claims ratio is visible. The increase in the disbursed claims was compensated by the larger increase in premiums (see Table 2).

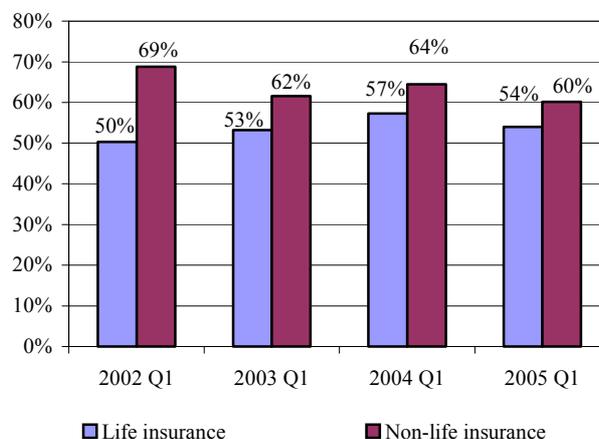
#### Structure of insurance undertakings’ portfolio

There has been a slight change in the structure of the insurance sector’s investment portfolio. Traditionally, the most important element of the portfolio were fixed-rate debt securities (see Figure 88). In the non-life insurance undertakings the increase in the role of subordinated undertakings’ shares is noticeable. The volume of foreign deposits (PLN 113 million, i.e. 0.14% of assets) and derivatives (PLN 1.3 million, i.e. 0.002% of assets) was relatively low.

The marginal exposure of insurance sector to the derivatives was caused by regulatory factors (the law imposes restrictions on the purchase of such instruments) as well as the nature of interest rate risk of balance sheet assets and liabilities. Over half of assets are represented by the fixed-rate debt instruments, in the majority of undertakings classified as securities *held to maturity* and valued according to the amortised cost method. Most liabilities of insurance undertakings are not sensitive to the changes of interest rates, as the value of funds from the capital insurance funds with the guaranteed rate of return stood at approx. 15% of technical provisions in December 2004.

The insurance undertakings are the second largest investor, after banks, in terms of the Treasury securities portfolio

Figure 87  
Insurance undertakings’ gross claims ratio<sup>1</sup>



<sup>1</sup> Ratio of claims and benefits paid, plus movements in provisions, to premiums earned.

Source: Commission for the Supervision of Insurance and Pension Funds.

Table 32  
Insurance claims paid and collected premiums

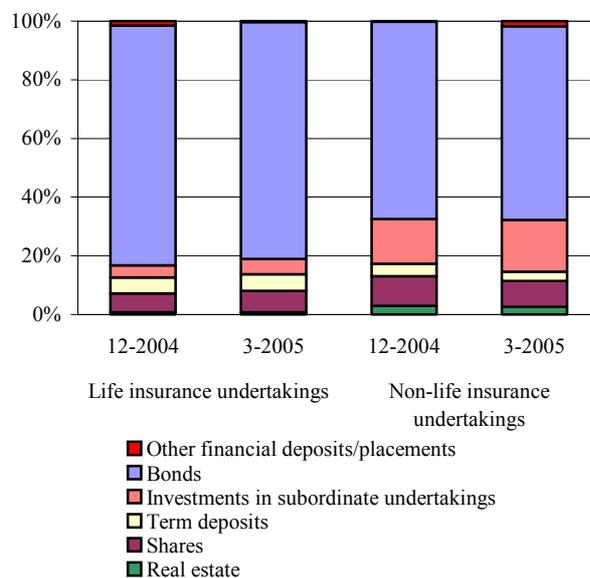
	2004 Q1	2005 Q1	Change (%)
Insurance claims and benefits paid			
Life insurance	1 642 150	1 813 717	10.4
Non-life insurance	1 976 242	2 059 212	4.2
Premium written			
Life insurance	2 973 390	3 388 413	14.0
Non-life insurance	4 149 951	4 407 541	6.2

Source: Commission for the Supervision of Insurance and Pension Funds.

volume (apart from non-residents). The large scale of investments in Treasury securities in individual undertakings, similarly as in the case of pension funds, implies that there are limited possibilities of selling these securities without negative implications with regard to the price. However, under exceptional circumstances insurance undertakings can be forced to release significant funds invested in securities (because of e.g. natural catastrophes and increased disbursements of claims). Relatively high supply could negatively impact the quotations of securities, which could deteriorate the financial results of other domestic entities holding large portfolios, among others, banks and pension funds. The reclassification by banks of a part of securities (18%<sup>48</sup>) from the category valued according to the amortised cost to the category valued at fair value increases the banks' sensitivity to losses in the situation of growing interest rates, but the increase is only marginal (the amount of reclassified securities represented 1% of the sector's assets).

Thus, the probability of insurance undertakings triggering disturbances in the financial market is higher than in the case of pension funds. However, this probability is still not considerable due to the low awareness on the part of the Polish households of the need to insure their property against unforeseen events.

Figure 88  
Investment portfolio of insurance undertakings at the end of March 2005



Source: Commission for the Supervision of Insurance and Pension Funds.

<sup>1</sup> See: *Inflation Report*, NBP, August 2005.

<sup>2</sup> See: *Senior Loan Officer Opinion Survey on Bank Lending Practices and Credit Conditions*, NBP, quarterly issues from 2005, [www.nbp.pl](http://www.nbp.pl).

<sup>3</sup> On the basis of the study: *Korzystanie z produktów finansowych przez Polaków* [The use of financial products by Poles], published by PBS polling company, April 2005.

<sup>4</sup> This change was evident in opinions prepared by market analysts.

<sup>5</sup> See: *Financial Stability Report 2004*, NBP, 2005, chapter 2.

<sup>6</sup> The level of short-term interest rates in the core markets may also be interpreted in terms of alternative cost considered by foreign investors in taking decisions on the composition of their investment portfolio.

<sup>7</sup> Record-breaking oil prices (the price of a Brent oil barrel in London spot transactions exceeded USD 53 in the first week of March 2005 thus reaching its then all-time high) increased the uncertainty as to the outlook for inflation in the USA, which brought about a drop in US bond prices. In order to compensate for losses in the American market, global investors realised profits from investments outside the most developed markets.

<sup>8</sup> Relatively low duration level of bond portfolios held by banks may have several reasons. First, the term structure of liabilities of pension funds and (partly) insurers increases their demand for instruments with longer maturities so that it outstrips the banks' demand for these instruments. Second, foreign undertakings usually treat investment in Polish Treasury securities as short- and medium-term transactions, which should generate profit due to expected movements of interest rates. The natural way of maximising profits from expected changes in yields is purchasing high-duration instruments. What is more, Polish Treasury bonds constitute a significant part of the balance sheet of domestic banks. Due to the scale of exposure it can be assumed that domestic banks try to limit their interest rate risk by purchasing bonds of lower duration.

<sup>9</sup> The drop in the interest rate disparity was in the first place responsible for limiting the attractiveness of "carry trade" strategy. Carry trades, if engaged in extensively, may create appreciation pressure on the zloty.

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<sup>10</sup> See e.g. *Financial Stability Review*, ECB, June 2005, p. 10.

<sup>11</sup> See e.g. *Financial Stability Review*, ECB, June 2005, p. 34. The data on the involvement of non-oil-sector institutions in the oil market point to the convergence of oil price growths in 2005 with the rise of these institutions' participation.

<sup>12</sup> The terms "claims" and "loans" are used interchangeably.

<sup>13</sup> Loan is classified as irregular when the delay in scheduled payments exceeds 3 months (in case of retail loans the delay period is 180 days) or if the economic standing of the borrower suggests that they can experience difficulties with debt repayment. This definition applies to banks which observe the Polish Accounting Standards (PAS). However, also the remaining banks prepare the part of their financial reports devoted to irregular loans in the format consistent with the categories required for banks complying with the PAS. The results of loan portfolio classification obtained by internal models of assessing the impairment of credit are "translated" into categories possibly most consistent with those defined in the Ordinance of the Minister of Finance.

<sup>14</sup> The regulatory amendments were discussed in the *Financial Stability Report 2003*, p. 41. The most important changes included adjusting delinquency triggers for principal and interest payments to correspond with those in force in other EU countries, introducing a simplified classification for retail exposures (with two categories of *satisfactory* and *loss*), and allowing security to be taken into consideration at the classification stage (e.g. including the provision that assessing the financial condition of the obligor can be replaced by assessing the condition of the security provider).

<sup>15</sup> Prior to 2005 all banks used to classify claims to risk categories according to the rules specified in the Ordinance of the Minister of Finance (as published in *Dziennik Ustaw* [Journal of Laws] No.218/2003, item 2147). The Ordinance allowed banks to follow their internal models, yet no bank had asked the Commission for Banking Supervision for the required authorisation.

<sup>16</sup> The act of 7 August 2005, amending the Civil Code and some other acts (*Dziennik Ustaw* [Journal of Laws] No.157/2005, item 1316).

<sup>17</sup> Non-performing loans are loans whose delinquency in payment of either principal or interest exceeds 90 days.

<sup>18</sup> The calculations accounted for loans classified *loss* that had been granted until the end of 2002. They constituted approx. 70% of the total amount of loans classified in the *loss* category.

<sup>19</sup> More information on the obstacles to reposting loss exposures as memo items can be found in: *Financial Stability Report 2004*, Box 3 "Reasons why regulations allowing the charge-off of loss loans have failed to have a major effect on the level of those loans".

<sup>20</sup> Data as at the end of 2004. Source: *EU Banking Sector Stability*, ECB, October 2005 (preliminary version). ECB does not publish separate data on claims on non-financial sector.

<sup>21</sup> The paragraph refers to combined indebtedness of the non-financial, financial and general government sectors. This approach makes comparisons within the European Union possible.

<sup>22</sup> The present analysis of loan quality by section of the economy refers to the banks' "large exposures", i.e., those above PLN 500 thousand, which account for a substantial portion of claims on non-financial undertakings.

<sup>23</sup> More information on potential effects of discharge of contracts in: *Financial Stability Report 2004*, NBP, 2005.

<sup>24</sup> Assessments of investment risk based on *Mapa ryzyka inwestycyjnego w branżach polskiej gospodarki* [Map of investment risk in sections of Polish economy] Report No. 25, Second half of 2005, The Gdansk Institute for Market Economics (IBnGR), Warsaw, June 2005. IBnGR analysts define investment risk as "a potential threat to the implementation of economic objectives envisaged by the investor". This risk is assessed upon the analysis of data released by the Central Statistical Office (GUS) supplemented by expert studies.

<sup>25</sup> This is a conservative assumption considering the currently observed improvement in financial standing of corporates in most sections of the economy.

<sup>26</sup> More detailed account of the development of FX derivatives can be found in: *Financial Stability Development in Poland 2004*, NBP, 2005 (in press), Chapter 5.4.2.2.

<sup>27</sup> More about non-price competition between banks see: *Financial Stability Report 2004*, NBP, 2005; Box 5: "Housing loan products on offer from the banks – proactive methods of winning business".

<sup>28</sup> Act of 11 March 2004 on tax on goods and services, Art. 146 (*Dziennik Ustaw* [Journal of Laws] No.54/2004, item 535, as amended).

<sup>29</sup> More about banks' policies in the periodical publication *Senior loan officer opinion survey on bank lending practices and credit conditions*, NBP, 2005, quarterly editions.

<sup>30</sup> Source: *EU Banking Sector Stability*, November 2004, ECB, p. 29.

<sup>31</sup> See *Inflation Report*, NBP, August 2005.

<sup>32</sup> See *Senior loan officer opinion survey on bank lending practices and credit conditions* – 3rd quarter of 2005, NBP, 2005.

<sup>33</sup> The funding gap is defined as a difference between the total amount of loans granted to the non-financial, government and local government sectors and the total amount of deposits taken from those sectors, expressed as a percentage of the value of loans. A positive value of the funding gap shows which proportion of the extended loans does the bank finance by funds (other than customer deposits) gained over at the market. A negative value of the funding gap shows that the deposits taken from customers exceed the value of the loans granted.

<sup>34</sup> Due to the changes introduced to the reporting in June 2005, the comparison of the value of the liquidity gap with data from earlier periods is limited. The most important change is the introduction of recording claims and commitments paid in instalments distributed by individual instalment dates.

<sup>35</sup> Banks did not apply cost allocation on a scale that could influence the aggregate results of the banking sector.

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<sup>36</sup> See: Ordinance of the Minister of Finance of 10 December 2001 relating to specific accounting principles for banks (*Dziennik Ustaw* [Journal of Laws] No. 149/2001, item 1673, as amended).

<sup>37</sup> The difference between the average weighted interest on PLN loans and PLN time deposits went down from 6.7% to 6.4% in the period from December 2004 to June 2005.

<sup>38</sup> ROA (ROE) ratios for the first half of 2005 have been calculated on the basis of net profit generated in the first half of 2005 and the average of assets (capital) at the end of December 2004 and June 2005.

<sup>39</sup> The possibility of including part of net profit of the current period and the profit undergoing the procedure of approval in regulatory capital was introduced in January 2005 in the amended Banking Law (*Dziennik Ustaw* [Journal of Laws] No.91/2004, item 870).

<sup>40</sup> The idea of prudential filters is to regulate the recognition of fluctuations of financial instrument prices resulting from, among others, changes in fair value in the banks' regulatory capital. In general terms, it can be said that only a portion of profits on the rise in the instrument's value should be taken into supplementary capital while the whole loss resulting from the instrument's impairment should reduce core capital. (See: [www.c-eps.org/prudential\\_filters.html](http://www.c-eps.org/prudential_filters.html)).

<sup>41</sup> The analysis does not include cooperative banks.

<sup>42</sup> Financial strength ratings for 19 banks from the Czech Republic, Slovakia, Slovenia and Hungary assigned by Moody's are slightly higher than the ratings assigned to Polish banks. The median of the distribution (as of end of July 2005) corresponds to "C-" rating (in Poland D+), and the ratings range from "B-" to "D".

<sup>43</sup> For more information on the financial system structure see: *Financial System Development in Poland 2004, 2005* (in press), NBP, Chapter 1.

<sup>44</sup> In view of the late publishing of data on the financial performance of investment companies (end of October each year) they cannot be included in this document.

<sup>45</sup> Certain negative impact on the increase in the profit from management can be caused by the decrease in fees while exceeding the statutory thresholds in the value of open-ended pension fund's assets.

<sup>46</sup> More information on the mechanism of additional payments to the pension company depending on the results achieved by open-ended pension funds in: Act of 28 August 1997 on the organisation and operations of pension funds, Chapter 18 (*Dziennik Ustaw* [Journal of Laws] No.159/2004, item 1667, as amended).

<sup>47</sup> The capitalisation of the Warsaw Stock Exchange excluding foreign companies. *Free float* is defined as the blocks of shares smaller than 5% of the total number of issued shares (source of data: Warsaw Stock Exchange).

<sup>48</sup> For the purpose of calculation the value of reclassified portfolio was decreased by the value of restructuring bonds of B and C series pre-purchased by the issuer.