National Bank of Poland

Monetary Policy Council

Report on monetary policy implementation in 2005

Warsaw, May 2006

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1. Monetary policy strategy in 2005

The present report is concerned with the implementation of the monetary policy in 2005, the guidelines for which were formulated in the document *Monetary Policy Guidelines for the Year 2005*.

Pursuant to Article 227, Paragraph 1 of the Constitution of the Republic of Poland "The National Bank of Poland shall be responsible for the value of the Polish currency". The Act on the National Bank of Poland of 29 August 1997 in Article 3 states that „the basic objective of NBP activity shall be to maintain price stability, and it shall at the same time act in support of Government economic policies, insofar as this does not constrain pursuit of the basic objective of the NBP".

At present, central banks understand price stability as an inflation rate that is low enough not to negatively affect investment, savings and other important decisions taken by economic agents. Ensuring so understood price stability is the basic way in which a central bank contributes, through its decisions, to the achievement of a high and sustainable economic growth.

The Monetary Policy Council (MPC) bases its policy on direct inflation targeting strategy (DIT). International experience shows that such a strategy is an effective means of ensuring price stability. In the *Monetary Policy Strategy beyond 2003,* accepted in February 2003, the MPC adopted the so-called permanent inflation target at the level of 2.5% with a symmetrical tolerance band for deviations of +/- 1 percentage point. In February 2004, the current MPC confirmed the fundamental elements of the *Monetary Policy Strategy beyond 2003*, namely, the level of inflation target, the width of the tolerance band and the maintenance of the floating exchange rate regime until Poland's entry to ERM II.

The Council has emphasised on many occasions that the implementation of an economic strategy focused on creating conditions which would ensure the introduction of the euro at the earliest possible date would be most favourable for Poland and would contribute to a higher long-term economic growth.

In the *Monetary Policy Guidelines for the Year 2005*, the Council explained how it understood the inflation target and the way of its implementation:

• First, the notion of *permanent* target means that it refers to year-on-year inflation measured each month in relation to the corresponding month of the previous year, as opposed to the 1999-2003 practice of measuring inflation only once a year – in December (in relation to December of the previous year). The permanent target will remain in force until Poland joins ERM II or till the end of term of the present MPC.

• Second, the Central Statistical Office (GUS) presents data on inflation in the form of indicators calculated as the change in the prices of consumer goods and services (CPI) in a given month in relation to the corresponding month of the previous year. This measure is the main basis for interpreting the inflation target. However, for better understanding of inflation developments it is also justified to apply quarterly and average annual inflation indices, such as those used in the NBP's inflation projection[1] or in the central budget. The use of quarterly indicator is motivated by the fact that the inflation projection, which is a very important point of reference for MPC decisions, makes it possible to assess probable inflation deviations from the target on a quarterly basis. The reasons to use the average annual indicator are as follows: (a) it eliminates temporary, accidental deviations from the inflation target; (b) some important variables are presented in this form in the inflation projection; and (c) it is used in the budget forecast and other government documents and programmes.

• Third, the adopted solution means that the monetary policy is unequivocally focused on maintaining inflation as close as possible to the level of 2.5% and not only within the tolerance range. This is a different approach than the one pursued in a number of countries where the inflation target is defined as a range without a central value. The adopted solution provides better anchoring for inflation expectations.

• Fourth, inflation fluctuations within the band should be treated as a natural consequence of minor shocks and business cycle factors. It can be assumed that these fluctuations are compensated in the longer term and so do not normally require any action on the part of monetary authorities. Nevertheless, in the case of unexpected and strong shocks pushing inflation out of the tolerance band, the reaction of the central bank may be required.

[1] Inflation projections are forecasts of inflationary processes in the Polish economy drawn up on the assumption of interest rates kept unchanged in the projection horizon. Projections are prepared on a quarterly basis by NBP economists using the econometric model ECMOD. Since August 2004, inflation projections are published in *Inflation Reports* (projection based on ECMOC model was first published in the November 2004 *Report*). See: information in Appendix 5: Inflation projections of the NBP.

• Fifth, monetary policy reaction to unexpected shocks will depend on their strength and character and also on the degree of inertia of inflation expectations. The reaction to demand shocks is a relatively minor problem, as in such a case inflation and output move in the same direction. An increase in interest rates, accompanied by inertial inflation expectations, weakens the economic activity and, in a longer perspective, inflationary pressure. Supply shocks are much more difficult to cope with. The main problem is that in the case of supply shocks, output and inflation move in opposite directions, as it was the case during the oil shocks of the 1970s. In their aftermath, there was a surge in inflation in many countries and a parallel decline in output resulting from increased costs. Inappropriate monetary policy reaction may have far-reaching negative consequences for the economy. An attempt to fully neutralise the impact of a supply shock may lead to an excessive loss in output, as the supply shock has in itself a negative effect on demand and investment. On the other hand, striving to fully accommodate a supply shock leading to price increases and output reduction – by pursuing too expansionary monetary policy – usually leads to an acceleration in inflation, which, in turn, requires a far more restrictive monetary policy in the subsequent periods, resulting in a relatively strong deceleration of economic growth.

• Sixth, supply shocks are usually transitory and limited in scale. Thus, they do not require immediate reaction. However, in the case of strong shocks even temporary acceleration in price growth may bring about a permanent rise in inflation expectations and, in turn, a further increase in inflation due to building wage pressure. In such a situation, monetary policy should prevent secondary effects of the supply shock (the so-called second-round effects). In countries with a short history of low inflation the risk of such effects is substantial. Very useful in analysing supply shocks are core inflation indices, which make it possible to distinguish, at least roughly, temporary changes in inflationary pressure from the permanent ones.

• Seventh, because of delayed reaction of output and inflation to monetary policy, its influence on the current inflation is limited. Any current action of the central bank affects price developments in the future, just as the current inflation is influenced by interest rate changes made several quarters before. Unfortunately, these lags are not constant and depend, to a large extent, on structural and institutional changes in the economy. Changes in the transmission mechanism result in a situation where central banks can only approximately assess the time lag between a decision and its strongest observed impact on real variables (output, employment) and then on inflation.

• Eighth, monetary policy affects the economy not only through changing interest rates but also by keeping them unchanged for a period of time. Lack of decision on interest rate level for several

periods (months or quarters) is also a decision which has substantial consequences for the economy, whenever it leads to a gradual widening or narrowing of the output gap.

• Ninth, monetary policy is conducted under high uncertainty, which means, inter alia, that the model utilised by the central bank for projecting inflation may not fully reflect the consequences of structural changes taking place in the economy. This means that (a) while making decisions, it is necessary to take into account all available information and not only the inflation projection; (b) it is not possible to adopt a simple policy rule which could be known *ex ante* to market participants; and (c) a forward-looking monetary policy has to be presented to the public as an attempt to balance risk factors associated with achieving the inflation target, rather than as an attempt to control economic processes.

• Tenth, in assessing the stance of monetary policy, not only the level of real interest rates should be considered, but also the level of the real exchange rate.

2. Monetary policy in 2005

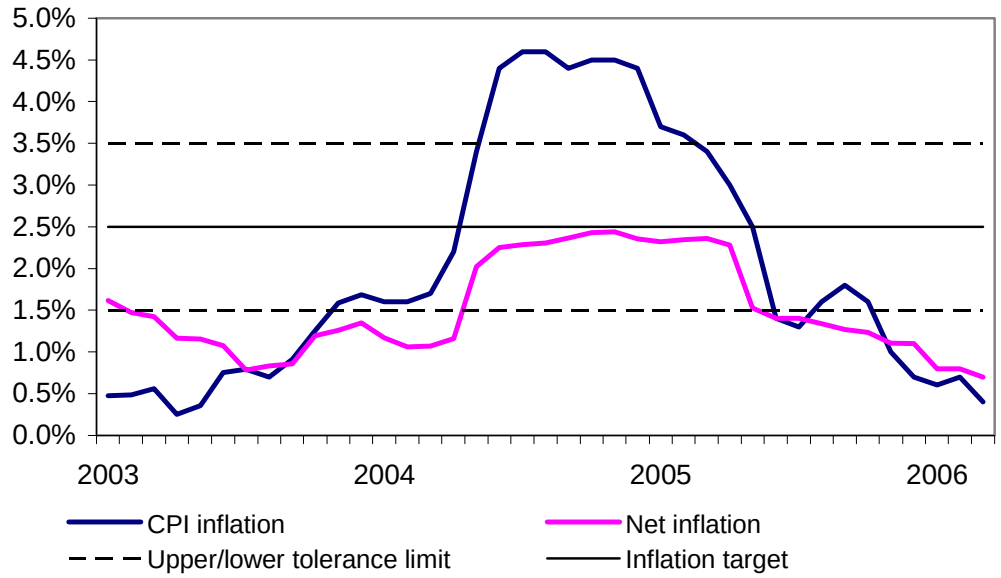
In view of the fact that the time elapsing between interest rate decisions and their strongest impact on inflation extends from five to seven quarters, inflationary processes in 2005 were largely affected by the monetary policy pursued in the years 2003-2004. In turn, the monetary policy conducted in 2005 will, for the most part, influence inflationary processes in 2006 and 2007.

A correct monetary policy is a forward-looking one. Therefore, inflation projections are treated as one of the inputs to monetary policy decisions. Such approach is characteristic of central banks pursuing the DIT strategy. An important point of reference for the monetary policy under this strategy is an interest rate level favouring medium-term stabilisation of inflation at the target level.

Monetary policy in 2005 was pursued amid lowering inflation as measured with the Consumer Price Index (CPI) and net inflation[2].

Figure 1

Inflation in 2003-2006



Source: GUS data, NBP data.

[2] Net inflation is CPI inflation net of food and fuel prices.

In 2005 the annual average CPI inflation reached 2.1% and was lower than all available external forecasts prepared in 2004 and 2005. The annual CPI inflation fell from 3.7% in January to 0.7% in December, while the net inflation indicator fell from 2.3% to 1.0% respectively.

This strong decline in both inflation measures was largely driven by the fading-away of a temporary increase in inflation in 2004, connected with Poland's entry to the European Union. The reasons behind the temporary increase in inflation include a rise in indirect taxes to the levels consistent with EU requirements[3] and a surge in foreign demand for Polish food products. Besides, the year 2004 marked considerable price increases in the world energy and industrial commodity markets (e.g. crude oil, coal and copper).

Low inflation in 2005 also stemmed from strong appreciation of the zloty in 2004 (14% against the euro and 20% against the US dollar) and was achieved amid lower than forecast public finance deficit in 2005.

Fading-out of the accession shock impacted the inflation indicator mainly in the first half of 2005. This was reflected in CPI inflation matching net inflation level. On the other hand, 2005 Q3 was marked by CPI inflation rising above net inflation, mainly as a result of a rapid oil price increase in the world markets. CPI inflation falling below net inflation in 2005 Q4 was, in turn, the result of decreasing food prices and lower distribution margins in fuel markets.

* * *

Relatively low growth rate of wages and prices at the end of 2004 indicated that inflation acceleration in the aftermath of the EU accession shock had not become a factor automatically accelerating wage growth, and, as a result, stimulating inflation. This created an opportunity for lowering interest rates to the level close to that maintained before the 2004 increases. Those increases were supposed to prevent a situation where temporarily heightened inflation expectations could drive up inflation permanently if taken into account in wage negotiations and futures contracts (the so-called second-round effects).

Lack of second-round effects, a lower than expected rise in domestic demand in 2004 Q4 and a considerable decline in inflation at the turn of 2004 and 2005 were the signals indicating that the period of the accession effect, reflected in the 12-month CPI surge, would be followed by a relatively strong drop in current inflation. This induced the MPC to change its monetary policy bias

[3] VAT rates (among other things on construction materials, children's apparel) and excise rates (on tobacco products) were increased.

into easing in February 2005, followed by two subsequent cuts in interest rates, each time by 50 basis points, in March and April 2005. As a result, NBP reference rate was lowered from 6.5% to 5.5%.

In April 2005, the MPC changed its monetary policy bias from easing to neutral. The Council assessed that, in the medium term, the then prevailing interest rate level should ensure inflation close to the target and favour GDP close to its potential level i.e. such that triggers neither rise nor drop in inflation. This assessment was corroborated with the results of the May inflation projection.

The Council's decisions to change the monetary policy bias were motivated by the need to pursue a forward-looking monetary policy, taking account of time lags between interest rate decisions and their most powerful impact on inflation. In particular, the Council adopted an easing monetary policy bias in February 2005, although the current inflation was largely above the upper tolerance limit for deviations from the target. Likewise, in April 2005, when taking the decision to shift into a neutral monetary policy bias, the Council forecasted that subsequent quarters will probably see inflation running below the target, mainly as a result of a strong drop in the growth rate of food prices. The Council assessed, however, that due to the gradual closing-up of the output gap and the impact of high crude oil prices on inflation and economic growth, the probabilities of price growth rate moving above and below the target were comparable in the longer term.

Based on the May 2005 inflation projection, the MPC set the NBP reference rate at the level driving inflation back to target in the monetary policy horizon. However, the economic data flowing in from June to August showed that the rate of economic growth and, as a result, inflationary pressure in 2005 may in fact be considerably lower than those accounted for in the May inflation projection. In view of these data, in June 2005 the MPC changed its monetary policy bias from neutral to easing and lowered the NBP reference rate by 50 basis points to the level of 5.0%.

In July, the analysis of available data allowed an assessment that GPD growth in 2005 Q2, albeit stronger than in the preceding quarter, was considerably weaker than that accounted for in the May *Inflation Report*[4]. In view of those estimates and the appreciation of the zloty, in July 2005 the MPC reduced the NBP reference rate by another 25 basis points.

[4] *Inflation Report* is a quarterly published document in which the Monetary Policy Council presents its assessment of macroeconomic developments. The Report contains also inflation and GDP projections which are prepared by NBP economists. See: information contained in Appendix 5: Inflation projections of the NBP.

The inflation projection prepared in August accounted for previously unexpected deterioration of economic climate. The August inflation projection, as compared with the May projection, forecast downward inflationary path to continue in the monetary policy transmission horizon. However, the Council took into consideration the fact that the projection could not account for all sources of uncertainty, including, inter alia the Government's economic policy in the years to come. Moreover, due to the time needed for its preparation, the August inflation projection did not account for the latest information on considerably higher forecasts for crude oil prices and a different than expected structure of GDP growth.

The data on national accounts in Q2, published by the GUS in August 2005, corroborated earlier expectations of a slower than previously expected recovery of the Polish economy. They also confirmed that under the assumption of unchanged potential GDP estimates, the period of a gradual closing of the output gap could have been longer than projected in the May *Report*, which was an inflation curbing factor. This information induced the MPC to lower the NBP reference rate by another 25 basis points to the level of 4.5%. In view of the August inflation projection, the reduced NBP reference rate remained at a level favouring inflation moving back to target in the monetary policy horizon. However, the MPC maintained its easing monetary policy bias, taking into consideration, inter alia, the consistently lowering core inflation rate, which was a signal of weakening inflationary pressure.

The MPC did not change the NBP interest rates in the subsequent months, since the economic developments turned out to be largely in line with the results of the August inflation projection, which forecast a gradual improvement of the economic climate. The annual growth rate of industrial output increased steadily. Also retail sales experienced a moderate upward trend. Revival in the construction sector continued, although its growth rate fell in October and November. Economic climate assessments communicated by enterprises in GUS business tendency surveys did not change substantially, yet the good performance of the corporate sector recorded in the first three quarters of 2005 pointed at a good economic condition of the surveyed enterprises: growing revenue, high profitability and a safe liquidity level (which in 2005 Q3 hit the highest level in the history of GUS surveys).

According to GUS data published in November, GDP growth in 2005 Q3 was higher than in Q2 and consistent with the projection presented in the August *Report*. Also the growth rates of individual consumption and investment were in line with the NBP's expectations, running above the Q2 levels. Net exports – despite the 2004 appreciation of the real effective exchange rate of the zloty

– remained the main demand factor behind economic growth. Its contribution to GDP growth proved considerably higher than forecast.

An additional factor preventing the MPC from lowering interest rates was a risk related to rapidly growing oil prices in the world markets.

The data on economic condition in September-December 2005 confirmed the accuracy of the NBP projections indicating a gradual improvement of economic climate, yet, the scale of decline in core inflation was slightly larger than accounted for in the August 2005 inflation projection. On the other hand, CPI inflation in Q3 was somewhat higher than forecast in the August *Report*, while Q4 marked a considerable inflation decrease driven by a drop in the growth rate of prices of food and non-alcoholic beverages and also of fuel prices.

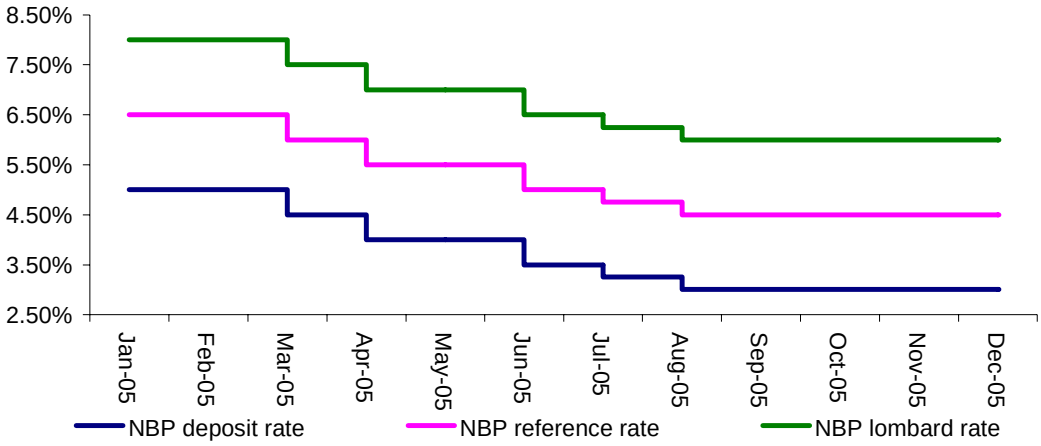
The economic developments in the final months of 2005, namely a marked improvement in the economic climate coupled with inflation maintained at a lower than previously forecast level, induced the MPC to put greater emphasis on potential inflationary impact of such structural changes as stronger competition in product markets, increased labour market flexibility, continued positive trends in labour effectiveness and a weaker than previously expected pass-through of commodity prices to domestic prices.

On the whole, the 2005 economic developments and processes affecting inflation enabled the MPC to gradually ease its monetary policy in pursuit of the inflation target. The interest rates were lowered on five occasions by the total of 200 basis points (from 6.5% to 4.5%). A more expansionary monetary policy supported the rise in economic activity and job creation.

The MPC will continue to analyse thoroughly all changes in Poland's economic and financial situation in order to identify any threats to price stability. Faced with such threats, the MPC will respond adequately with monetary policy instruments at its disposal.

Figure 2

MPC decisions in 2005



Source: NBP data.

3. Monetary policy instruments

3.1 Liquidity surplus in the banking sector

Liquidity surplus in the banking sector in 2005, in contrast to the preceding year, was rising steadily. Its level measured as the average balance of NBP money market bills amounted to PLN 16,699 million and was PLN 11,424 million higher than the average level of money market bills in 2004. The total banking sector liquidity absorption, measured by the scale of issuance of NBP money market bills and the level of deposits held by the Ministry of Finance at the NBP, averaged PLN 21,707 million in 2005 and was PLN 4,240 million higher than in 2004. Moreover, bonds issued by the NBP in 2002 in the amount of PLN 7,816 million with maturity in 2012 are still in circulation.

The banking sector liquidity in particular months of 2005 was affected by changes in liquidity autonomous factors, which were beyond the central bank's control. The first of those factors, which contributed to mounting liquidity surplus, was the NBP's net purchase of currency in the amount of PLN 7,479 million. It was mainly driven by the use of EU funds, which were transferred from the subsidiary (euro) account of the European Union at the NBP to the funds' accounts and subsequently converted into the zloty at the central bank. Other major factors behind the rise in liquidity included a PLN 6,609 million drop in the zloty deposits held by the public sector at the central bank and the transfer of the NBP's profit in the amount of PLN 4,168 million to the central budget. The level of liquidity surplus was limited mainly by an increase in notes and coin in circulation by PLN 3,864 million, increase in the banks' reserve requirements by PLN 945 million and repayment of refinancing loan in the amount of PLN 343 million.

3.2 Monetary policy instruments

3.2.1 Interest rates

The Monetary Policy Council determines the level of NBP interest rates, which, in turn, affects interest rates of monetary policy instruments, i.e. open market operations, required reserves and standing facilities.

The main NBP interest rate is the reference rate. This rate influences the level of interest rates with maturity comparable to the maturity of basic open market operations. The deposit rate and the lombard rate of the NBP determine the fluctuation band of overnight interest rates in the interbank market.

In 2005, the Monetary Policy Council lowered the NBP's interest rates on five occasions. The reference rate was lowered in total from 6.50% to 4.50%, the lombard rate from 8.00% to 6.00% and the deposit rate from 5.00% to 3.00%. The tolerance band for deviations of short-term market rates remained unchanged and amounted to +/- 1.50 percentage point.

Table 1

Decisions of the Monetary Policy Council on the level of key NBP interest rates in 2005

Decision date*	**Decision:**
30 March	- Lowering of the minimum yield on the 7-day open market operations from 6.50% to 6.00% - Lowering of the lombard rate from 8.00% to 7.50% - Lowering of the rediscount rate from 7.00% to 6.50% - Lowering of the deposit rate from 5.00% to 4. 50%.
27 April	- Lowering of the minimum yield on the 7-day open market operations from 6.00% to 5.50% - Lowering of the lombard rate from 7.50% to 7.00% - Lowering of the rediscount rate from 6.50% to 6.00% - Lowering of the deposit rate from 4.50% to 4.00%.
29 June	- Lowering of the minimum yield on the 7-day open market operations from 5.50% to 5.00% - Lowering of the lombard rate from 7.00% to 6.50% - Lowering of the rediscount rate from 6.00% to 5.50% - Lowering of the deposit rate from 4.00% which lay beyond to 3.50%.
27 July	-Lowering of the minimum yield on the 7-day open market operations from 5.00% to 4.75% - Lowering of the lombard rate from 6.5% to 6.25% - Lowering of the rediscount rate from 5.50% to 5.25% - Lowering of the deposit rate from 3.50% to 3.25%.
31 August	- Lowering of the minimum yield on the 7-day open market operations from 4.75% to 4.50% - Lowering of the lombard rate from 6.25% to 6.00% - Lowering of the rediscount rate from 5.25% to 4.75% - Lowering of the deposit rate from 3.25% to 3.00%

Source: NBP data.
*Decisions came into force on the following business day

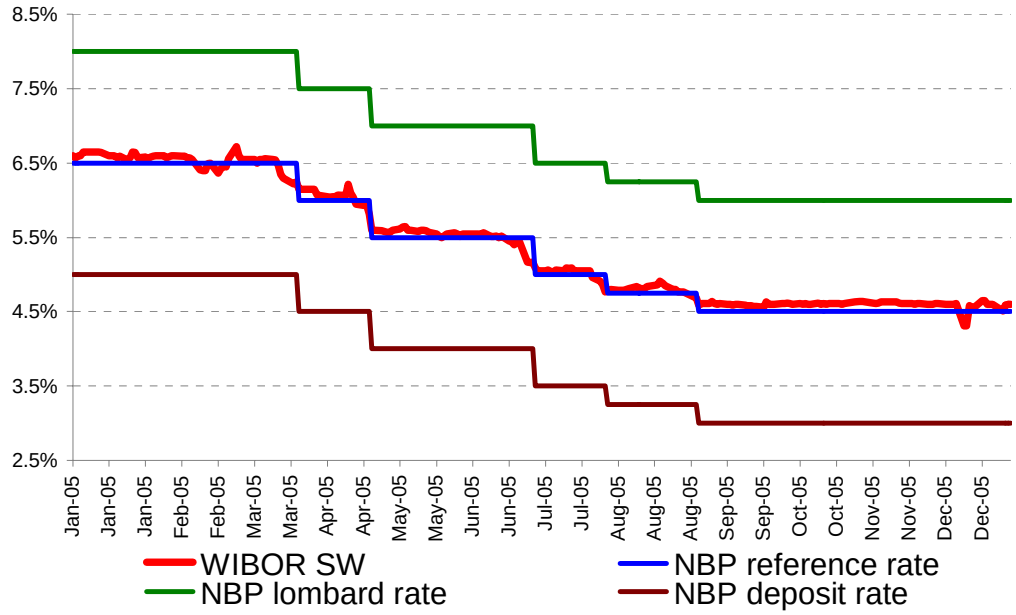
The reference rate cuts were followed by decreases of short-term interest rates in the interbank market. WIBOR SW rate[5], directly influenced by the central bank through open market operations, oscillated around the reference rate within the fluctuation band of the lombard rate and

[5] WIBOR SW (Warsaw Interbank Offered Rate Spot Week) – rate at which banks are ready to grant loans in the unsecured interbank deposit market for the period of 7 days. It is calculated as the arithmetic mean from quotations submitted by participants of the fixing conducted each business day at 11.00 hrs.

the deposit rate of the NBP. The average deviation of this rate from the NBP reference rate in 2005 amounted to 9 basis points and was 7 basis points lower than in the preceding year.

Figure 3

Basic NBP rates and rates of the interbank market WIBOR SW in 2005



Source: NBP data.

At the beginning of 2005, the NBP introduced a new rate POLONIA (Polish Overnight Index Average). It is the average overnight rate weighed with the transaction volume in the unsecured interbank deposit market. The level of POLONIA rate reflects actual interest rates on overnight interbank deposits. The average deviation of the POLONIA rate from the NBP reference rate in 2005 was 26 basis points and that of WIBOR Overnight – 22 basis points (in 2004 – 38 basis points). The NBP publishes this rate at NBPS page at Reuters website daily at 17.00 hrs.

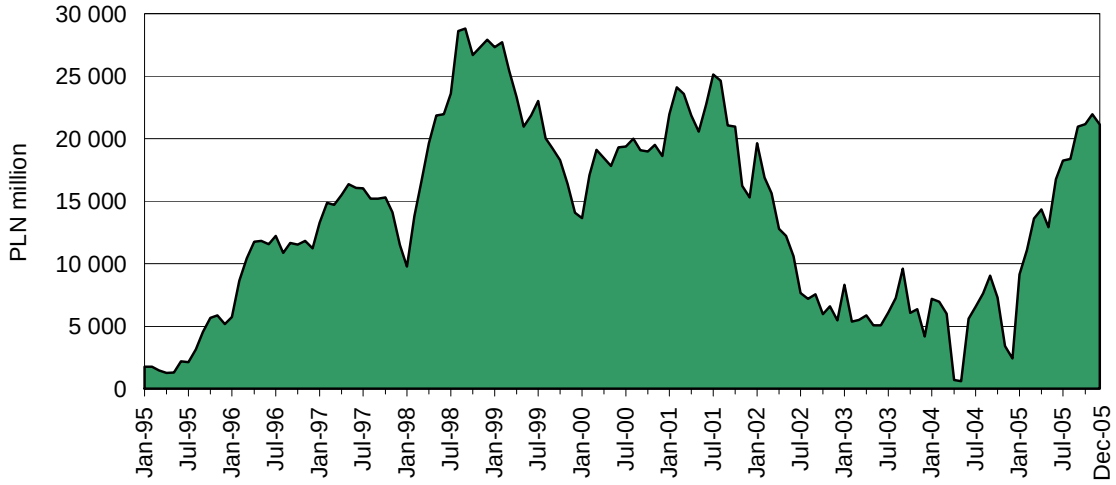
3.2.2 Open market operations

Open market operations are the basic instrument enabling to keep short-term interest rates at a level close to the NBP reference rate, in line with the pursuit of the inflation target set by the MPC. The NBP has recourse to basic, fine-tuning and structural operations.

In 2005, the NBP conducted basic open market operations on a regular basis, once a week, by issuing money market bills. The minimum yield on money market bills was determined by the NBP reference rate. In order to ensure a more precise management of the banking sector liquidity, the NBP shortened the maturity period of issued money market bills from 14 to 7 days. This change brought the NBP monetary policy operational framework closer to the Eurosystem standards. The issuance of the NBP 7-day money market bills helps to curb volatility of short-term interest rates.

Figure 4

Issuance of the NBP money market bills in 1995-2005



Source: NBP data.

In 2005, open market operations were carried out with a group of 14 entities, i.e. 13 banks – money market dealers – and the Bank Guarantee Fund. Dealer banks were selected in accordance with uniform qualification criteria of the Dealer Activity Index (DAI). The banks demonstrated high activity in the market of Treasury securities, NBP money market bills, interbank deposits and FX swaps.

In 2005 there was no need to conduct fine-tuning or structural operations.

Fine-tuning operations may be undertaken to manage unexpected short-term changes in the banking sector liquidity, leading to undesirable – from the point of view of monetary policy – short-term interest rate fluctuations. These operations could take the form of liquidity-providing and

liquidity-absorbing operations (issuance of NBP money market bills, repo transactions and early redemption of NBP money market bills).

Structural operations are aimed to change the long-term liquidity level of the banking sector. The central bank could carry out structural operations through redemption of own bonds (held in commercial bank portfolios), purchase of securities in the secondary market or issuance of own long-term securities.

3.2.3 Required reserves

Required reserves are maintained in the averaged system, which means that banks are obliged to maintain an average balance of funds on accounts with the NBP during the reserve period at the level not lower than the reserve requirement. Such system mitigates the impact of autonomous liquidity factors on market interest rate fluctuations.

2005 brought no changes to the principles of calculation and holding of required reserves. Required reserves are calculated and held in the zloty. The reserve ratio for funds received from repo transactions is 0.0% and 3.5% for other types of liabilities. Required reserves are calculated on the basis of the bank's collected deposits, funds obtained by selling securities and other repayable funds. The funds taken from other domestic banks, as well as funds obtained from abroad for at least two years are excluded from the basis for reserve calculation.

All banks reduce the amount of calculated required reserves by the equivalent of EUR 500 thousand. On 1 May 2004 the Monetary Policy Council set the interest on the required reserve funds at the level of 0.9 bill rediscount rate.

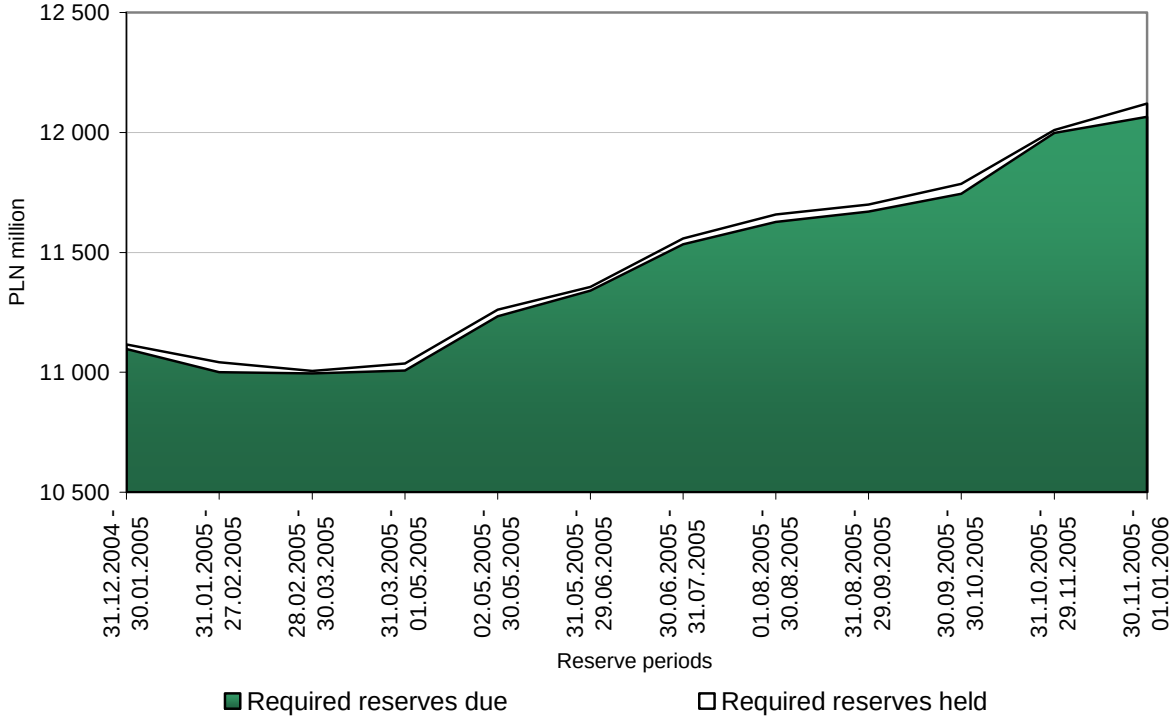
In 2005 one of the banks following a corrective program was partially exempted from holding required reserves on the basis of the 1999 decision of the NBP Management Board. The exempted amount was PLN 421.7 million.

The amount of required reserves was PLN 12,065 million as at 31 December 2005, showing an increase of PLN 968 million (8.7%) as compared with 31 December 2004. The increase in the reserves balance in 2005 was largely driven by an 8.3% increase in deposits constituting the basis for required reserves calculation, which were subject to the positive rate of reserve requirement.

All reserve periods in 2005 marked a slight surplus of the average balance of funds held by banks on accounts with the NBP as compared with the level of the required reserves due. In 2005 this surplus averaged PLN 28 million, i.e. 0.24% of the required reserves, and ranged from 0.09% in March to 0.46% in December.

Figure 5

Changes in the amount of required reserves held and due in 2005



Source: NBP data.

The minimal differences between required reserves held and due in particular reserve periods resulted mainly from: the fact that the interest on required reserve funds was only charged up to the amount of required reserved due, an appropriate asset management at banks and the banks' use of instruments facilitating asset management at the NBP accounts (intraday credit, deposit and lombard facilities). An additional driving force behind the more efficient management of banks' liquidity was the information published daily by the NBP on the balance of funds held by banks on NBP accounts (NBPM page at Reuters website).

3.2.4 Standing facilities

Standing facilities, which include lombard facility and deposit facility, are initiated by commercial banks. They are source for a short-term supplementation of the banking sector liquidity and also allow banks to make overnight deposits of their surplus liquidity with the NBP.

These operations are aimed to prevent fluctuations of the interbank interest rates. The deposit rate constitutes the lower limit for movements in short-term market rates. The lombard facility

interest rate determines the maximum cost of funding with the NBP by setting a ceiling on fluctuations of the inter-bank rates.

In 2005 the total amount of overnight deposits placed by the banks with the NBP equalled PLN 56.9 billion. They were almost two times lower as compared with PLN 113.6 million recorded in the preceding year. The total value of overnight deposit placed by the banks ranged between PLN 200 thousand and PLN 4.5 billion. The average daily level of overnight deposits amounted to PLN 155.9 million as compared with PLN 310 million in 2004. The highest amounts were deposited by the banks on the last days of the required reserve maintenance periods.

In 2005 the banks used lombard facility collateralised with Treasury securities mainly on the last days of the required reserve maintenance periods. The total amount of the lombard facility used throughout the year was PLN 10.3 billion as compared with PLN 8.0 billion in 2004. The average daily use of lombard facility was PLN 28.4 million as compared with PLN 22 million in 2004.

3.2.5 Other operations

Intraday credit facility serves to facilitate settlements and liquidity management in the banking sector during the business day. It is a non-interest bearing credit taken and repaid during the same business day, which is collateralised with Treasury securities. In 2005 the banks used intraday credit facility every business day. The banks' daily debt under credit facility ranged from PLN 4.4 billion to PLN 15.3 billion.

On 7 March 2005 the NBP, through the intermediary of the central bank of Italy, joined the TARGET system of euro settlements. One of the conditions set out in the TARGET Agreement to be met by the NBP was the need to ensure settlement liquidity under SORBNET-EURO. This role is played by the intraday credit in the euro granted to the national RTGS participants. As an intraday-type credit it is repayable by the end of the business day on which it is taken and it is non-interest bearing. It may be collateralised with Treasury bonds subject to MTS-CeTO fixing. Valuation principles of securities – against the amounts of credit granted – are fully compliant with Eurosystem standards. In view of rather insignificant volume of payments transmitted by banks to the SORBNET-EURO system, the use of euro intraday credit in 2005 was very limited. The banks' daily debt at the NBP amounted to EUR 0.3 million. Given a short period of operation of euro intraday credit facility, its use should be expected to extend gradually.

Appendix 1. GDP and final demand

What has to be borne in mind while discussing the path of GDP and its components in 2005 is the fact that these data have been subject to a number of revisions announced by the GUS and thus there may appear differences between the values quoted in the present *Report* and those presented in press releases and *Inflation Reports* published earlier on. Especially in the first half of 2005, the data on national accounts were characterised by large uncertainty connected with the assessment of two developments: the speed of changes in their main components (consumption, investment and stock building) and the impact of net exports on GDP growth rate. These issues attracted a lot of attention during the MPC's meetings, as the quality of these estimates is of great importance for the correct assessment of the current and future economic situation.

In 2005, a 2.2% growth in domestic demand was recorded as compared with 6.0% growth in 2004. The decline in year-on-year growth rate of domestic demand was to a large extent the result of significantly lower stock building than a year before, which led to capital formation rising only 0.5%. The growth rate of total consumption (2.6%) was also lower than in the preceding year. In 2005, the surplus of imports over exports in current prices fell down for the fifth consecutive year.

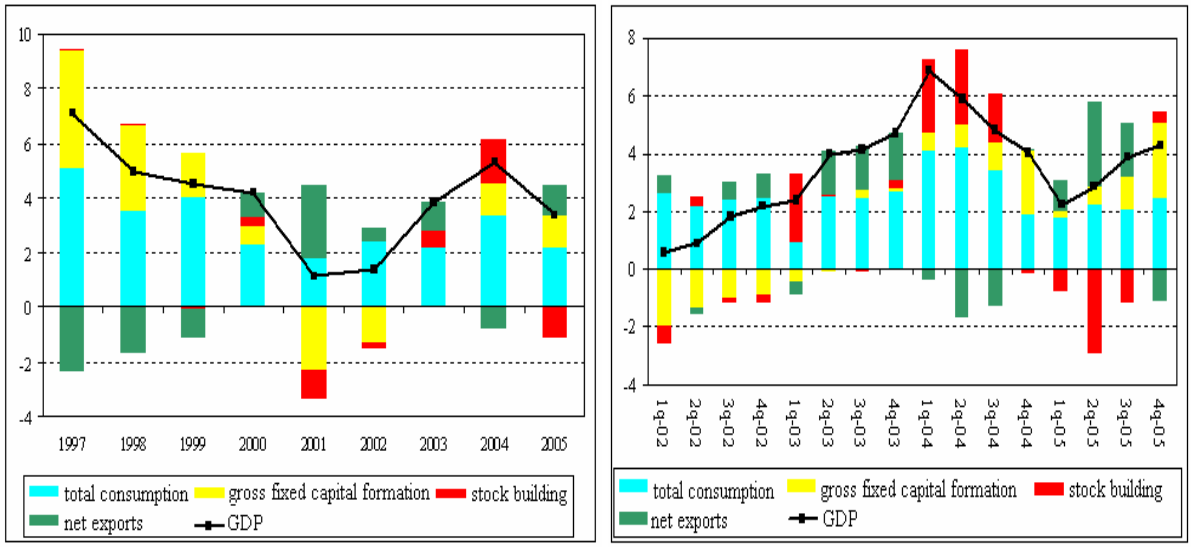
The growth rate of gross value added[6] in 2005 was at 3.2%, while a year before this category recorded a rise of 5.1%. The rise in gross value added in 2005 primarily resulted from a recovery in market services and industry (their contributions to total value added growth amounted to 1.6 percentage points and 1 percentage point, respectively). The scale of increase in industrial output was determined by the manufacturing sector whose growth rate was affected by the rising exports and gradually recovering domestic demand.

The GDP and domestic demand growth rates, and their structure in the years 1997-2005 are presented in Table 2, share of final demand components in GDP growth are shown in Figure 4, while GDP and domestic demand growth rates by quarters are presented in Table 3.

[6] Gross Domestic Product equals the total gross value added increased by the net balance of taxes on products (including import duties) and product subsidies.

Figure 6

Share of final demand components in the GDP growth



Source: NBP calculations based on GUS data.

Table 2

GDP and domestic demand in 1997 – 2005

	1997	1998	1999	2000	2001	2002	2003	2004	2005
	Growth rate								
GDP	7.1	5.0	4.5	4.2	1.1	1.4	3.8	5.3	3.4
Domestic demand	9.3	6.4	5.2	3.1	-1.4	0.9	2.7	6.0	2.2
Consumption	6.3	4.3	5.0	2.8	2.2	2.9	2.5	4.0	2.6
Individual consumption	7.1	5.0	5.4	3.0	2.2	3.3	1.9	4.3	2.0
Capital formation	21.0	13.6	6.0	3.9	-13.4	-7.2	3.3	14.7	0.5
Gross fixed capital formation	21.8	14.0	6.6	2.7	-9.7	-6.3	-0.1	6.4	6.5
Exports	12.2	14.4	-2.5	23.2	3.1	4.8	14.2	14.0	8.1
Imports	21.4	18.6	1.0	15.5	-5.3	2.7	9.3	15.2	4.9
Contribution of net exports to GDP growth (percentage points)	-2.3	-1.7	-1.0	0.9	2.6	0.5	1.1	-0.8	1.1
	GDP structure in current prices								
Domestic demand	103.9	104.8	105.9	106.4	103.7	103.4	102.6	102.0	100.3
Consumption	80.5	79.8	80.7	81.6	82.9	84.8	83.8	81.9	81.3
Capital formation	23.4	25.1	25.2	24.8	20.8	18.6	18.8	20.1	19.0
Net exports	-3.9	-4.8	-5.9	-6.4	-3.7	-3.4	-2.6	-2.0	-0.3

Source: GUS data.

Table 3

GDP and domestic demand dynamics by quarters

	Year	Q1	Q2	Q3	Q4	Q1 -Q4
Gross value added	2005	2.2	2.8	3.7	4.2	3.2
	2004	6.4	5.5	4.8	4.2	5.1
Industry	2005	0.9	2.6	4.3	7.8	4.0
	2004	15.7	13.6	7.6	6.3	10.5
Construction	2005	5.4	11.0	8.2	3.8	6.7
	2004	-0.7	0.1	-0.2	4.9	1.8
Market services	2005	2.3	2.7	4.1	3.6	3.2
	2004	4.8	4.5	4.3	3.2	4.2
GDP	2005	2.2	2.9	3.9	4.3	3.4
	2004	6.8	5.9	4.8	4.0	5.3
Domestic demand	2005	1.1	0.0	1.9	5.4	2.2
	2004	7.0	7.4	5.9	3.9	6.0
Total consumption	2005	2.1	2.6	2.4	3.3	2.6
	2004	4.6	4.9	4.1	2.5	4.0
Individual consumption	2005	1.4	1.4	2.3	2.8	2.0
	2004	5.1	5.1	4.4	2.7	4.3
Gross capital formation	2005	-4.3	-12.0	-0.3	11.4	0.5
	2004	23.5	20.4	14.5	7.9	14.7
Gross fixed capital formation	2005	1.4	4.0	6.5	10.1	6.5
	2004	4.8	4.9	5.3	8.6	6.4

Source: GUS data.

The growth rate of gross investment outlays in 2005 was close to the value recorded one year earlier, while stock increases were considerably lower than a year before. The growth rate of investment outlays was affected by the inflow of structural funds from the European Union.

The growth rate of individual consumption in 2005 was lower than a year ago and 1 percentage point lower than the growth rate of real gross disposable income of households. The improvement of the situation in the labour market was conducive to increased income from paid employment (a rise of 5.5% in current prices), while social benefits remained at levels close to those recorded in 2004. Important sources of financing consumption growth in 2005 included the increasing income from private business activity (nominal growth in operational surplus of 10.6% in relation to 2004) and income from property (a rise of 14.1%). In the aftermath of Poland's accession to the European Union, an important role in income growth was played by payments to farmers under the Common Agricultural Policy.

The year 2005 was the fourth consecutive year which saw a rise in exports and imports, though foreign trade growth rate was not as high as in the previous year. Despite a strengthening exchange rate, the growth of exports outpaced the growth of imports, which resulted in net exports making an over-one-percent contribution to the real GDP growth, after this contribution being

negative in 2004. There was a reduction in the external imbalance as measured with the fall in foreign savings[7] in relation to GDP from approx. 4.3% in 2004 to 1.5% in 2005. To a large extent, this was the result of improved foreign trade balance. The decline in the rate of foreign savings was accompanied by the rise in total savings in relation to GDP from 15.8% in 2004 to 17.6% in 2005.

[7] According to national accounts. The national accounts' data on foreign trade turnover differ from those published in the NBP's balance of payments primarily in that they account for the so-called net processing turnover (in the balance of payments this category is presented in gross terms).

Appendix 2. Prices of consumer goods and services

In 2005, inflation (CPI) decreased from 3.7% y/y in January to 0.7% y/y in December and thus ran below the lower tolerance limit for deviations from the inflation target. From the point of view of inflation processes, the year 2005 may be divided into two sub-periods. For the first five months of 2005, the annual inflation rate remained at a high level, which resulted from price increases in the period preceding Poland's accession to the EU and in the first months of its membership. The gradual fading-out of the statistical base effect[8] led to a decline in annual inflation in the subsequent months. Also conducive to the reduction of the annual price growth rate in the final months of 2005 was a slowdown in the growth rate of the prices of food and non-alcoholic beverages and of fuel prices. Likewise, the appreciation of the zloty exchange rate contributed to lowering annual inflation.

The increase in prices of consumer goods and services of 0.7% y/y at the end of 2005 resulted from:

- a 1.3% y/y drop in the prices of food and non-alcoholic beverages, which lowered the CPI by 0.4 percentage point,
- a 3.4% y/y increase in regulated prices, which raised the CPI by 1.0 percentage point, including the rise of fuel prices of 6.4% y/y, which was conducive to the CPI rising by 0.2 percentage point,
- a rise in the prices of other goods and services of 0.2% y/y, which led to an overall price growth of 0.1 percentage point.

[8] The base effect consisted in that the current price level was referred to a much lower level from the period preceding Poland's EU accession.

Table 4

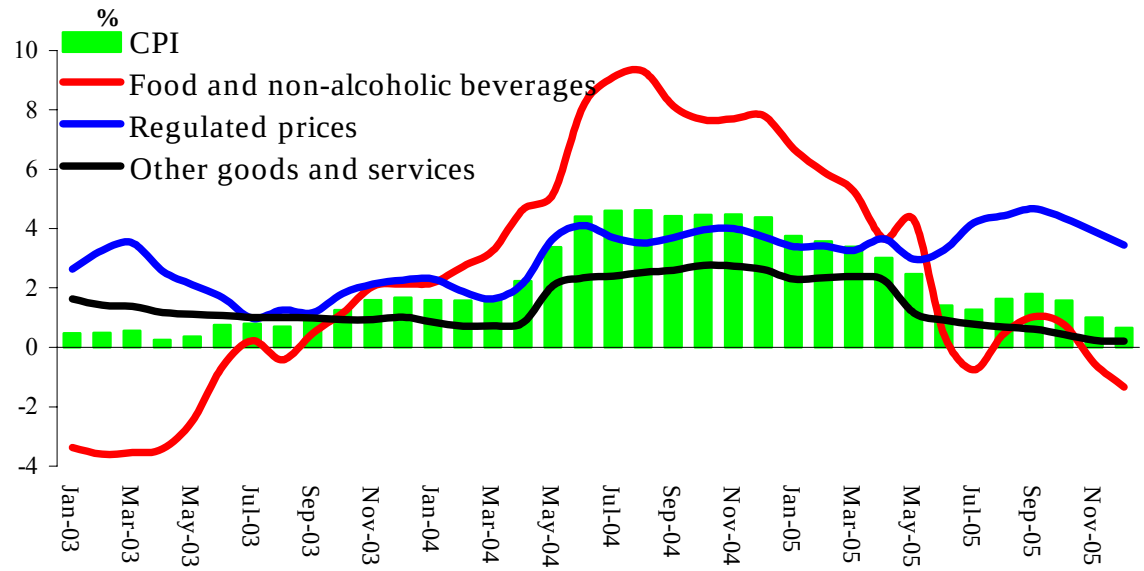
Changes in the main price groups of consumer goods and services in 2004-2005 (y/y)

	CPI	Food and non-alcoholic beverages	Regulated prices	*of which*	Other goods and services	*of which*	
				fuels		*non-food products*	*services*
				Weight structure in %			
2004	**100.00**	**26.95**	**27.28**	*3.8*	**45.77**	*27.29*	*18.48*
2005	**100.00**	**26.94**	**26.62**	*3.84*	**46.44**	*26.81*	*19.63*
				Change in relation to the corresponding period of the previous year (%)			
Jan 2004	**1.6**	**2.2**	**2.3**	5.4	**0.8**	-0.2	2.4
Feb	**1.6**	**2.7**	**1.9**	2.7	**0.7**	-0.3	2.3
Mar	**1.7**	**3.3**	**1.6**	1.3	**0.7**	-0.2	2.1
Apr	**2.2**	**4.6**	**2.2**	4.7	**0.8**	0.0	2.1
May	**3.4**	**5.2**	**3.7**	15.3	**2.1**	1.9	2.4
Jun	**4.4**	**8.1**	**4.1**	17.8	**2.3**	2.1	2.7
Jul	**4.6**	**9.1**	**3.7**	16.1	**2.5**	2.3	2.8
Aug	**4.6**	**9.3**	**3.5**	14.8	**2.5**	2.4	2.9
Sep	**4.4**	**8.1**	**3.7**	15.9	**2.6**	2.4	3.0
Oct	**4.5**	**7.7**	**4.0**	19.2	**2.8**	2.5	3.3
Nov	**4.5**	**7.7**	**4.0**	19.1	**2.7**	2.4	3.4
Dec	**4.4**	**7.8**	**3.7**	17.0	**2.6**	2.2	3.4
Jan 2005	**3.7**	**6.7**	**3.4**	9.9	**2.3**	1.6	3.2
Feb	**3.6**	**5.9**	**3.4**	10.2	**2.3**	1.7	3.2
Mar	**3.4**	**5.3**	**3.3**	9.1	**2.4**	1.5	3.6
Apr	**3.0**	**3.7**	**3.7**	11.9	**2.3**	1.4	3.5
May	**2.5**	**4.3**	**3.0**	6.8	**1.2**	-0.4	3.3
Jun	**1.4**	**0.4**	**3.3**	8.4	**0.9**	-0.6	3.0
Jul	**1.3**	**-0.8**	**4.2**	13.1	**0.8**	-0.7	2.9
Aug	**1.6**	**0.5**	**4.4**	14.7	**0.7**	-0.9	2.8
Sep	**1.8**	**1.0**	**4.7**	16.5	**0.6**	-1.0	2.9
Oct	**1.6**	**0.8**	**4.4**	12.8	**0.4**	-1.1	2.6
Nov	**1.0**	**-0.5**	**3.9**	9.6	**0.2**	-1.2	2.2
Dec	**0.7**	**-1.3**	**3.4**	6.4	**0.2**	-1.2	2.2
Jan-Dec 2004	**3.5**	**6.3**	**3.2**	*12.4*	**1.9**	1.4	2.7
Jan-Dec 2005	**2.1**	**1.6**	**2.9**	10.8	**1.2**	-0.1	2.9

Source: GUS data, NBP calculations.

Figure 7

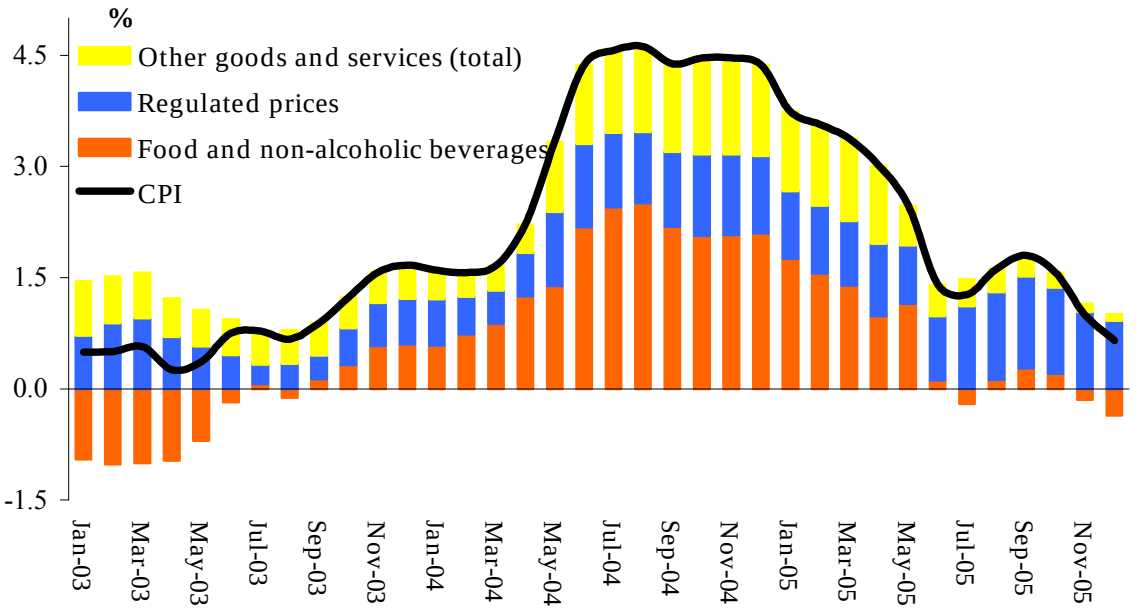
Changes (y/y) in CPI and main price categories in 2003-2005



Source: GUS data, NBP calculations.

Figure 8

CPI breakdown (y/y)



Source: GUS data, NBP calculations.

Prices of food and non-alcoholic beverages

Prices of food and non-alcoholic beverages in December 2005 fell down by 1.3% y/y and thus contributed to a 0.4-percentage point reduction of inflation measured with the CPI, while in the corresponding period of 2004 they had recorded a steep increase (of 7.8% y/y).

For the first five months of 2005 there persisted a high, though falling, tendency in the 12-month index of the prices of food and non-alcoholic beverages: it slid from 6.7% in January to 4.3% in May 2005. In turn, in June 2005, due to the vanishing of the price effects connected with Poland's accession to the European Union and also due to the seasonal drop in food and non-alcoholic beverage prices in the summer months, the annual growth rate of these prices amounted to 0.4%. In subsequent months of 2005, the development of price growth in this group was affected by one-off factors such as a growing supply of pork. The meat price falling tendencies were additionally strengthened by consumers' fears connected with the news of bird flu cases being reported in Europe and the ban on Polish food imports introduced by Russian authorities starting from November 2005. This strengthening effect, however, was mitigated by a rise in exports to EU countries. The decline in prices of food and non-alcoholic beverages was also supported by a high crop harvest in 2005, supplemented with considerable stocks from the 2004 harvest.

Regulated prices

In December 2005 the 12-month growth rate of regulated prices reached 3.4%, i.e. the same level as had been recorded at the beginning of 2005. The most important factor which was conducive to keeping a relative high growth rate of regulated prices over the analysed period was a rise in prices of natural gas (by 11.3% y/y) and fuels (by 6.4% y/y) connected with oil price hikes in the world markets. The combined increase in oil and gas prices accounted for 52% of the rise of regulated prices (1.8 percentage points). Moreover, 2005 marked a considerable increase in prices of tobacco products (by 7.3% y/y), which resulted from the increase of excise tax rate, due to the obligation to harmonise it with the level required in the European Union. The change in the tariffs for electricity raised its prices by 3.4% (y/y). On the other hand, the prices of alcoholic beverages remained unchanged in relation to the preceding year.

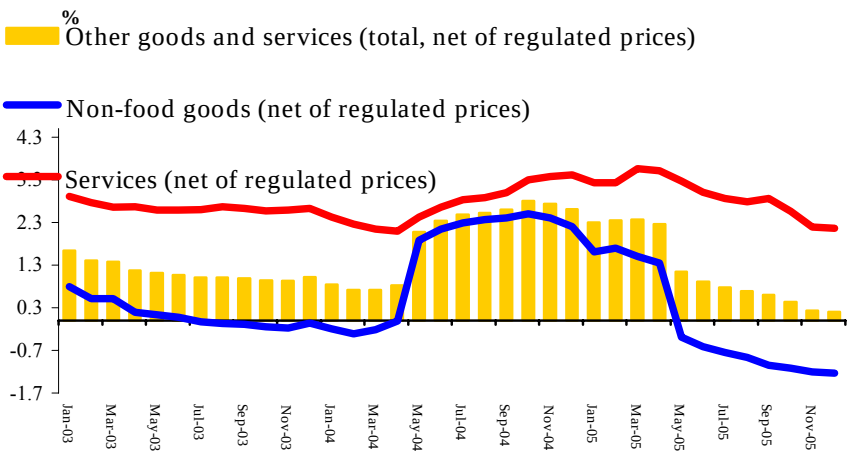
Prices of other consumer goods and services

The prices of the remaining consumer goods and services slid from 2.3% y/y in January 2005 to 0.2% y/y in December 2005. The main reason behind decrease in the annual price dynamics in the group of other goods and services was the vanishing of the previously mentioned base effect. It should be borne in mind that Poland's EU accession brought about an increase in the VAT rate on some goods and services (inter alia construction materials and children's apparel), which led to a one-off price increase reflected in the rise of annual inflation rates persisting up to the end of April 2005.

The growth rate of other prices was primarily decelerated by a drop in the price growth rate in non-food goods. In December 2005, the prices of those goods fell by 1.2% y/y as compared with a rise of 1.6% y/y recorded in January 2005. The most pronounced drop in prices was observed in the following categories: clothes (5.2%), footwear (8.6%), telecommunications equipment (10.9%), audiovisual, photographic and computer equipment (8.9%), passenger cars (6.8%) and household appliances (1.4%). The lower inflation rate in the group of other consumer goods and services was also driven by a lower growth rate of the prices of services, which decreased from 3.2% y/y in January 2005 to 2.2% y/y in December 2005. The main reason for weakening in the growth rate of these prices was a strong decline in the prices of internet services, which was conducive to lowering the annual price growth rate in December 2005 by approx. 0.3 percentage point.

Figure 9

Changes in prices of other consumer goods and services in 2003-2005 (y/y)



Source: GUS data, NBP calculations.

Appendix 3. Balance of payments

The negative current account balance of the balance of payments decreased in 2005 after a temporary deepening in the previous year[9]. In 2005 the current account deficit amounted to EUR 3.5 billion, i.e. it was more than EUR 5 billion lower than in the preceding year. The relation of current account deficit to GDP went down from 4.1% in 2004 to 1.5% in 2005. The improvement in the current account balance in 2005 was primarily driven by a considerable lowering of trade deficit in goods. Likewise, the changes in the balance of the other components contributed to a reduction in the current account deficit.

Figure 10
Current account balance in 1994-2005

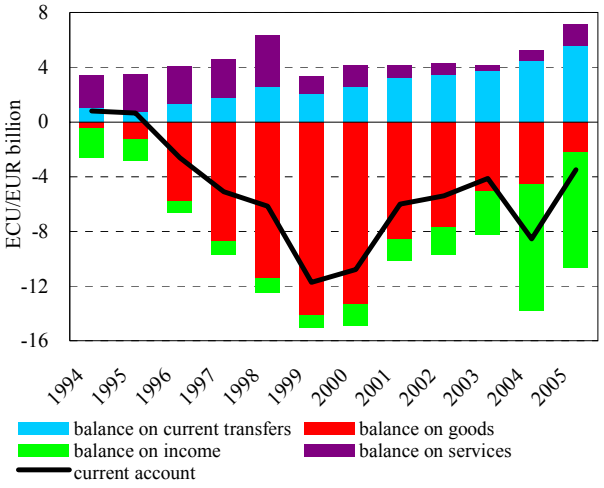
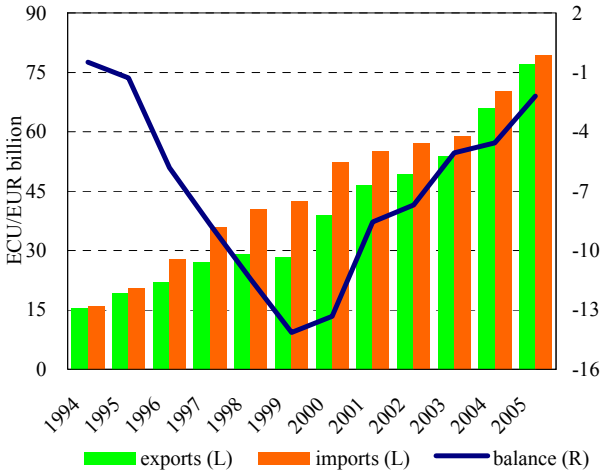


Figure 11
Exports and imports in 1994-2005



Source: NBP data.

The year 2005 was the sixth consecutive year when the Polish foreign trade deficit was shrinking. A strong decrease in the negative balance on goods from EUR 4.6 billion to EUR 2.2 billion in 2005 was the reflection of the relatively large, in comparison to the previous years, difference between the growth rates of exports and imports[10].

[9] The data presented in the *Report on the implementation of monetary policy guidelines in 2004* pointing at an improvement in the current account balance were subsequently revised in September 2005 due to the fact that the balance of payments statistics started to account for reinvested profits from direct investment. Before the revision, the current account deficit in 2004 amounted to EUR 3.0 billion, while after it – EUR 8.5 billion.

[10] According to NBP data the euro value of exports increased in 2005 by 17.1%, while the value of imports rose by 12.6% in comparison to the previous year (compared with 22.3% and 19.5% in 2004).

In 2005 the rise in the value of exports (expressed in the euro) remained relatively high, though it fell slightly in relation to 2004[11].

In 2005 the Gross Domestic Product in the euro area, which accounted for 54% of Polish export, increased by 1.3% as compared with 2.1% in the previous year. The rise in the demand of the export sector in the euro area, accompanied with rising tendencies visible in this region's investment demand, contributed to raising Polish exports to the euro area in the second half of 2005. This is mainly due to the fact that Polish exports to the euro area are dominated by supply goods, which are used as intermediate products and components in the export production of the euro area.

After a significant appreciation of the zloty in 2004, in 2005 the nominal zloty exchange rate continued to strengthen – the average annual exchange rate of the zloty was 11.2% stronger in relation to the euro, and 11.5% – in relation to the US dollar. An appropriate measure to assess changes in the competitive position of producers in international markets is an index reflecting production costs. Moreover, most of trade has so far involved the products of the manufacturing industry. For these reasons, the real exchange rate deflated with unit labour costs in manufacturing is the appropriate indicator of the international competitive position of producers. In 2004 Q1–2005 Q4 the real effective exchange rate of the zloty deflated with unit labour costs in manufacturing appreciated less than the nominal rate, i.e. by 5.3%. The real zloty exchange rate appreciation was smaller in this period than the real appreciation of the Czech and Slovak koruna and Hungarian forint, which appreciated by 13.6%, 8.9% and 6.6%, respectively.

The continuation of a relatively high growth rate of exports, despite lower import demand in major markets and in spite of the zloty appreciation, also resulted from the continuation of the structural changes underway in the Polish economy. The changes are connected with the growing importance of foreign direct investment in Polish exports. This leads to an ever increasing participation of the Polish economy in the international division of labour. The growing contribution of corporate trade[12] makes exports increasingly less sensitive both to demand changes and exchange rate fluctuations.

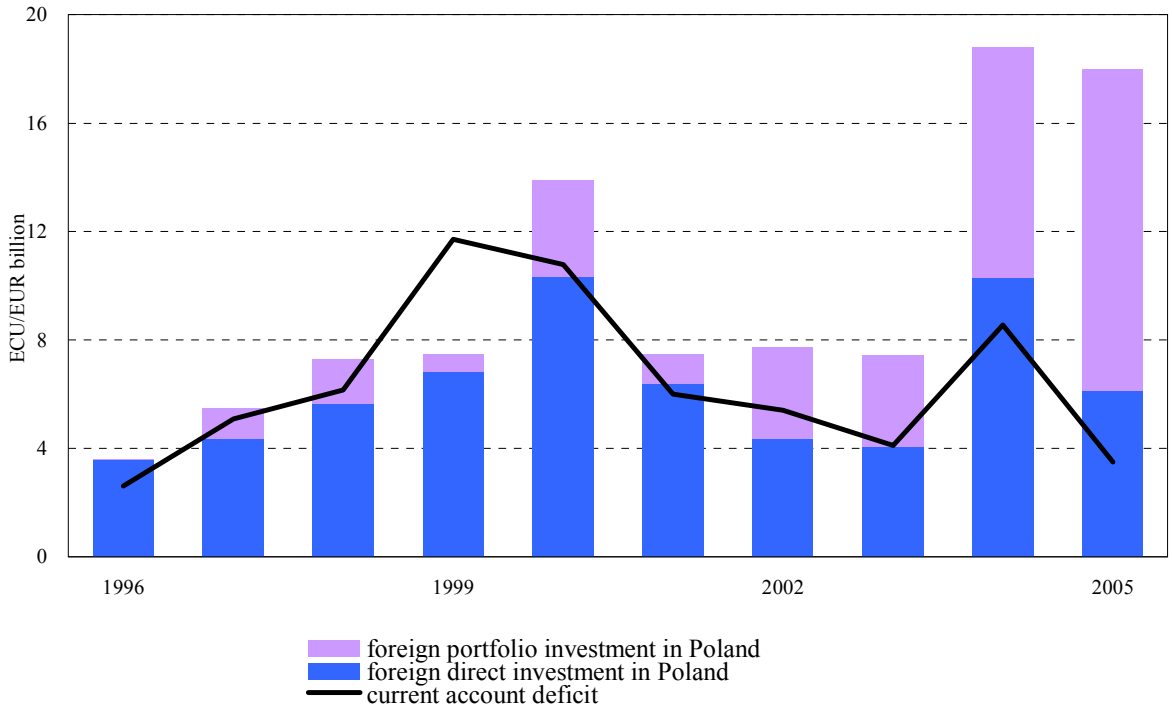
[11] According to GUS data the growth rate of export volume in year-on-year terms fell from 18.2% in 2004 to 10.8% in 2005. The impact of the lowered growth rate of export volume was partly offset by the acceleration in the growth of euro transaction prices from 6.3% to 7.9%, respectively. In turn, the growth rate of import volume declined from 17.3% in 2004 to 4.6% in 2005, while the increase of import prices (of 8.0%) proved considerably higher in relation to the previous year (0.8%).

[12] Corporate trade consists in exporting and importing goods between Polish branches of foreign corporations and the parent companies or branches located in other countries.

The 2005 rise in the value of imports expressed in the euro was strongly affected by the rise in transaction prices, which was caused, primarily, by the increased fuel prices in international markets[13]. The impact of high fuel prices on the value of imports was partly weakened as a result of a lower increase in the unit prices of investment and consumer goods. This was caused by a larger contribution of countries with lower production cost (primarily China) in total Polish imports. The rise in investment demand that occurred in the second half of 2005 was conducive to accelerating the growth of investment imports.

Figure 12

Current account deficit versus foreign investment inflow in 1996-2005



Source: NBP data.

2005 marked an improvement in all major financial indicators reflecting the external equilibrium of the Polish economy. The relation of current account deficit and trade deficit in goods to GDP declined in relation to the period 2002-2004. The current account deficit was in 2004 and 2005 entirely financed by in the inflow of capital in the form of foreign direct investment, which is considered safe.

[13] The value of the import of crude oil to Poland (expressed in the euro) rose in 2005 by 45%. This resulted mainly from the rise in the price of oil imported to Poland of 42.3%, while the volume of supplies increased by only 1.9% in relation to the previous year.

Table 5

Main indicators of external equilibrium

Warning indicator	2002	2003	2004	2005
Current account balance / GDP	-2.7%	-2.1%	-4.2%	-1.5%
Trade balance / GDP	-3.9%	-2.7%	-2.2%	-0.9%
Direct investment / current account balance	76.7%	92.5%	112.9%	141.4%
(Current account balance+capital balance–direct investment) / GDP	-0.6%	-0.2%	0.9%	0.9%
Foreign debt servicing / exports of goods and services	28.2%	30.7%	35.4%	32.5%
Foreign reserves expressed in terms of monthly imports of goods and services	5.5	4.8	4.0	4.8

Source: NBP calculations.

Appendix 4. Money supply

The year 2005 brought acceleration in the growth of households' indebtedness in the banking system. The fastest growth was observed in housing loans, particularly foreign currency ones, but the growth rate of consumer loans also stepped up considerably. There was also a rise in the indebtedness of enterprises, but the scale of this increase was moderate, particularly if compared with the growth rate of investments recorded in 2005. On the other hand, there was a continuously high growth in enterprises deposits at banks, which may point to the limited credit needs of enterprises. The bank deposits of households increased moderately. At the same time, however, there was a surge in the level of financial savings held by households in forms alternative to bank accounts, primarily in investment fund units.

Loans to households

In 2005 the volume of bank loans to households increased by PLN 26.4 billion (24.0%) in nominal terms. Some of those loans were taken in foreign currencies and so changes in the zloty exchange rate had an effect on the growth rate of the volume of lending to this sector. In comparable terms, after adjusting for exchange rate fluctuations, the increase in loans to households in 2005 amounted to PLN 27.8 billion (25.0%). The rising trend in the annual growth rate of loans to households was disrupted twice in 2005 – in May and October. In the first case, a one-off increase in the growth rate resulted from the fact that households took loans for the purchase of the shares of LOTOS fuel company sold by the State Treasury in a public offering. In the second case, a significant one-off growth rate drop was caused by the base effect (in October 2004 household indebtedness had risen considerably as a consequence of the privatisation offer of Bank PKO BP and a major publishing house WSiP).

The breakdown of household loan growth in 2005 reveals that housing loans were the main growth component. At the same time, the contribution of consumer loans was only slightly smaller.

The volume of housing loans increased by PLN 14.6 billion in nominal terms (40.8%), which represents PLN 15.8 billion (42.2%) after adjusting for the zloty exchange rate fluctuations. Housing loans denominated in foreign currencies were more popular than zloty denominated loans, which resulted from their lower interest rates and intensified marketing activities by commercial banks, which were persuading borrowers to take loans particularly in Swiss francs. The volume of housing

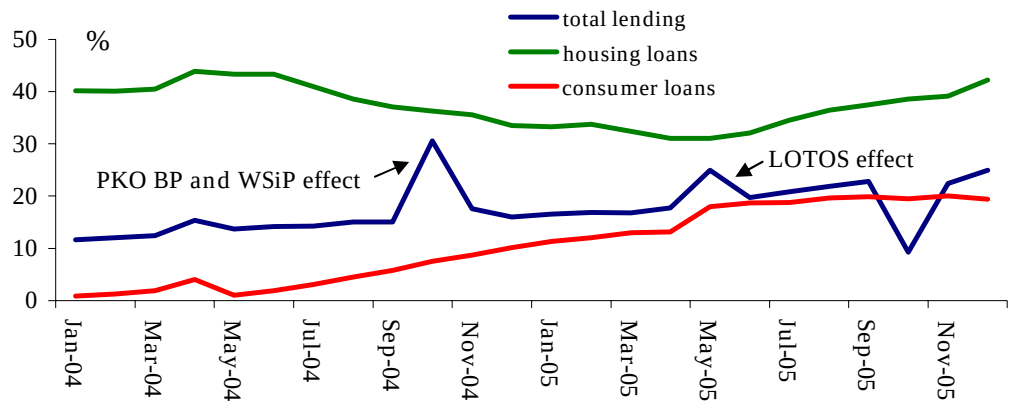
loans (in comparable terms, i.e. after adjusting for the zloty exchange rate fluctuations) rose in 2005 by PLN 13.0 billion (61.3%), while the volume of zloty denominated housing loans – by PLN 2.8 billion (18.2%).

In 2005 the volume of consumer loans increased by PLN 10.2 billion (19.0%) in nominal terms. After adjusting for the zloty exchange rate fluctuations this amounted to PLN 10.4 billion (19.4%). The rising trend in consumer loans started in the mid-2004 and continued in 2005. Its roots lie in the improvement of financial standing of households stemming from the acceleration of economic growth over the past two years accompanied by positive developments in the labour market.

These developments also affected the structure of bank indebtedness of households. The share of housing loans granted to households in the total value of bank loans to that sector amounted to 37.1%, while the contribution of consumer loans was 46.9%. In December 2004 these shares were 32.7% and 48.9%, respectively.

Figure 13

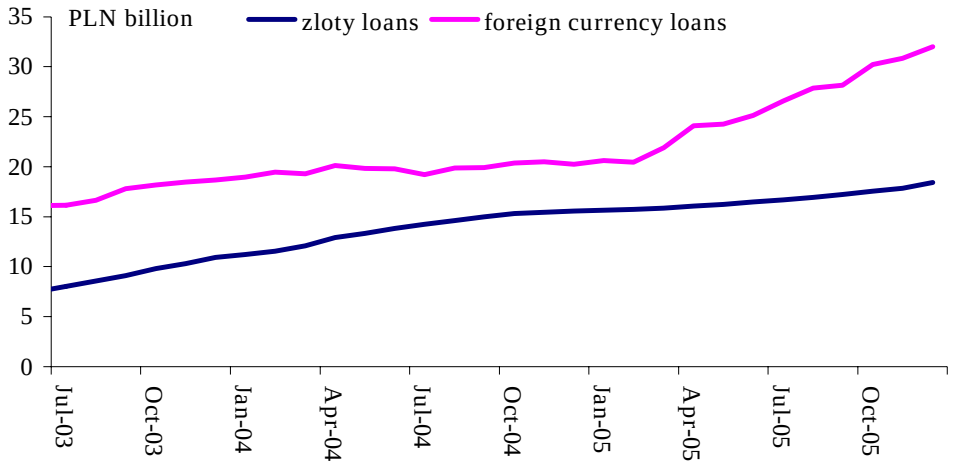
Loans to households, annual growth rate, data adjusted for the impact of exchange rate fluctuations



Source: NBP data.

Figure 14

Housing loans to households



Source: NBP data.

Loans to enterprises

In 2005 the indebtedness of enterprises in the Polish banking sector rose by PLN 3.0 billion, while foreign debt of enterprises increased by EUR 3.1 billion in the same period.

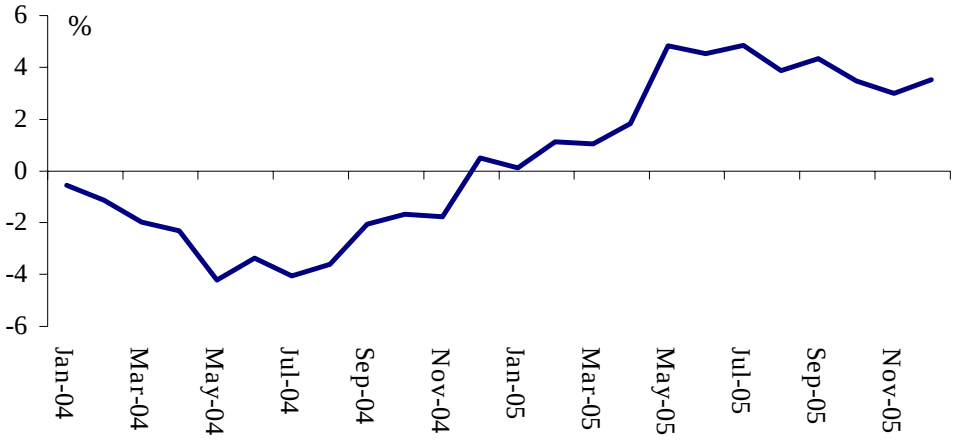
The volume of bank loans to enterprises increased in 2005 by PLN 3.0 billion (2.6%) in nominal terms. In comparable terms, after adjusting for exchange rate changes, this increase was even bigger, i.e.: PLN 4.1 billion (3.5%). In the first half of the year, the annual growth rate was stepping up steadily, and in the second half – it stabilised at the level of approx. 4%.

Despite the observed economic recovery, the growth rate in corporate loans in 2005 was relatively low. This may reflect very good financial results of the sector in 2004 and 2005. With a large amount of own funds at their disposal, enterprises are able to fund their activity with only a limited use of bank loans.

The foreign debt of enterprises rose from EUR 42.3 billion at the end of 2004 to EUR 45.4 billion at the end of 2005, i.e. by 7.3%. There was a continuation to the dynamic growth of trade loan debt (18.0% y/y), reflecting Poland's growing foreign trade volume. The other debt categories, including debt securities issued by Polish companies, were growing at a pace consistent with the domestic debt growth (6.5% y/y).

Figure 15

Bank loans to enterprises, annual growth rate, data adjusted for exchange rate fluctuations



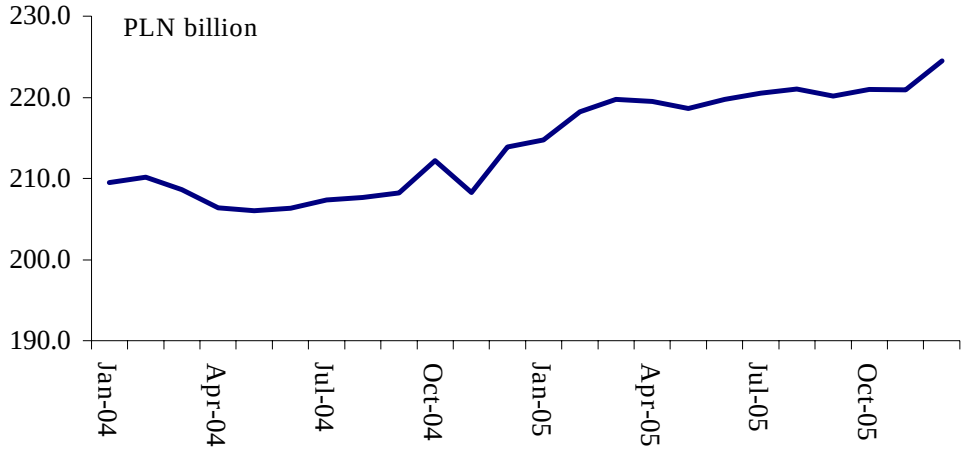
Source: NBP data.

Deposits of households

In 2005 the volume of bank deposits of households increased by PLN 11.0 billion (5.2%) in nominal terms. After adjusting for exchange rate fluctuations, the rise in deposits amounted to PLN 10.6 billion (5.0%). The increase in households' deposits occurred in two stages: at the beginning of 2005 and in December. In the first period, from January through March 2005 the deposits rose by PLN 5.8 billion, and in December – by PLN 3.6 billion. The remaining part of the deposit increase, i.e. approx. PLN 1.2 billion, was evenly spread over the other months.

Figure 16

Deposits of households, volumes adjusted for the impact of exchange rate fluctuations



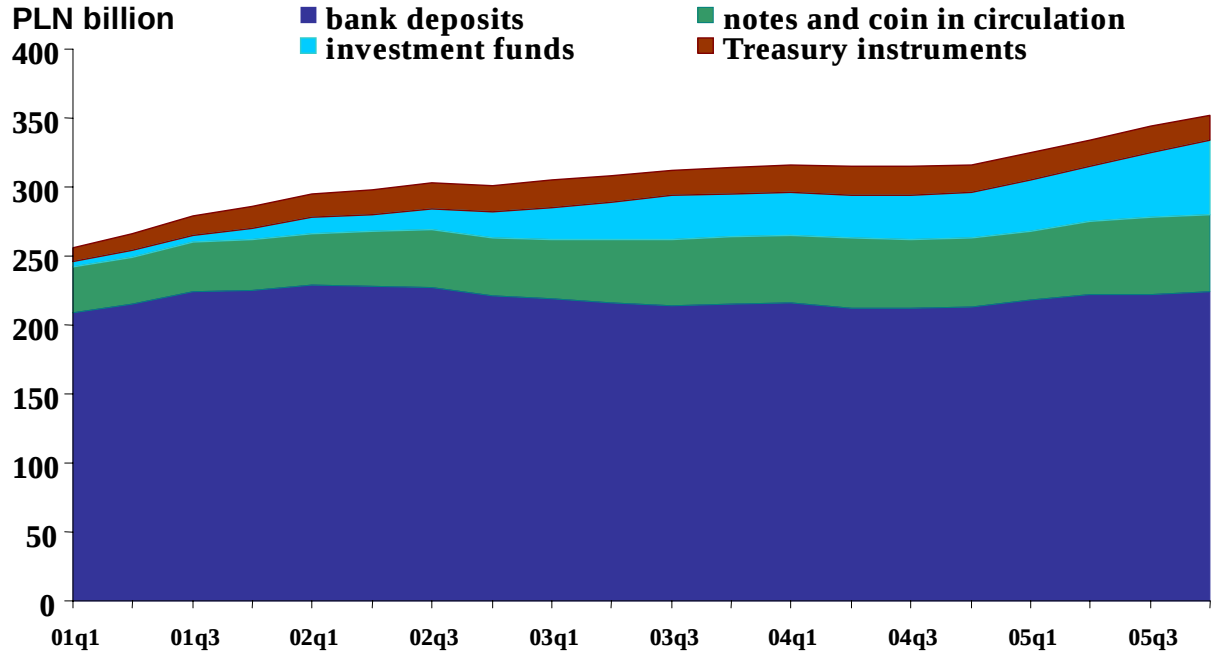
Source: NBP data.

Households deposit their financial savings also outside the banking sector, mainly in the form of investment fund units and Treasury bonds, which are close substitutes of bank deposits. In 2005 the growth pace of households' financial assets held in non-banking financial institutions was well ahead of that in bank deposits. The value of investment fund units, deposits at Credit Unions and Treasury securities held by households rose during the year by approx. PLN 20.9 billion, i.e. 35.5%[14]. Alternative forms of saving owe their popularity to the fact that their potentially attainable yields significantly exceed interest accrued on bank deposits. The structure of household savings is undergoing changes leading to a gradual reduction of bank deposit share (Figure 15). The observed diversification of assets, particularly the shrinking significance of bank deposits, makes the structure of financial assets of Polish households similar to that observed in many developed countries.

[14] NBP data.

Figure 17

Selected financial assets of households[15]



Deposits of enterprises

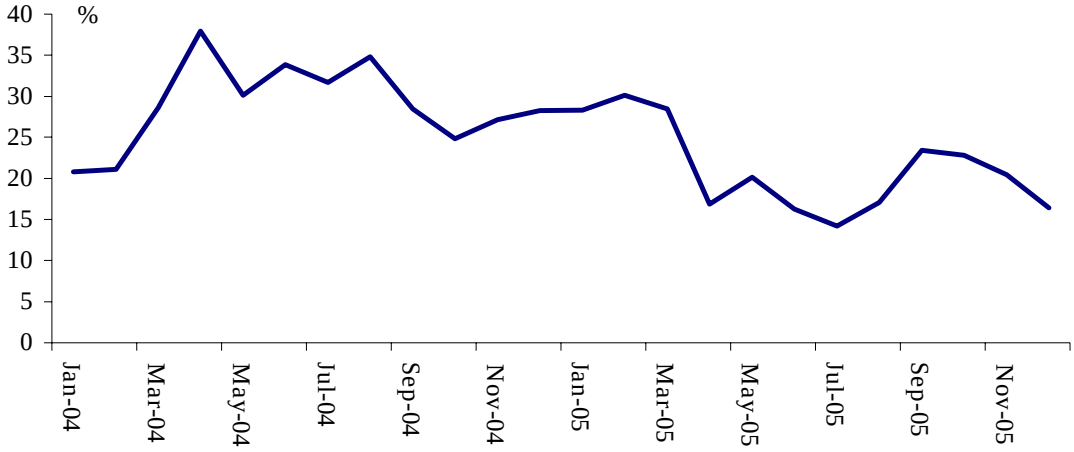
In 2005 bank deposits of enterprises were building up dynamically. Nominal growth amounted to PLN 14.6 billion (17.0%), i.e. PLN 14.5 billion (16.4%) in adjustment for the impact of exchange rate fluctuations. During the year the annual growth rate of corporate deposits was gradually decreasing – in the first months of 2005 it settled at the level of approx. 30%, while in December it fell to 16.4%.

A rapid growth in corporate deposits was related to good financial results of enterprises. The growth rate of deposits should be falling together with the acceleration of investments funded mainly from own funds.

[15] Figure 17 does not include all types of financial assets of households, particularly shares in their possession.

Figure 18

Deposits of enterprises, annual growth rate, data adjusted for the impact of exchange rate fluctuations



Source: NBP data.

Monetary aggregates

The above described changes in loans and deposits found reflection in the developments in monetary aggregates. The annual growth rate of broad M3 money remained at the level of approx. 10% throughout the year. In December 2005 it stood at 10.4% in nominal terms (9.7% in real terms, deflated with the current CPI). Narrow money M1 was growing faster than M3. The annual growth rate of M1 at the end of the year reached 18.3% in nominal terms (17.5% in real terms, deflated with the current CPI). After a period of decline in 2004, the growth rate of notes and coin in circulation in 2005 was growing to reach the value of 12.7%, in nominal terms in December (11.9% in real terms, deflated with the CPI). The temporary drop in the growth rate of notes and coin in circulation in 2004 resulted from the shift in the structure of the narrow money supply (M1).

Table 6

Money supply in 2004 and 2005

	as at 31 Dec 2004	as at 31 Dec 2005	Growth	Annual nominal growth rate	Annual real growth rate*
	PLN million	PLN million	PLN million	%	%
M1 money supply	175 815.4	208 033.6	32 218.2	18.3	17.5
M3 money supply	373 409.1	412 346.0	38 936.9	10.4	9.7
Notes and coin in circulation	50 710.2	57 154.7	6 444.5	12.7	11.9
Deposits and other liabilities	315 672.3	345 340.0	29 667.6	9.4	8.6
Households	196 524.5	203 549.1	7 024.6	3.6	2.9
Non-monetary financial institutions	11 395.8	15 180.6	3 784.8	33.2	32.3
Non-financial corporations	85 099.9	99 415.6	14 315.7	16.8	16.0
Non-profit institutions serving households	8 937.7	9 708.1	770.4	8.6	7.9
Local governments	11 320.7	13 702.0	2 381.2	21.0	20.2
Social security funds	2 393.6	3 784.5	1 390.9	58.1	57.0
Other M3 components	7 026.6	9 851.4	2 824.8	40.2	39.2

* Deflator: consumer goods and services price index (CPI)

Source: NBP data.

Table 7

Claims and liabilities of the banking system in 2004 and 2005

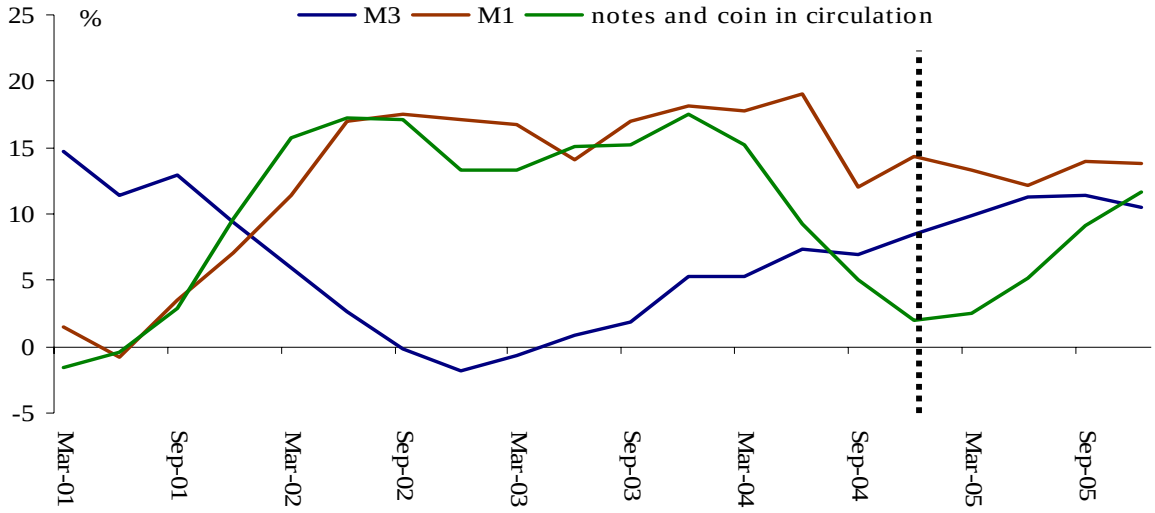
	as at 31 Dec 2004	as at 31 Dec 2005	Growth	Annual nominal growth rate	Annual real growth rate*
	PLN million	PLN million	PLN million	%	%
Total claims	272757.5	303300.3	30542.8	11.2	10.4
Households	114996.9	141251.8	26254.9	22.8	22.0
Non-monetary financial institutions	15564.6	15946.7	382.1	2.5	1.7
Non-financial corporations	123328.5	126459.9	3131.4	2.5	1.8
Non-profit institutions serving households	714.9	835.9	121.0	16.9	16.1
Local governments	13349.3	14253.8	904.6	6.8	6.0
Social security funds	4803.4	4552.2	-251.2	-5.2	-5.9

* Deflator: consumer goods and services price index (CPI)

Source: NBP data.

Figure 19

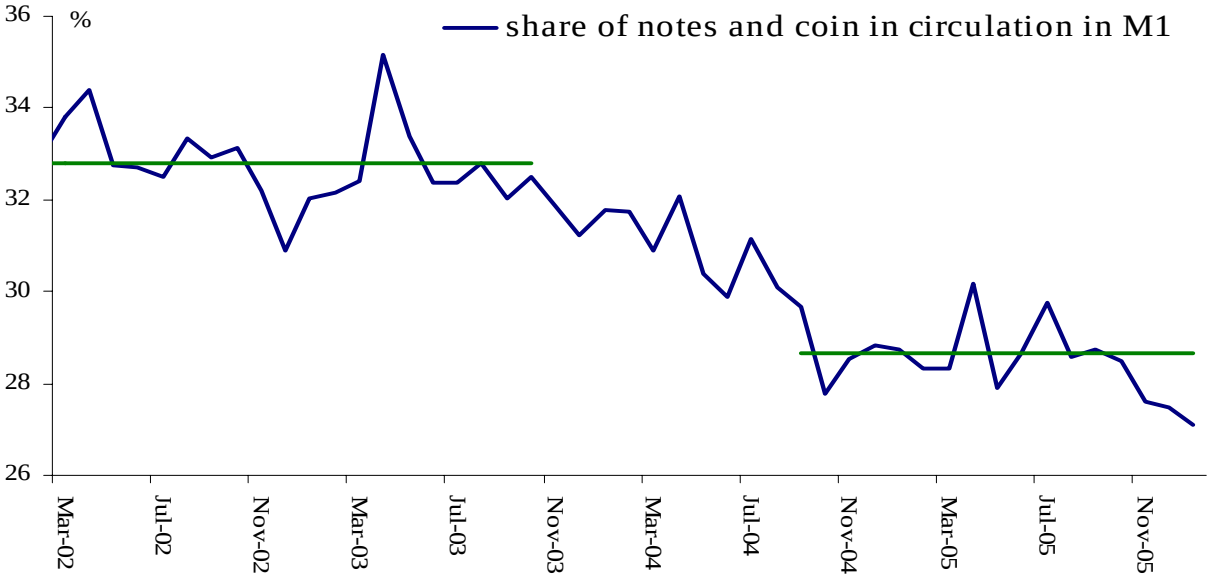
Monetary aggregates M3 and M1, notes and coin in circulation, annual growth rates



Source: NBP data.

Figure 20

Share of cash money in M1 monetary aggregate



Source: NBP data.

Appendix 5. Inflation projections of the NBP

Inflation Report prepared quarterly by the MPC, together with its attached inflation projection prepared by the NBP's economists is a very important instrument of communication with market participants. The *Inflation Report* is a document presenting the Monetary Policy Council's assessment of the current and future macroeconomic developments influencing inflation. It is worth pointing out that due to the change in the time of releasing GUS data on national accounts, the publication schedule of *Inflation Reports* was modified in 2005. As a result, after the February, May and August *Reports*, the preparation of the next projection and *Report* was postponed from November 2005 to January 2006.

In view of the need to account for delays in the transmission mechanism of monetary policy impulses, in pursuing its forward-looking policy, the MPC made use of, among other things, inflation projections. At the same time, the inclusion of projection results and the assessment of the balance of factors influencing future inflation into *Inflation Reports* warranted the transparency of the implemented monetary policy.

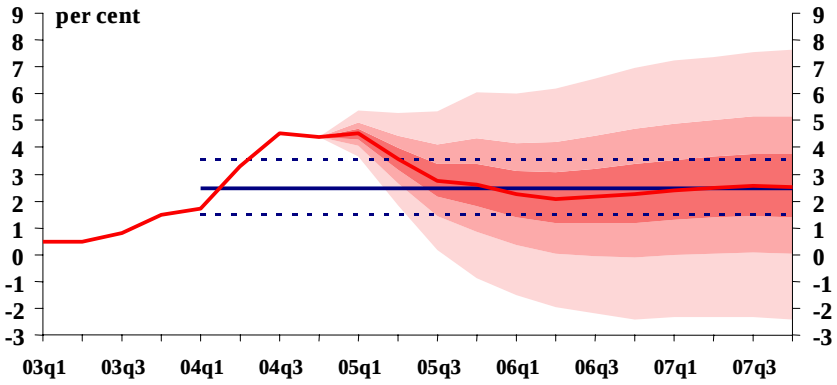
Ever since August 2004 *Inflation Reports* have included the results of inflation projections (and since May 2005 – also GDP projection results). The projection presented in Chapter 4 of the *Report* is prepared with the use of an econometric model of the Polish economy, called ECMOD[16], by a team of NBP economists. The projection horizon encompasses the year of its preparation and two subsequent calendar years. The inflation projection is one of the inputs to the Monetary Policy Council's decision-making process on NPB interest rates.

The below presented fan charts depict the results of projections published in 2005. Fan charts only reflect the main sources of uncertainty (e.g. uncertainty connected with exogenous assumptions). The types of uncertainty not accounted for in the fan chart are discussed in detail in projection descriptions in *Inflation Reports* (see Box below).

[16] Description of the model was published in: Fic T., Kolasa M., Kot A., Murawski K., Rubaszek M., Tarnicka M., "Model gospodarki polskiej ECMOD"[ECMOD – a model of the Polish economy], *Materiały i Studia*, NBP, No. 194, May 2005.

Figure 21

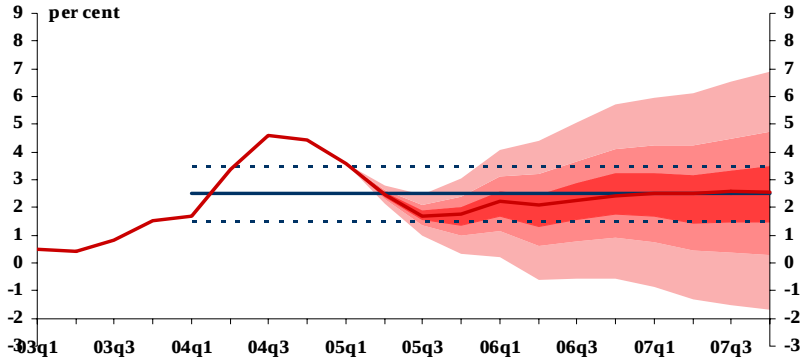
Central inflation projection, fan chart of future inflation path and inflation target of the MPC – February 2005



Source: *Inflation Report*, February 2005, NBP.

Figure 22

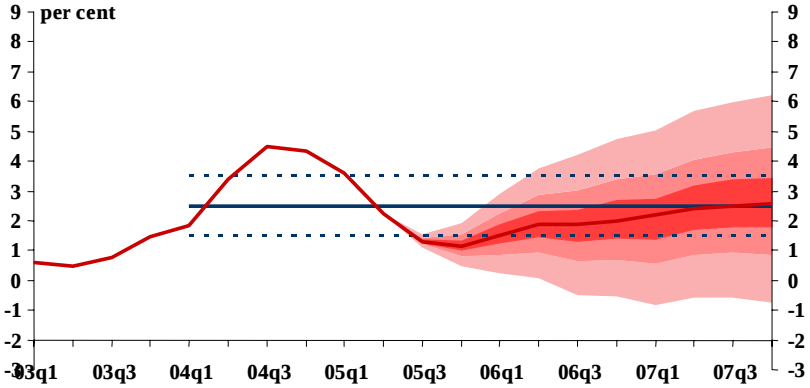
Central inflation projection, fan chart of future inflation path and inflation target of the MPC – May 2005



Source: *Inflation Report*, May 2005, NBP.

Figure 23

Central inflation projection, fan chart of future inflation path and inflation target of the MPC – August 2005



Source: *Inflation Report*, August 2005, NBP.

How should fan charts be interpreted?

Every projection of future values of economic variables is subject to risk and uncertainty. Central banks present the size and scope of quantifiable inflation projection risk through the use of fan charts. The width of the "fan" corresponds to the overall level of risk, which usually changes from quarter to quarter. The further ahead, the wider it gets, as the uncertainty of the assessments of the future usually grows proportionally to the length of the time horizon.

In inflation projections prepared by the NBP, probability distribution of their possible realisations is determined for each quarter. The most probable realisations, i.e. the mode of the distributions in particular quarters, are adopted as the central projection. At the same time, 30-percent confidence intervals are constructed around distribution medians. These constitute the central band of the fan, indicated with the darkest shade. Thus, the probability of inflation settling within this band is equal to 30%. Next the fan is expanded on both sides so that the probability of the variable running between the extended boundaries increases by another 30 percentage points – 15 points on the above, and 15 on the below. The subsequent extensions create successive bands of the fan marked with increasingly lighter shades. The entire fan represents a 90-percent band of confidence around the medians – there is a 90-percent probability of inflation running within the fan.

For example, the chart in Figure 23, which refers to the August inflation projection, shows that the probability of inflation staying in 2006 Q1 within the tolerance band around the inflation target amounted to approx. 52%, the probability of higher inflation was equal to approx. 1%, whereas the probability of lower inflation could be assessed at approx. 47%. For 2007 Q1 these probabilities corresponded to 42%, 20% and 38%, respectively. Except for 2006 Q3 and 2007 Q1, the inflation projection was characterised by positive asymmetry, which reflects a greater probability of inflation running above the central path than below it.

Fan charts depict the uncertainty associated with assumptions exogenous to the projection model and connected with the inaccuracy of the model's statistical mapping of the relations holding between macroeconomic variables. Fan charts, however, do not account for all kinds of uncertainty, such as the uncertainty related to possible changes in the structure of the Polish economy, the approximate nature of any replication of economic reality by a model or the potential instability of estimated relationships in time. A detailed discussion of the sources of uncertainty not accounted for in the fan chart can be found in *Inflation Reports*.

Appendix 6. Voting records of Monetary Policy Council members on motions and resolutions in 2005

Date	Subject matter of motion or resolution	MPC decision	Voting of the Council members
26 January 2005	Motion to change the monetary policy bias from tightening to neutral	The motion was not passed (due to tie vote, the vote of the Chairman prevailed)	**For:** J. Czekaj M. Pietrewicz S. Nieckarz A. Sławiński A. Wojtyna **Against:** L. Balcerowicz D. Filar M. Noga S. Owsiak H. Wasilewska-Trenkner
25 February 2005	Motion to change the monetary policy bias from tightening to neutral	The motion did not receive a majority vote	**For:** L. Balcerowicz D. Filar M. Noga H. Wasilewska-Trenkner **Against:** J. Czekaj S. Nieckarz S. Owsiak M. Pietrewicz A. Sławiński A. Wojtyna
25 February 2005	Motion to change the monetary policy bias from tightening to easing	The MPC changed its monetary policy bias from tightening to easing	**For:** J. Czekaj S. Nieckarz S. Owsiak M. Pietrewicz A. Sławiński A. Wojtyna

			Against: L. Balcerowicz D. Filar M. Noga H. Wasilewska-Trenkner
30 March 2005	Resolution on the level of reference rate, lombard rate, deposit rate and rediscount rate of the National Bank of Poland	The MPC reduced the level of all interest rates by 0.5 percentage point	**For:** L. Balcerowicz J. Czekaj S. Nieckarz M. Noga S. Owsiak M. Pietrewicz A. Sławiński H. Wasilewska-Trenkner A. Wojtyna **Against:** D. Filar
26 April 2005	Resolution to approve the Annual Financial Report of the National Bank of Poland prepared as of 31 December 2004		**For:** L. Balcerowicz J. Czekaj D. Filar S. Nieckarz M. Noga S. Owsiak M. Pietrewicz A. Sławiński H. Wasilewska-Trenkner A. Wojtyna
27 April 2005	Resolution on the level of the reference rate, lombard rate, deposit rate and rediscount rate of the National Bank of Poland	All interest rates reduced by 0.5 percentage point	**For:** L. Balcerowicz J. Czekaj D. Filar S. Nieckarz M. Noga S. Owsiak M. Pietrewicz A. Sławiński H. Wasilewska-Trenkner A. Wojtyna

27 April 2005	Motion to change the monetary policy bias from easing to neutral	The MPC changed its monetary policy bias	**For:** L. Balcerowicz J. Czekaj D. Filar S. Nieckarz M. Noga S. Owsiak M. Pietrewicz A. Sławiński H. Wasilewska-Trenkner A. Wojtyna
24 May 2005	Resolution to approve the Report on Monetary Policy Implementation in 2004		**For:** L. Balcerowicz J. Czekaj D. Filar S. Nieckarz M. Noga S. Owsiak M. Pietrewicz A. Sławiński H. Wasilewska-Trenkner A. Wojtyna
24 May 2005	Resolution assessing the activities of NBP Management Board as regards monetary policy implementation in 2004		**For:** L. Balcerowicz J. Czekaj D. Filar S. Nieckarz M. Noga S. Owsiak M. Pietrewicz A. Sławiński H. Wasilewska-Trenkner A. Wojtyna
24 May 2005	Resolution to approve the Report on the Operations of the National Bank of Poland in 2004		**For:** L. Balcerowicz J. Czekaj D. Filar S. Nieckarz

			M. Noga S. Owsiak M. Pietrewicz A. Sławiński H. Wasilewska-Trenkner A. Wojtyna
25 May 2005	Motion to change the monetary policy bias from neutral to easing	The motion was not passed (due to tie vote, the vote of the Chairman prevailed)	**For:** J. Czekaj S. Owsiak M. Pietrewicz A. Sławiński A. Wojtyna **Against:** L. Balcerowicz D. Filar S. Nieckarz M. Noga H. Wasilewska-Trenkner
29 June 2005	Resolution on the level of the reference rate, lombard rate, deposit rate and rediscount rate of the National Bank of Poland	All interest rates reduced by 0.5 percentage point	**For:** L. Balcerowicz J. Czekaj D. Filar S. Nieckarz M. Noga S. Owsiak M. Pietrewicz A. Sławiński H. Wasilewska-Trenkner A. Wojtyna
29 June 2005	Motion to change the monetary policy bias from neutral to easing	The MPC changed its monetary policy bias	**For:** J. Czekaj S. Nieckarz S. Owsiak M. Pietrewicz A. Sławiński A. Wojtyna **Against:** L. Balcerowicz D. Filar

			M. Noga H. Wasilewska-Trenkner
27 July 2005	Resolution on the level of the reference rate, lombard rate, deposit rate and rediscount rate of the National Bank of Poland	All interest rates reduced by 0.25 percentage point	**For:** J. Czekaj S. Nieckarz S. Owsiak M. Pietrewicz A. Sławiński A. Wojtyna **Against:** L. Balcerowicz D. Filar M. Noga H. Wasilewska-Trenkner
27 July 2005	Motion to maintain the easing monetary policy bias	Motion received a majority vote – the MPC maintained its easing monetary policy bias	**For:** J. Czekaj S. Nieckarz S. Owsiak M. Pietrewicz A. Sławiński A. Wojtyna **Against:** L. Balcerowicz D. Filar M. Noga H. Wasilewska-Trenkner
27 July 2005	Motion to change the monetary policy bias from easing to neutral	Motion did not receive a majority vote – the MPC maintained its easing monetary policy bias	**For:** L. Balcerowicz D. Filar M. Noga H. Wasilewska-Trenkner **Against:** J. Czekaj S. Nieckarz S. Owsiak M. Pietrewicz A. Sławiński A. Wojtyna
31 August 2005	Resolution on the level of the reference rate, lombard rate, deposit rate and	Reduction of the reference rate, lombard rate and deposit rate by 0.25	**For:** J. Czekaj S. Nieckarz

	rediscount rate of the National Bank of Poland	percentage point, and rediscount rate by 0.5 percentage point	S. Owsiak M. Pietrewicz A. Sławiński A. Wojtyna **Against:** L. Balcerowicz D. Filar M. Noga H. Wasilewska-Trenkner
31 August 2005	Motion to change the monetary policy bias from easing to neutral	Motion did not receive a majority vote – the MPC maintained its easing monetary policy bias	**For:** L. Balcerowicz D. Filar M. Noga H. Wasilewska-Trenkner **Against:** J. Czekaj S. Nieckarz S. Owsiak M. Pietrewicz A. Sławiński A. Wojtyna
27 September 2005	Resolution establishing the upper limit for liabilities incurred by the National Bank of Poland by way of loans from foreign banking and financial institutions		**For:** L. Balcerowicz J. Czekaj D. Filar S. Nieckarz M. Noga S. Owsiak M. Pietrewicz A. Sławiński H. Wasilewska-Trenkner A. Wojtyna
28 September 2005	Motion for the Monetary Policy Council to cease announcing its monetary policy bias	The motion received a majority vote – the MPC decided not to announce its monetary policy bias any more	**For:** L. Balcerowicz D. Filar M. Noga S. Owsiak M. Pietrewicz H. Wasilewska-Trenkner

			Against: J. Czekaj S. Nieckarz A. Sławiński A. Wojtyna
28 September 2005	Resolution establishing monetary policy guidelines for 2006		**For:** L. Balcerowicz J. Czekaj D. Filar S. Nieckarz M. Noga S. Owsiak M. Pietrewicz A. Sławiński H. Wasilewska-Trenkner A. Wojtyna
25 October 2005	Resolution to appoint a certified auditor to audit NBP annual financial statements for the business year 2005 and for the year 2006		**For:** L. Balcerowicz J. Czekaj D. Filar S. Nieckarz M. Noga S. Owsiak M. Pietrewicz A. Sławiński H. Wasilewska-Trenkner A. Wojtyna
30 November 2005	Motion to change the monetary policy bias from easing to neutral	Motion did not receive a majority vote – the MPC maintained its easing monetary policy bias	**For:** L. Balcerowicz D. Filar M. Noga H. Wasilewska-Trenkner **Against:** J. Czekaj S. Nieckarz S. Owsiak M. Pietrewicz A. Sławiński A. Wojtyna

20 December 2005	Resolution to approve the Financial Plan of the National Bank of Poland		**For:** L.Balcerowicz J.Czekaj D.Filar S.Nieckarz M.Noga S.Owsiak M.Pietrewicz A.Sławiński H.Wasilewska-Trenkner A.Wojtyna
20 December 2005	Resolution amending the resolution on accounting policies, the structure of assets and liabilities in the Balance Sheet and the Profit and Loss Account of the National Bank of Poland		**For:** L.Balcerowicz J.Czekaj D.Filar S.Nieckarz M.Noga S.Owsiak M.Pietrewicz A.Sławiński H.Wasilewska-Trenkner A.Wojtyna
20 December 2005	Resolution amending the resolution on the rules of conducting open market operations		**For:** L.Balcerowicz J.Czekaj D.Filar S.Nieckarz M.Noga S.Owsiak M.Pietrewicz A.Sławiński H.Wasilewska-Trenkner A.Wojtyna