

REPORT

MONETARY POLICY INSTRUMENTS OF THE NATIONAL BANK OF POLAND

IN 2008

BANKING SECTOR LIQUIDITY

Warsaw 2009

Table of contents

Executive summary	5
Chapter I Banking sector liquidity.....	9
I.1 Liquidity development in 2008.....	9
I.1.1 External determinants	10
I.1.2 Internal determinants.....	10
I.2 Impact of autonomous factors on banking sector liquidity in 2008 ...	12
I.2.1 Currency in circulation	12
I.2.2 Purchase and sale of foreign currencies by the NBP	15
I.2.3 Public sector deposits held with the central bank.....	17
Chapter II Monetary policy operating system in 2008.....	20
II.1 Monetary policy instruments	20
II.1.1 Interest rates	20
II.1.2 Open market operations	21
II. 1.2.1 Basic operations.....	21
II. 1.2.2 Fine-tuning operations	22
II. 1.2.2.1 Repo operations.....	23
II.1.2.3 Structural operations	23
II.1.2.4 FX swaps	24
II.1.3 Required reserves.....	25
II.1.4 Standing facilities.....	27
II.1.4.1 Deposit facility.....	27
II.1.4.2 Marginal lending facility.....	28
II.1.5 Other components of the NBP's influence on the money market.	28
II.1.5.1 Intraday credit facility in zloty	28
II.1.5.2 Intraday credit facility in euro.....	29
II.1.5.3 POLONIA rate.....	29
II.1.5.4 Publishing information on Reuters website.....	30
II.2 Developments in the interbank money market	30
Chapter III Confidence Pact.....	34

Annexes

- Annex 1. Changes in the level of fluctuations of the shortest-term interest rates in the interbank market against the open market operations conducted in 1998-2008*
- Annex 2. NBP monetary policy instruments in 1990 - 2008*
- Annex 3. Short-term banking sector liquidity in the NBP operations (PLN million)*
- Annex 4. Tenders for NBP bills*
- Annex 5. Tenders for REPO operations*
- Annex 6. Banks – Money Market Dealers in 2008*
- Annex 7. Daily information (as at month-end)*

Executive summary

In 2008 the National Bank of Poland conducted the monetary policy based on the *Monetary Policy Guidelines for 2008*.

According to the monetary policy guidelines, the National Bank of Poland has an obligation to maintain price stability. The short-term interest rate is the primary instrument of monetary policy. By determining the **basic NBP interest rates**, the Monetary Policy Council sets the yields on the monetary policy instruments. Changes to the NBP reference rate determine the direction of the monetary policy and influence the level of market rates with maturities comparable to that of the basic open market operations. The NBP deposit and lombard rates determine the fluctuation band of overnight interest rates in the interbank market. The band is symmetric against the reference rate forming a range of acceptable fluctuations of the short-term interest rates.

In 2008 the Monetary Policy Council changed the basic NBP interest rates on six occasions. In the first half of 2008 interest rates were increased four times, each time by 25 basis points (1 percentage point in total), with the fluctuation band for the short-term market rates unchanged at the level of +/-1.5 percentage points. As a result, in June 2008 the reference rate stood at 6.0%, the deposit rate at 4.5% and the lombard rate at 7.5%. The Monetary Policy Council decided to decrease the basic interest rates by 25 basis points in November 2008 and again in December 2008 this time by 75 basis points (in the second half of 2008 a decrease in the interest rates by 1 percentage point). As a result, at the end of the year the basic interest rates were as follows: the reference rate - 5.00%, the lombard rate - 6.50% and the deposit rate - 3.50%.

Open market operations is the basic instrument used by the NBP to implement the adopted monetary policy guidelines and manage the banking sector liquidity. Within the framework of those operations, the NBP issues the 7-day NBP bills once a week (on Fridays). In 2008, the yield on the NBP bills was fixed and equal to the NBP reference rate.

The volume of open market operations conducted by the NBP depends on the level of the banking sector liquidity resulting from autonomous factors, beyond the control of the NBP.

In 2008, the average balance of the NBP bills was PLN 11,530 million and was lower by PLN 7,772 million as compared to 2007. The average balance of operations conducted by the NBP stood at PLN 1,701 million in December 2008 and was lower than in December 2007 by PLN 9,096 million.

The decrease in banking sector liquidity and reduction in NBP liquidity-absorbing open market operations resulted from the crisis affecting the global financial markets from the end of 2007, which only deepened in 2008. The external crisis resulted in higher uncertainty in the Polish financial market and a decline in confidence among the interbank market participants. In connection with the crisis, the NBP introduced the so-called "Confidence Pact" in mid-October 2008. In the framework of measures connected with the "Confidence Pact," the central bank started conducting repo operations

providing liquidity to the banking sector. Additionally, the banks had possibility to obtain foreign currencies using the currency swap transactions.

In the period between January and September 2008 the demand of commercial banks for the NBP bills slightly exceeded their supply. In October the banks limited demand for the NBP bills. During subsequent auctions of the bills, the NBP conducted open market operations without announcing the supply. Thus, commercial banks purchased the NBP bills in the demanded amount.

In 2008, all banks participating in the SORBNET system, having an account at the Securities Register held with the NBP and the ELBON application, as well as the Bank Guarantee Fund had the access to the **basic open market operations**, similar to 2007. The group of most active banks in the money and foreign exchange markets was authorised to participate in the **fine-tuning operations**. In reply to the difficult situation in the interbank market, fine-tuning operations have been conducted with all banks which met the criteria essential to participate in basic operations since 7 November 2008.

In the framework of the fine-tuning operations in 2008, the central bank additionally issued the short-term NBP bills with three-day (November 2008) and two-day maturities (December 2008).

In 2008 the short-term banking sector liquidity calculated as the balance of the basic operations, the repo operations, the FX swaps and the standing facilities amounted to the average of PLN 10,964 million, as compared to PLN 19,814 million in 2007¹ (**the annual average decrease in surplus liquidity amounted to PLN 8,850 million**).

The aggregate value of the repo operations (providing liquidity to the banking sector) amounted to a total of PLN 34,329 million, while the aggregate value of the short-term NBP bills issues (liquidity absorbing) amounted to PLN 3,839 million.

Throughout 2008, no structural operations were conducted by the NBP.

In 2008, apart from the basic open market operations, the NBP also provided the **standing facilities** on the initiative of the commercial banks. They allowed the commercial banks to manage the short-term liquidity using the marginal lending facility and the deposit facility. The banks stabilised liquidity level using the marginal lending facility; its interest rate constituted the maximum cost of providing the short-term funds in the market. The liquidity surplus at the end of the operating day was placed as overnight deposits by commercial banks with the NBP.

¹ When calculating the balance of open market operations in 2007, only the balance of the NBP bills was taken into account. For 2008, apart from the volume of the NBP bills issue, additionally also the balance of the repo operations and the FX swaps was included.

Table 1. Basic open market operations, repo operations, FX swaps and standing facilities in 2001-2008

Period	NBP bills (annual average)	Repos (annual average)	Currency swaps (annual average)	Standing facilities (annual average)		
				Deposit facility	Marginal lending facility	Balance (deposit-credit)
2008	11 530	2 135	162	1 421	14	1 407
2007	19 302			530	18	512
2006	19 758			150	50	100
2005	16 699			162	29	133
2004	5 275			310	22	288
2003	6 251			167	34	133
2002	10 565			80	170	-89
2001	14 701			715	234	481

Source: NBP.

The **required reserve system** is an additional instrument of the central bank's monetary policy used to stabilise the liquidity and reduce the short-term interest rates volatility. The commercial banks had an obligation to maintain their required reserves with the NBP either on current accounts or on required reserve accounts. The ratio of the required reserve in 2008 was 3.5% on all liabilities constituting the basis for calculating the volume of the required reserve, except for the funds came from the sale of Treasury securities under repurchase agreements, where it was 0%.

The NBP activities within the monetary policy operational framework in 2008 facilitated the maintenance of the **short-term interest rates** in the interbank market within the fluctuation band determined by the profitability of the standing facilities. The fluctuations of the market interest rates in 2008 resulted from distortions in liquidity conditions mainly due to unfavourable events in international financial markets, as reflected in interbank market expectations for the change of the basic interest rates of the central bank. The average absolute deviation of the market rate with one week maturity (WIBOR SW) from the NBP reference rate amounted to 16 basis points in 2008 and was 7 basis points higher than the average in 2007.

Table 2. Money market rate developments in 2001-2008

Period	Average reference rate (%)	Deviation of rates from reference rate in basis points (annual average)					Average deviation of bank`s current accounts from required reserve (PLN mln)
		O/N	SW	2W	1M	POLONIA	
2008	5,72	30	16			32	38
2007	4,40	19	9			23	36
2006	4,06	10	6			16	35
2005	5,34	21	6			29	28
2004	5,79	40		10			24
2003	5,67	28		7			25
2002	8,82	90			32		43
2001	16,13	142			42		151

The average reference rate was weighted by the duration of its validity.

The deviations of the rates from the reference rate were calculated on a uniform basis of 365 days per year.

Source: NBP.

The main factor reducing the banking sector liquidity in that period was the increase in the currency in circulation. In the whole year, the average level of currency increased by PLN 11,476 million, i.e. 14.4%, while in the previous year the increase in the currency in circulation amounted to 16.8%. The increase in the surplus of the banking sector liquidity was mainly the result of the NBP foreign exchange transactions related to the financial inflows of the EU funds. Transactions of purchase and sale of foreign currencies by the NBP resulted in the increase of the banking sector liquidity by PLN 6,363 million in 2008. As in previous years also in 2008 the NBP provided commercial banks with information about the current liquidity situation in the interbank market. The data were presented on each operating day in the Reuters information service on the NBPM site.

Chapter I

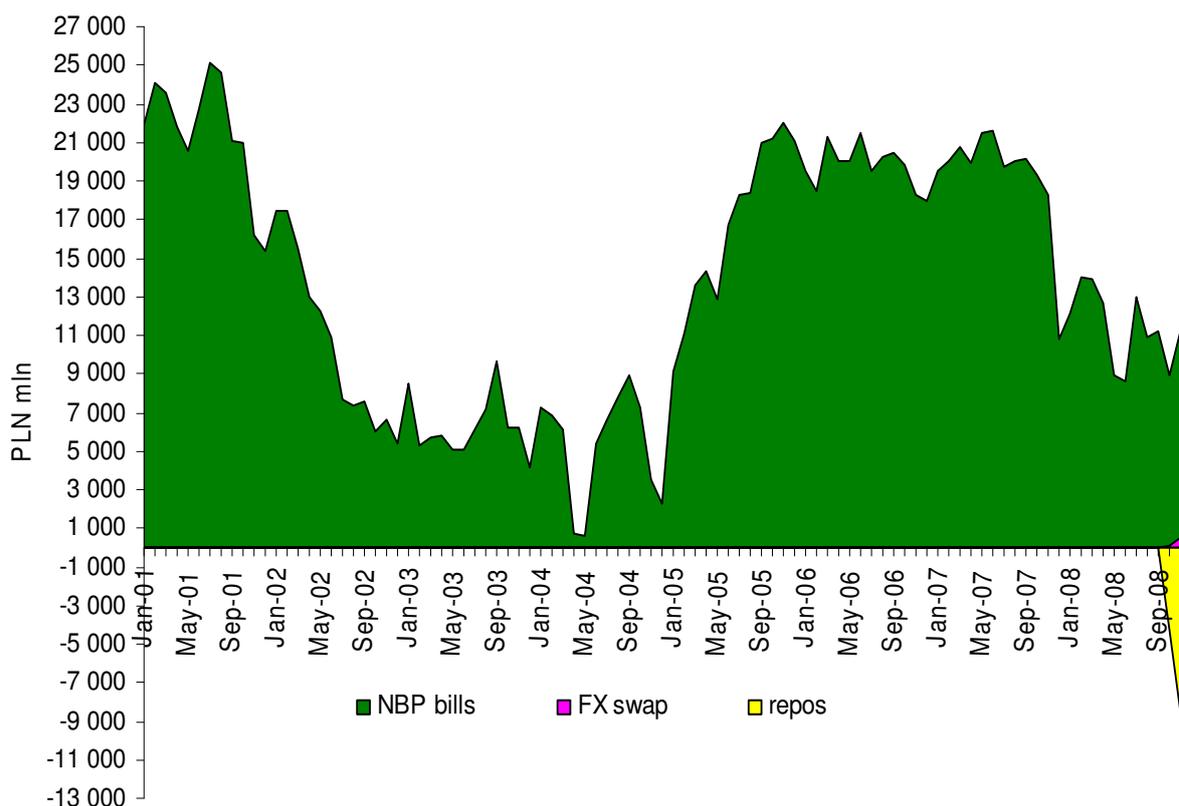
Banking sector liquidity

I.1 Liquidity development in 2008

Liquidity surplus has existed in the Polish banking sector since 1994. The major autonomous factors which determine the liquidity of the banking sector are: the amount of currency in circulation, the volume of the public sector deposits with the NBP, and the balance of currency purchase and sale by the NBP.

The figure below shows the absolute value of operations carried out by the NBP in the years 2001–2008.

Figure 1. Value of operations carried out by the NBP in 2001–2008



Source: NBP.

I.1.1 External determinants

In 2008 liquidity of the interbank market was destabilised by the credit and liquidity crisis in main financial markets of the world. After Lehman Brothers bank declared bankruptcy on 15 September 2008 and other entities from international financial markets started gradually revealing their liquidity problems, situation in financial markets deteriorated significantly starting from the second half of September. This indirectly affected the functioning of the national interbank market reducing the inclination of banks to extend non-secured loans as well as credit ceilings set for counterparty banks. Banks preferred to keep their access funds with the central bank on current accounts or as deposit facility. Thus the banks limited their participation in the 7-day open market operations conducted by the NBP.

I.1.2 Internal determinants

Banking sector liquidity in consecutive months of 2008 was subject to considerable fluctuations due to volatility of autonomous factors.

In the beginning of 2008, due to a decrease in deposits placed with the NBP by the public sector and the seasonal decrease in currency in circulation, the banking sector liquidity increased temporarily (in March the average balance of the NBP bills amounted to PLN 13,932 million and was PLN 3,135 million higher as compared to December 2007).

In 2008 Q2 the surplus of liquidity was considerably reduced, primarily as a result of an increase in currency in circulation. In June the average balance of the NBP bills stood at PLN 8,633 million.

In 2008 Q3 the banking sector liquidity increased due to the raising purchase of foreign currencies from EU funds, primarily those intended for the implementation of Common Agricultural Policy, by the NBP. Since September, the liquidity was increasingly influenced by disturbances in the financial markets, which resulted in systematic increase in deposit facilities maintained by banks with the NBP.

The main autonomous factor considerably limiting the banking sector liquidity in 2008 Q4 was the level of currency in circulation, which increased by PLN 11,133 million in the period between 30 September and 31 December 2008, as well as the required reserve (increase of PLN 1,446 million).

Additionally, the decline of banking sector liquidity in 2008 Q4 was accompanied by increasing distrust between counterparties in the interbank market connected with the beginning of the crisis. Since October 2008 the NBP started conducting operations providing the banking sector with zlotys liquidity (repos) and with currency liquidity (FX swaps). In 2008 Q4 these operations amounted to an average of PLN 8,538 million and PLN 654 million, respectively.

As a result of additional liquidity provided to the banking sector by the NBP for longer periods in 2008 Q4 there was an increase in the NBP bill issues to the average amount of PLN 11,068 million.

The list below presents the changes of the factors that determined the volume of the NBP bill issues in 2008 on annual average.²

Factors decreasing liquidity (PLN million):

– currency in circulation	11,476
– banks' reserve requirements level increase	3,173
– deposit facility (as compared to the previous year)	891
– refinancing loan repayment	370
– FX swaps	162
– marginal lending facility	4
Total:	16,076

Factors increasing liquidity (PLN million):

– repos	2,135
– public sector deposits in PLN decrease with the NBP	1,546
– payment of the NBP profit to the state budget ³	1,396
– other items, net ⁴	1,081
– NBP bills discount	757
– payment of interest on the required reserve	807
– payment of the interest on NBP bonds	326
– net foreign currencies purchase by the NBP	256
Total:	8,304

The most significant effect of the decrease in the banking sector liquidity in 2008 was the increase in the amount of the currency in circulation. In 2008 the average annual growth rate of currency in circulation amounted to 14.4%.

Another significant factor was the increase in deposits placed with commercial banks in 2008, which resulted in the increase in required reserve of 20.5% (in December 2008 the required reserve of the whole banking sector amounted to PLN 20,605 million).

² Data calculated in required reserve maintenance periods.

³ Changes in liquidity in 2008 which concern payment of the NBP profit to the state budget result from settlement of payment on 25 July 2007 on annual average. This means that the factor effect from the previous year was taken into account.

⁴ The increase in the liquidity due to other net items resulted mainly from the payment of interest on the Ministry of Finance's term deposits (both in zloty and in foreign currencies) with the NBP and the decrease in funds on the accounts of the Social Insurance Institution (ZUS).

In 2008 the short-term banking sector liquidity calculated as the balance of basic operations, repo operations, FX swaps, and standing facilities amounted to the average of PLN 10,964 million, as compared to PLN 19,814 million in 2007 (the annual average decrease in surplus liquidity amounted to PLN 8,850 million).

I.2 Impact of autonomous factors on banking sector liquidity in 2008

I.2.1 Currency in circulation

In 2008 the volume of currency in circulation amounted to the average of PLN 91,282.8 million. In the year as a whole, the increase in the average level of currency in circulation amounted to PLN 11,476 million, which marks a growth of 14.4% as compared to the previous year. In December 2007 to December 2008 terms, currency in circulation increased by PLN 16,272 million, i.e. by 19.0%.

In the period between January and September 2008, the average annual growth rate of currency in circulation in subsequent months was relatively uniform and amounted to an average of 12.6%.

Starting from October 2008 strong disturbances of current trends and seasonality observed in previous years became visible.

The annual growth rate of currency in circulation (the average amount of cash in the required reserve maintenance period) in the last three months of 2008 was higher than the growth rate noted in the first half of 2008 and amounted to 18.4%, 21.5% and 19.0%, respectively, in October, November and December.

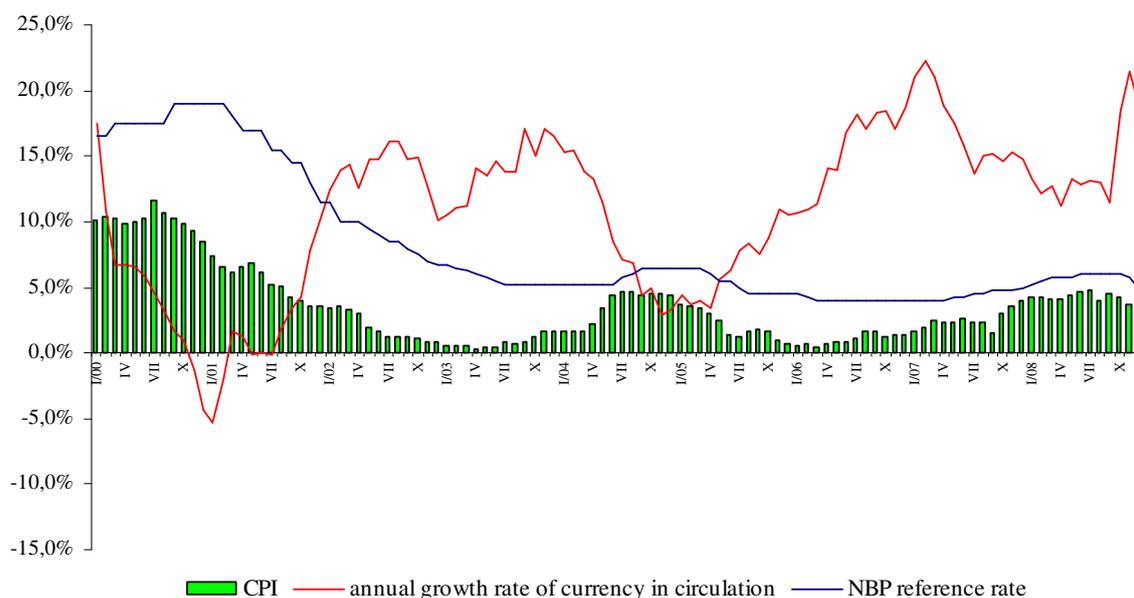
In October 2008, in the required reserve maintenance period the value of cash resources increased by the average of PLN 5,935 million, while it increased by PLN 151 million in the corresponding period of the previous year.⁵ This was the highest increase in this factor in more than a dozen years. A sudden increase in the amount of currency in circulation held by citizens and enterprises resulted from a strong increase in the demand for cash. In October 2008 the demand for cash was conducive to the increase in currency circulation by PLN 9.9 billion. The balance of cash in vaults of commercial banks increased in October by PLN 1.8 billion as compared to the previous month.

Enormous increase in currency in circulation was a result of concerns about the stability of the Polish financial system due to the crisis affecting the international financial markets. As a result, a number of customers of financial entities have withdrawn their previously invested funds and deposited them in the form of cash. An increase in withdrawals of funds deposited by customers caused that banks protected themselves by extending their cash reserves.

⁵ Particularly intensive cash withdrawals took place on 8-15 October 2008. The total amount exceeded PLN 8 billion.

Considerable disturbances to the hitherto observed seasonality were also visible in November and December 2008. In the November required reserve maintenance period, there was an extraordinary increase in the average amount of currency in circulation of PLN 2,896 million. The increase amounted to PLN 264 million in the corresponding period of the previous year. The increase in currency in circulation was also different from previous years in the December required reserve maintenance period: it amounted to PLN 940 million, as compared to PLN 2,509 million in the previous year.

Figure 2. Growth rate of currency in circulation as compared to inflation and changes of the NBP reference rate between 2000 and 2008



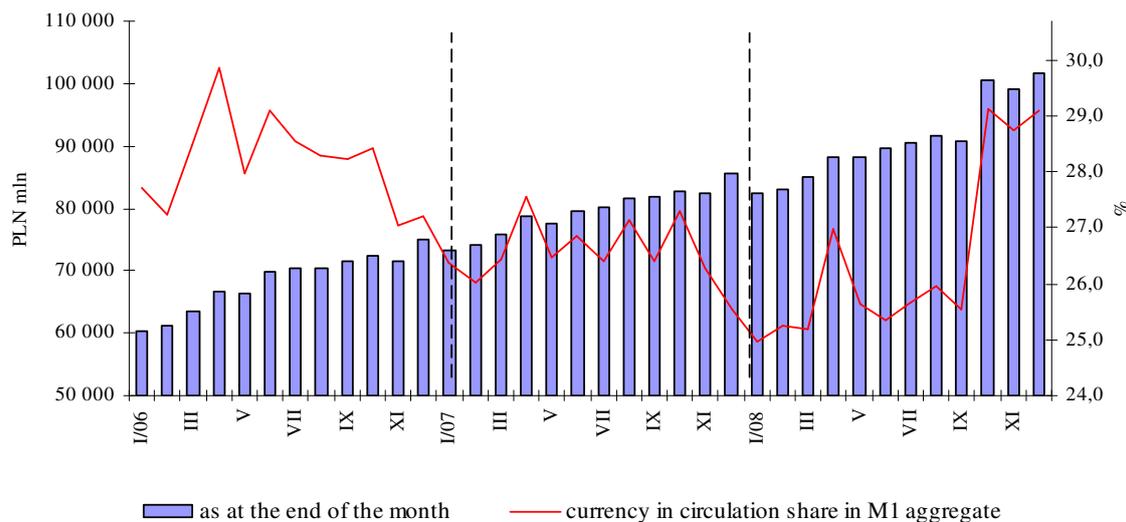
Source: NBP.

The decrease of the growth rate of currency in circulation in the first three quarters of 2008 as compared to the previous year was a result of higher interest rates on bank deposits in the period (by a monthly average of approx. 2 percentage points as compared to 2007) due to an increase in market interest rates. This was conducive to depositing a part of financial surplus with commercial banks. In the whole of 2008, the balance of deposits and other liabilities towards households increased by PLN 69.7 billion, i.e. by 26.5%. Such a high growth rate of deposits had not been achieved in ten years. A serious source of funds deposited by households were money withdrawn from the capital market and investment funds due to prolonged recession in the financial market. The outflow of financial assets from investment funds in December 2007 amounted to approx. PLN 1.1 billion.

Disturbances in seasonal changes to currency in circulation observed in 2008 are confirmed by the analysis of the structure of total money supply and the narrow M1 monetary aggregate in subsequent months of 2008. The results of such analysis primarily point to the fact that the share of currency in

circulation in M1 monetary aggregate increased considerably, particularly in the three final months of 2008 (29.1% in December 2008 compared with 25.6% in December 2007).

Figure 3. Currency in circulation and its share in the M1 narrow monetary aggregate in 2006-2008



Source: NBP.

Regardless of the above mentioned, an additional factor which contributed to the decrease in the currency in circulation growth rate was, as in previous years, steady development of the non-cash payment market. In 2008 the value of domestic non-cash transactions executed with payment cards increased by 15.4% and their share in total card transactions increased to 23.06% at the end of 2008 Q4 (in 2007 Q4 the share in total card transactions was 22.30%).

As in previous years, also in 2008 currency in circulation was significantly impacted by changes in seasonal factors. The increase in currency in circulation before Christmas and Easter and in holiday periods was still observed.

I.2.2 Purchase and sale of foreign currencies by the NBP

In 2008 the purchase and sale of foreign currencies by the NBP resulted in the increase in the banking sector liquidity of PLN 6,363 million (on annual average).⁶

Purchase of foreign currencies by the NBP was related to:

- Absorption of EU funds within the framework of assistance funds of PLN 22,643 million (as compared to PLN 14,273 million in 2007);
- Exchange of funds coming from loans from the international financial organisations for zloty and repayment of loans granted to governments of other countries – PLN 534 million;
- Exchange of a part of funds from the issue of bonds to the foreign markets for zloty – PLN 3,530 million.

Sales of foreign currencies by the NBP resulted from:

- Currency exchange of membership fee paid to the account of the European Commission (EC) of PLN 12,426 million (as compared to PLN 10,280 million in 2007);
- Service to central budget units whose accounts are maintained with the NBP of PLN 2,819 million;
- Sale of foreign currencies for the Ministry of Finance to service foreign debt of the State Treasury of PLN 5,682 million.

Foreign currency operations conducted by the central bank – purchase and sale of foreign currencies in 2008:

Transactions related to the membership in the European Union

The majority of the foreign exchange transactions conducted by the central bank was related to the foreign currency purchase transactions related to absorption of EU funds in PLN transferred by the European Commission in the euro. Structural funds and the Common Agricultural Policy had the major share in those transactions (54.8% and 44.4% of converted funds, respectively).

The sale of foreign currencies by the central bank in 2008 was related mainly to the exchange of the Polish membership fee paid to the EU budget in PLN. In the previous year the European Commission exchanged the funds from the membership fee paid in PLN only with the NBP.

2008 was the second year of provision and absorption of the EU budgetary funds in the framework of the New Financial Perspective 2007-2013. In 2008 the amount of EUR 1,958 million had been

⁶ The average is compared to the average value in December 2007.

transferred to the fund accounts with the NBP. In total, the EC transferred almost EUR 3,500 million from 2007, of which about 15% was absorbed.

Foreign operations of the State Treasury

The operations related to the servicing of the foreign liabilities and receivables of the State Treasury, consisting in the purchase and sale of foreign currencies by the NBP, influenced the banking sector liquidity. Foreign exchange transactions in 2008 were conducted pursuant to the agreement on the purchase and sale of foreign currencies for servicing foreign liabilities and receivables of the State Treasury concluded between the Ministry of Finance and the NBP.

Box 1. Agreement on the purchase and sale of foreign currencies

On 27 December 2007, the Ministry of Finance and the NBP signed an Annex to the agreement of 12 January 2004 on the purchase and sale of foreign currencies for servicing foreign liabilities and receivables of the State Treasury and on servicing principles.

The annex introduced limits on the value of foreign exchange transactions in 2008: the purchase of foreign currencies by the NBP up to EUR 4,000 million and the sales up to EUR 4,000 million, with the accumulated absolute difference between the sales amount and the purchase amount as at the end of the year not exceeding the equivalent of EUR 1,600 million. The total cumulated difference between the amount of purchase and sale of foreign currencies could not exceed the equivalent of EUR 1,250 million.

In 2008 the agreement was executed in 30.04% as regards the purchase of foreign currencies by the NBP, and in 39.59% as regards the sale. The value of transactions amounted to PLN 4,063 million and PLN 5,682 million, respectively. The foreign exchange operations consisting in repayment of State Treasury liabilities to foreign creditors were executed not only through the purchase of foreign currencies in the central bank, but also with the use of funds from the MF foreign currency account held with the NBP. The account was credited with proceeds from the issue of Treasury bonds to foreign markets.

In 2008 the value of bonds issued by the Ministry of Finance that were earmarked for foreign markets amounted to EUR 2,000 million, CHF 475 million and JPY 25,000 million. The funds were transferred to the MF currency account with the NBP (to the equivalent of EUR 2,289 million) and the remaining part was converted into PLN.

In addition, the MF currency account was credited with the loans taken out from international financial organisations amounting to EUR 1,045 million.

The funds on the currency account were used to cover the liabilities due to creditors from the Paris Club (EUR 1,936 million), the London Club (EUR 64 million), liabilities related to foreign bonds of the State Treasury (EUR 222 million), foreign loans, shares and other liabilities (EUR 394 million). A part of the funds (EUR 900 million) was converted into PLN in the central bank to meet domestic demand of the Treasury.

In addition to foreign exchange operations related to service of foreign liabilities and receivables of the State Treasury and the transactions related to absorption of EU funds, the central bank conducted foreign exchange operations with entities authorised to purchase from or sell foreign currencies to the central bank pursuant to the bank account agreement.

1.2.3 Public sector deposits held with the central bank

The public sector deposits held with the central bank include primarily: the funds on the current account of the central budget units, the term deposits and the special fund resources.

In 2008 the average level of the public sector deposits amounted to PLN 6,582 million and was PLN 1,549 million lower than in the previous year (PLN 8,131 million).

The changes in the level of the public sector deposits with the NBP resulted from the flows of funds between the banking sector and the public sector. The changes in the level of the public sectors deposits were influenced by: the volume of central budget incomes and expenditures; the settlements of the Treasury securities issues and repurchase; the payments resulting from servicing other transactions related to meeting the borrowing needs of the public sector; absorption of EU funds, the levels of the limits for the MF term deposits in PLN with the central bank, the flows of funds between Poland and the European Union (payment of Poland's membership fee to the EU budget).

In 2008 the share of MF term deposits in PLN in total central budget deposits decreased for yet another year and amounted to around 43.3%, as compared to 54.0% in 2007, which resulted mainly from reduction of the limit for MF deposits with the NBP.

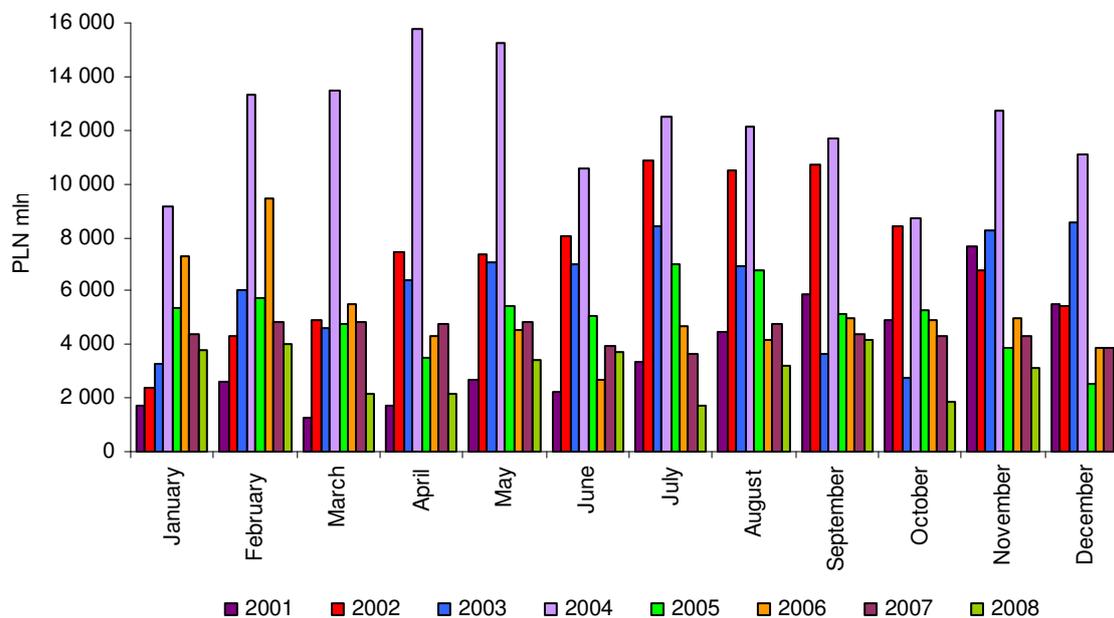
Box 2. MF term deposits held with the NBP in 2008

Pursuant to Article 164 of the Public Finance Act, in 2008, as in the previous years, the Minister of Finance was entitled to place the interest-bearing surplus funds deposits in PLN with the National Bank of Poland or Bank Gospodarstwa Krajowego.

The detailed principles for depositing such funds with the NBP were specified in the Annex of 11 December 2007 to the framework agreement on depositing funds of the Ministry of Finance on zloty denominated term deposit accounts with the NBP concluded between the Ministry of Finance and the NBP on 18 December 2006.

In 2008 the limit of the MF term deposits with the NBP calculated according to daily balances accounted to: PLN 4,500 million from 1 January to 30 September and PLN 3,500 million from 1 October to 31 December.

Figure 4. Average level of the Ministry of Finance term deposits with the NBP in individual months of 2001-2008



Source: NBP.

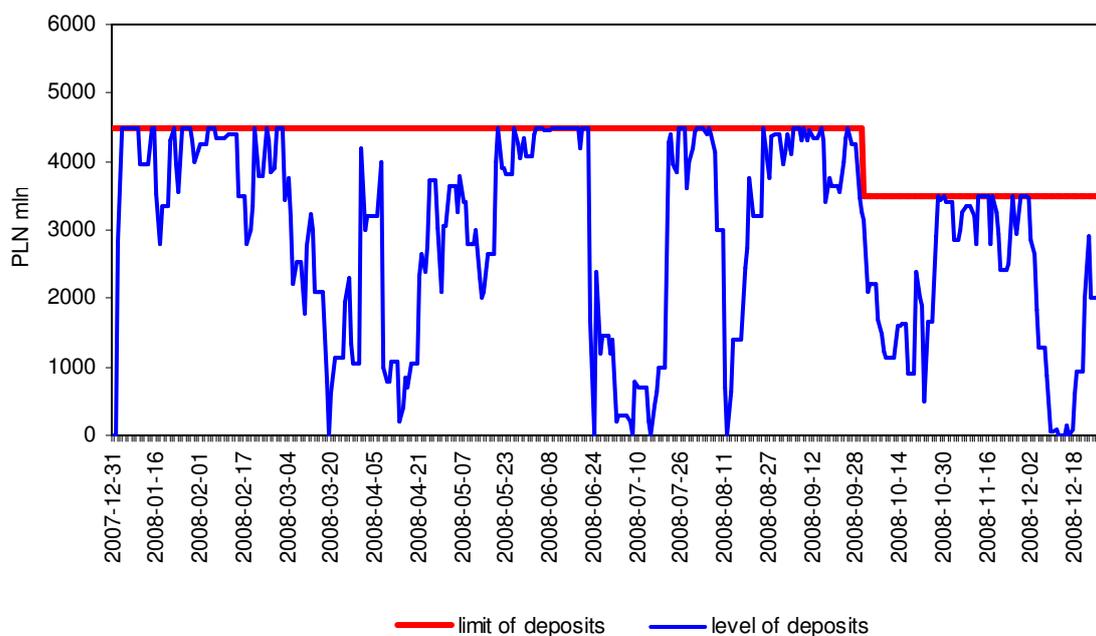
In 2008 the Ministry of Finance held funds on the term deposit PLN accounts with the NBP amounting to the yearly average of PLN 2,891 million (i.e. PLN 1,503 million less than in 2007), which was the lowest amount recorded in seven years. It was connected with the introduction of a daily limit for the MF term deposits with the NBP in 2005, which is gradually lowered year by year. The amount of deposits in 2008 accounted for only 67.5% of the daily limit for deposits. This was connected with the situation in global financial markets (the subprime loan crisis started in mid-2007 and deepened in 2008), which made it more difficult for the MF to obtain funds to meet its borrowing needs. The situation was also observed in the MF limiting buffer-stock behaviour on the MF accounts held with the NBP. Another effect of the uncertain situation in foreign markets in 2008 was that the role of foreign financing was reduced in favour of domestic financing, the PLN funds from which were partially earmarked for financing borrowing needs of the Treasury in foreign currencies.

The situation in the domestic market (increase in inflation, uncertainty as to the scale of changes to interest rates) resulted in an increase in demand for short-term instruments. Thus, in the framework of domestic financing, the MF issued more Treasury bills with shorter maturity (apart from 52-week T-bills, also 13-, 26-, and 39-week T-bills were issued) and limited the volume of Treasury bond issues.

As in the previous year, also in 2008 a part of surplus budget funds was placed in the interbank market via the Bank Gospodarstwa Krajowego. Transactions concluded with commercial banks were buy-sell-

back conditional transactions. Such transactions were collateralised with both Treasury bills and Treasury bonds. In addition, in 2008 the Ministry of Finance continued to deposit available funds in the interbank market of unsecured term deposits.

Figure 5 Use of MF term deposits limit with the NBP in 2008



Source: NBP.

Since 2008 the Ministry of Finance had the additional opportunity to place surplus funds as a deposit with the NBP through Bank Gospodarstwa Krajowego, which it was used between September and December 2008.

Similar to previous years, the Ministry of Finance transferred the highest amounts to the banking sector in January, February and between July and November 2008 due to an increase in budget income in this period.

In 2008 the average level of the MF deposits placed with commercial banks was about 75% of the amount noted in the previous year.

Pursuant to *Resolution 71/2005 of the Management Board of the NBP of 23 December 2005 on terms and conditions of accepting the term deposits in the zloty by the NBP, the maintenance periods and the interest rules*, other ministries (in addition to the Ministry of Finance) continued to deposit their surplus funds with the NBP. The deposits increased by almost a half and amounted to PLN 255 million per year (annual average), which constituted an increase of PLN 110 million as compared to the analogous value for the previous year.

Chapter II Monetary policy operating system in 2008

II.1 Monetary policy instruments

II.1.1 Interest rates

Interest rates are the primary instrument of the implementation of *Monetary Policy Guidelines*. In 2008 the Monetary Policy Council changed the basic NBP interest rates on six occasions: they were increased four times and reduced twice. In effect, at the end of the year the reference rate remained at 5.00%, the lombard rate stood at 6.50%, and the deposit rate at 3.50%. The fluctuation band for short-term market rates remained unchanged at +/-1.5 percentage point. Average reference rate in 2008 (calculated according to a 365-day basis) stood at 5.80%, while the average deposit rate at 4.22%, and the lombard rate at 7.22%.

Box 3. NBP interest rates

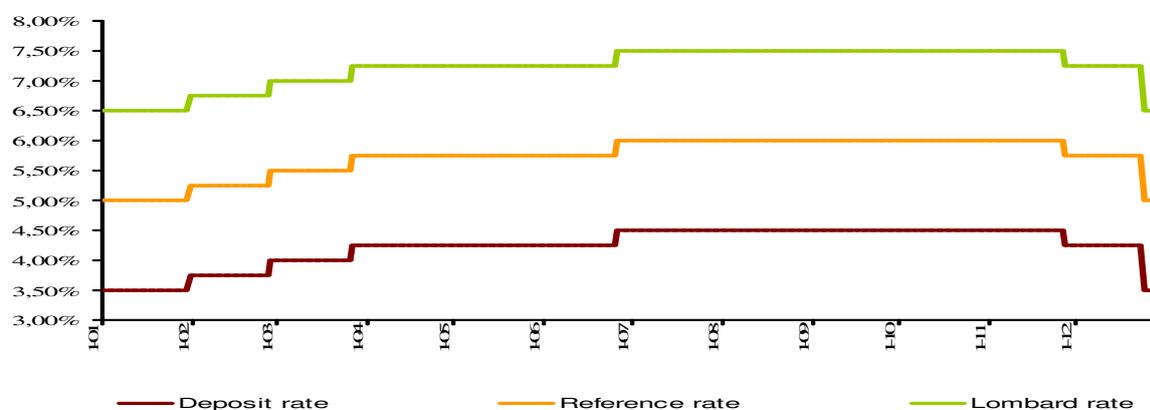
The NBP reference rate determines the yield on the basic open market operations, affecting at the same time the interest rate on short-term deposits in the market of unsecured interbank deposits.

The NBP lombard rate indicates the cost of obtaining money from the NBP. It specifies the upper ceiling for the increase in overnight rates.

The NBP deposit rate specifies the interest rate on deposits with the NBP. It specifies the lower ceiling for the decrease in overnight rates.

The NBP deposit and lombard rates define the fluctuation band for the O/N rate, which is symmetric against the central bank reference rate.

Figure 6. NBP interest rates in 2008



Source: NBP.

II.1.2 Open market operations

Open market operations are instruments designed to maintain short-term interest rates at the level defined by the Monetary Policy Council.

Open market operations have been conducted pursuant to *Resolution 14/2005 of 20 December 2005 on the principles of conducting open market operations, and Resolution of the Monetary Policy Council of 26 September 2007 on adopting the Monetary Policy Guidelines for 2008*.

II.1.2.1 Basic operations

In 2008 the NBP conducted open market operations issuing the NBP bills with 7-day maturity (due to holidays, on four occasions the maturity of the NBP bills was different than 7 days, i.e. 6 and 8 days in August and 5 and 9 days in December). As in the previous year, all banks participating in the SORBNET system that had an account with the Securities Register held with the NBP and had the ELBON application, as well as the Bank Guarantee Fund, had access to the basic open market operations.

In 2008 basic open market operations were conducted regularly on a weekly basis, on Fridays.⁷ The yield on the NBP bills offered on tenders was fixed and equalled the NBP reference rate.

In the first nine months of 2008 the demand of commercial banks for the NBP bills on subsequent tenders was uneven as compared to the supply offered by the central bank. In that period demand for the NBP bills slightly exceeded the supply.⁸

By 10 October 2008 the central bank had supplied the NBP bills of the nominal value of PLN 520.6 billion, whereas the market demand amounted to PLN 521.1 billion.

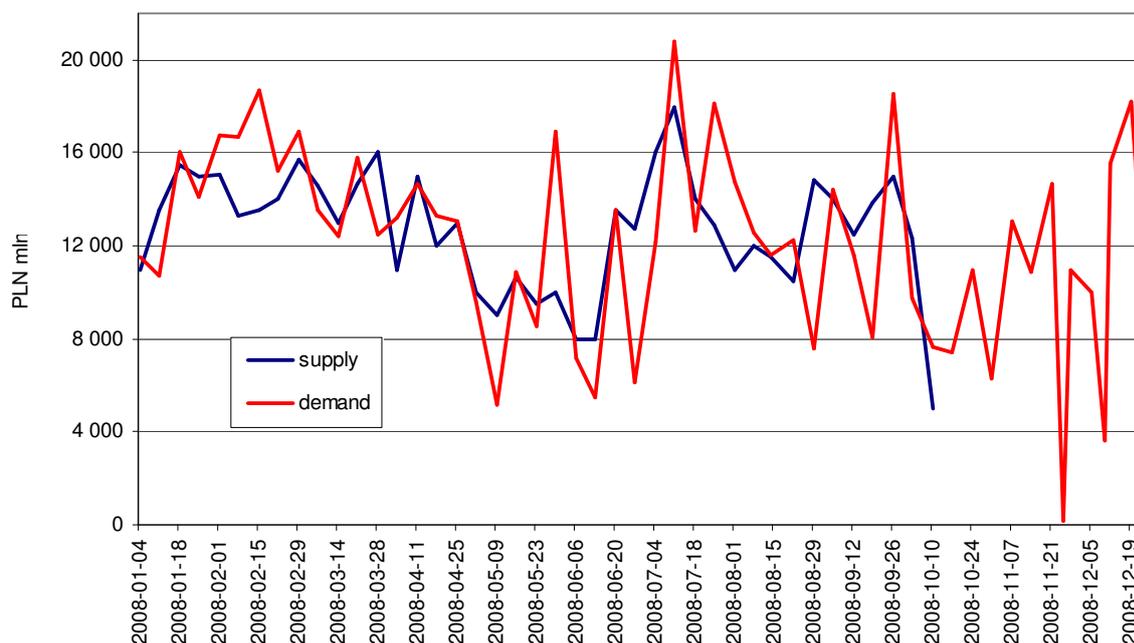
Due to uncertain situation in financial markets (both foreign and domestic), the demand of commercial banks for the NBP bills was lowering. Since 17 October 2008 the NBP has decided to organise the tenders for the NBP bills with no announcement of supply (without pool).

Between 17 October and the end of 2008 the value of the NBP bills bought by commercial banks amounted to PLN 132 billion.

⁷ In exceptional circumstances, due to holidays, the tenders for the NBP bills took place on Thursday (14.08) and Wednesday (24.12).

⁸ There were some tenders during 2008 when demand was lower than NBP's supply.

Figure 7. Demand and supply on tenders for the NBP bills in 2008



Source: NBP

In 2008 the average balance of the NBP bills stood at PLN 11,530 million and was PLN 7,772 million lower as compared to 2007, while the average monthly issue of the NBP bills fluctuated between PLN 8,633 million (June 2008) to PLN 13,979 million (February 2008).

II.1.2.2 Fine-tuning operations

In 2008 the National Bank of Poland had the right to conduct fine-tuning operations. Such operations could be initiated in the case of unexpected, short-term changes in banking sector liquidity leading to undesirable, from the monetary policy point of view, fluctuations of the short-term interest rates. These could include both absorbing and providing operations, i.e. the issue of the NBP bills, repo operations and early redemption of the NBP bills. The group of the most active banks in the money and foreign exchange markets was authorised to participate in the fine-tuning operations.⁹

According to the decision of the Management Board of the NBP, since 7 November 2008 all banks which met the criteria essential to partake in basic operations have permitted to conduct fine-tuning operations.

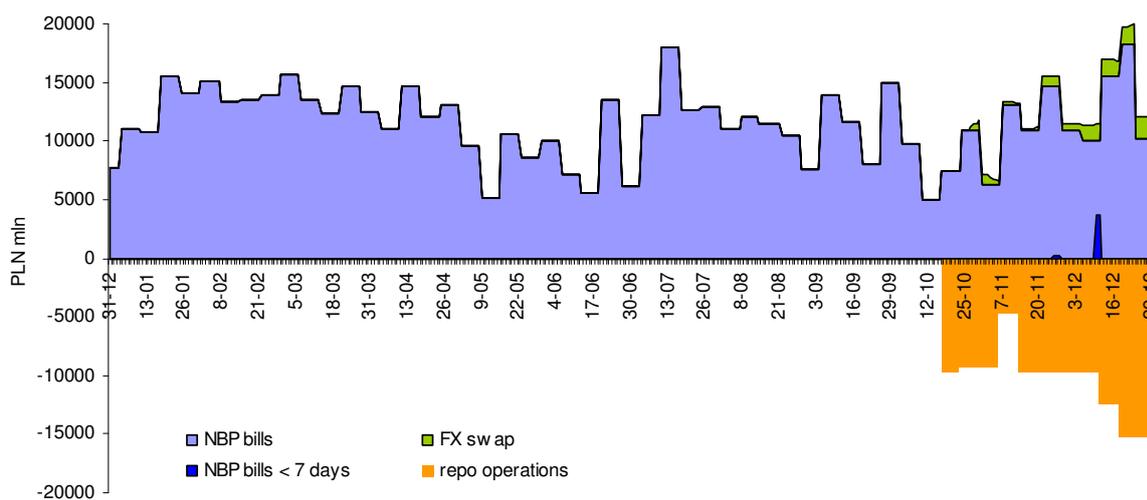
⁹ The list of the banks is presented in Annex 6.

II.1.2.2.1 Repo operations

In view of the crisis and the reduction of banking sector liquidity in 2008, enhanced by increasing mistrust between counterparties in the interbank market, the NBP began to conduct repo transactions, as a part of fine-tuning operations, to supply liquidity to the banking sector. They were short and long-term refinancing operations collateralised with securities accepted by the NBP.

Since 17 October 2008, within the framework of activities related to the so-called "Confidence Pact", the NBP on four occasions has conducted fine-tuning operations in the form of short-term repos with maturity of 6, 14 and 28 days (October, December 2008) and long-term repos with maturity of 91 days (November, December 2008). The operations resulted in supplying the banking sector with liquidity amounting to PLN 34,329.2 million (out of which liquidity provided for over one month accounted for PLN 12,493.7 million). It should be noted that the banks received liquidity to the amount of reported demand (tender without pool). Detailed information about the tenders for repos is presented in Annex 5.

Figure 8. Operations conducted by the NBP in 2008



Source: NBP

Repo operations in Q4 amounted to: PLN 4,290 million in October, PLN 8,452 million in November and PLN 12,783 million in December and supplied the banking sector with funds amounting to PLN 2,135 million, on average in the year.

II.1.2.3 Structural operations

Structural operations are aimed at a long-term change in the banking sector liquidity.

If such a need arises, the central bank could conduct operations consisting in the earlier repurchase of its own bonds (the portfolios of commercial banks contained the bonds amounting to PLN 7,816 million in 2008), purchase and sale of securities in the market or the issue of the long-term debt securities. The NBP did not conduct any structural operations in 2008.

II.1.2.4 FX swaps

In 2008, as a result of uncertainty in the world financial markets, the NBP conducted FX swaps in order to manage the banking sector liquidity. FX swaps gave the NBP an opportunity to purchase (or sell) the zloty for a foreign currency in the cash market and at the same time to sell (or repurchase) it by means of a forward transaction on a specified value date. In 2008 the NBP sold only foreign currencies in initial FX swap transactions.

Since 21 October 2008 the NBP has started to carry out FX swaps on the following pairs of currencies: EUR/PLN, USD/PLN CHF/PLN, with a 7-day maturity and settlement in the period T+2. Other maturities for FX swaps amounted to 6, 8, 10 and 84 days.

Box 4. FX swaps

According to the announcement of the NBP of 23 October 2008, FX swaps with a 7-day maturity were to be performed on each business day on USD/PLN and EUR/PLN currency pairs, pursuant to bilateral agreements.

According to the announcement of the NBP of 5 December 2008, the schedule of FX swaps on CHF/PLN currency pair was published. The swap transactions on CHF were to be conducted on 8 December (7-day), 15 December (6-day), 22 December (7-day) and 29 December (8-day). In the case of the two last December operations, the settlement was T+1 and for others it was T+2.

FX swaps in 2008 Q4 reduced the zloty liquidity of commercial banks by an average of PLN 75 million in October, PLN 476 million in November and PLN 1,410 million in December. The average annual impact of swaps on the reduction of banking sector liquidity amounted to PLN 162 million in 2008.



In 2008 short-term liquidity of the banking sector calculated as the balance of the NBP basic operations and supplementary operations, repo operations, FX swaps, and standing facilities amounted to PLN 10,964 million, as compared to PLN 19,814 million in 2007 (the annual average decrease in surplus liquidity amounted to PLN 8,850 million).

Box 5. Cooperation of the Swiss National Bank, the European Central Bank and the National Bank of Poland to provide Swiss franc liquidity to the market.

On 15 October 2008 the Swiss National Bank (SNB) and the European Central Bank (ECB) announced that they will conduct EUR/CHF FX swaps providing Swiss francs against the euro. The operations with a term of 7 days at a fixed price were to improve liquidity in short-term Swiss franc money markets. It was announced that this measure would be in place as long as needed, at least until January 2009. The time for those operations was prolonged to April 2009 in later announcements.

Starting on 17 November 2008 the National Bank of Poland (NBP) joined the weekly foreign exchange swap operations of the SNB and the Eurosystem. The SNB provided the NBP with Swiss francs for euro, while the NBP provided its counterparties with Swiss francs for the zloty. The operations were conducted with a 7-day maturity at a fixed exchange rate.

According to the announcement published on 7 November 2008, the National Bank of Poland in consultation with the Swiss National Bank (SNB) offered on 19 November 2008 the financing in Swiss francs for the Polish banking sector, in the form of FX swaps with a 84-maturity at a fixed exchange rate. Another such financing, with the same maturity was offered on 3 and 17 December 2008.

II.1.3 Required reserves

For the purpose of the short-term interest rates stabilisation, the National Bank of Poland used the averaged system of the required reserves provision. The system allows commercial banks to flexibly adjust the level of current account balance on a given day to their liquidity needs.

In 2008 banks were obliged to maintain the average balance of funds on accounts with the NBP in the reserve maintenance period at the level not lower than the value of the required reserves.

Box 6. Required reserves

Domestic banks, branches of credit institutions and branches of foreign banks are all subjects of the required reserves system. Required reserves are maintained on the current accounts of banks with the NBP or the required reserve accounts. The affiliated cooperative banks maintain the required reserves through the affiliating bank.

Minimum reserves are calculated on the basis of repayable funds accumulated on bank accounts and the funds obtained from the sales of securities. Funds received from other domestic bank and/or obtained from abroad for a period of at least 2 years, as well as accumulated on savings and settlement accounts with housing credit associations and individual pensions accounts are excluded from the reserve base.

Minimum reserves are calculated and maintained in the zloty. The required reserve ratios were not changed in 2008 and stood at 3.5% for all liabilities constituting the reserve base, except for funds obtained from repo transactions, where it was 0%.

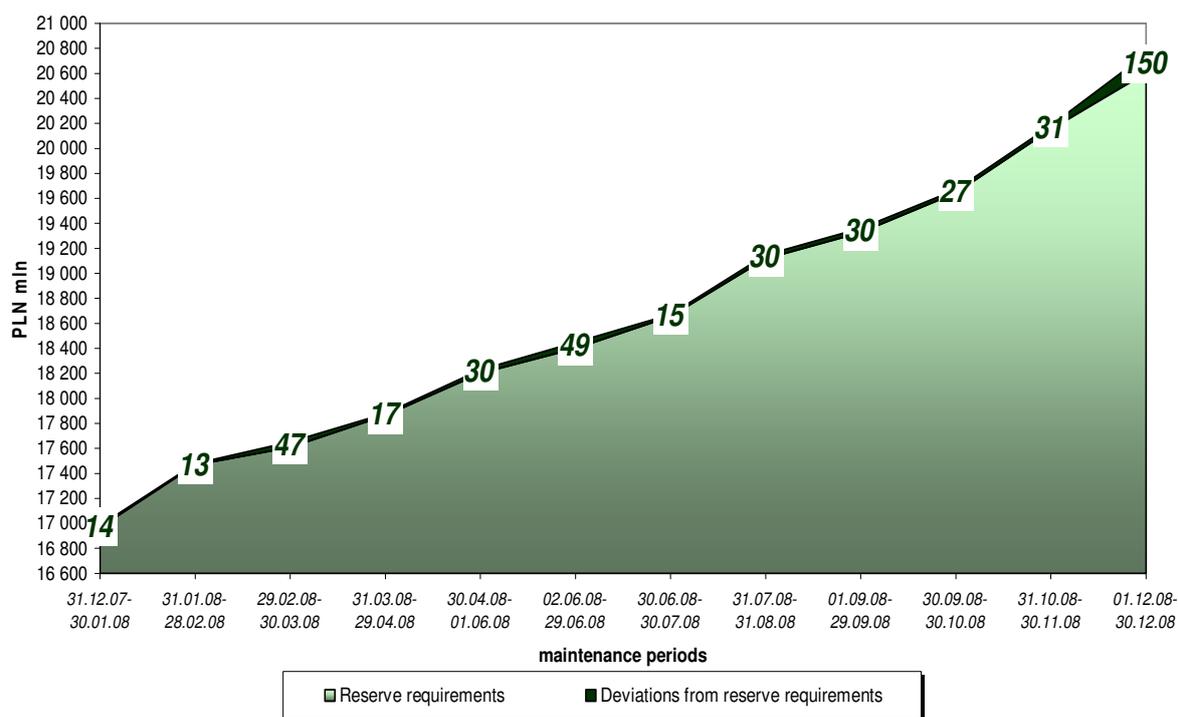
All banks deduct the equivalent of EUR 500,000 from the calculated required reserves. Funds

of the required reserves bear interest at the level of 0.9 of the rediscount rate.

The principles for calculating and maintaining the required reserves by banks are specified in the *Resolution 15/2004 of the Management Board of the NBP of 13 April 2004*, with later amendments, and the *Resolution 1/2004 of the Monetary Policy Council of 30 March 2004 on the rates of the banks' required reserves and on the remuneration on the required reserves*.

The level of the minimum reserves stood at PLN 21,098 million on 31 December 2008. It increased by PLN 4,123 million (24.3%) as compared with the level on 31 December 2007.

Figure 9. Deviation from the required reserves at the end of individual reserve maintenance periods in 2008



Source: NBP

The increase in reserve requirements was determined by a growth in deposits (by 23.4%) that constitute the basis for calculating their level.

The average level of funds on the banks accounts slightly exceeded the level of the required reserves in all the reserve maintenance periods. It amounted to PLN 38 million, i.e. 0.20% of the required reserves, on average. In individual reserve maintenance periods the excess ranged from PLN 12.6

million (0.07%) in January to PLN 150 million (0.73%) in December. Such marginal differences between the required reserves and the reserves maintained on accounts resulted from appropriate asset management at banks, consisting in using the instruments that facilitate the management of funds on the NBP accounts by banks (the intra-day credit, the deposit facility and the marginal lending facility). It was supported by the remuneration of the reserve holdings only to the amount of the required reserves.

In 2008 nine banks did not comply with the minimum reserve obligations, i.e. 2 banks more than in the previous year.

II.1.4 Standing facilities

Standing facilities, performed on the initiative of commercial banks, stabilise the liquidity conditions in the interbank market and the fluctuation of the overnight market rates. The operations enable banks to deposit fund surpluses with the NBP in the form of the deposit facility and supplement shortage of the liquidity on the short-term basis, as the marginal lending facility, on an overnight term.

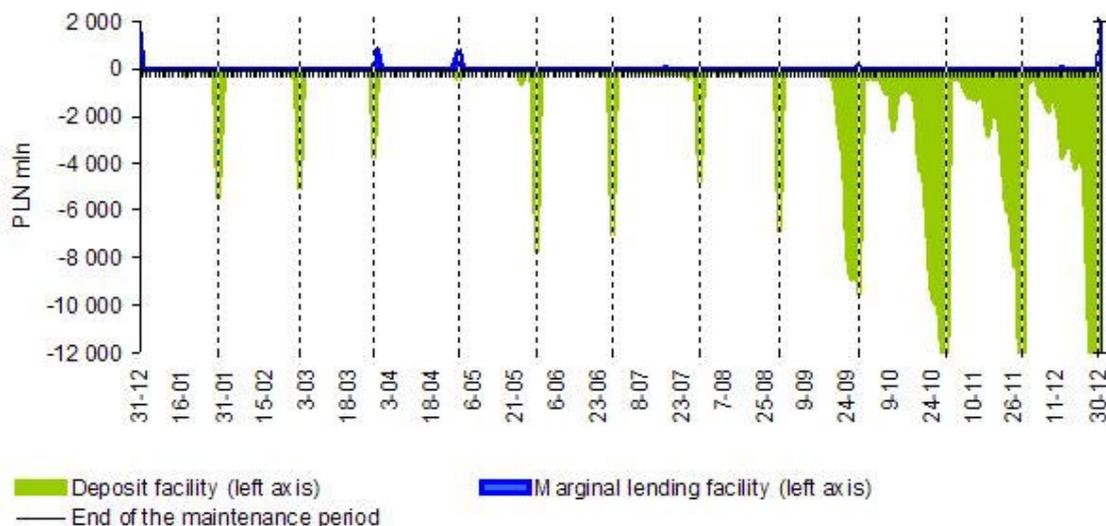
As a result of increasing uncertainty in domestic financial markets in 2008, there was a significant change in the proportion of the use of individual standing facilities by commercial banks. The use of deposit facility increased significantly. From 16 September 2008 commercial banks placed the deposit facility with the central bank everyday. Therefore, the marginal lending facility was used by the banks much less often than in the previous year.

II.1.4.1 Deposit facility

In 2008 banks placed fixed-term deposits with the NBP amounting to a total of PLN 520.1 billion, calculated for days of their maintenance. They were over 2.5 times higher than the deposits placed in 2007.

The total value of overnight deposits of the banks fluctuated between PLN 41,000 to PLN 17.3 billion. The average daily level of the overnight deposits stood at PLN 1,421.1 million and was 168.1% higher than in 2007 (PLN 530 million). The highest amounts were placed by the commercial banks in the last days of the required reserve maintenance periods.

Figure 10. Deposit facility as compared to marginal lending facility



Source: NBP

II.1.4.2 Marginal lending facility

In 2008 banks, supplementing current liquidity on current accounts with the NBP, used the marginal lending facility pledged with securities.¹⁰

The total annual use of the marginal lending facility amounted to PLN 5.2 billion and accounted for 77.6% of the facility in 2007 (PLN 6.7 billion), whereas the average daily use stood at PLN 14.3 million, as compared to PLN 18.5 million in 2007.

II.1.5 Other components of the NBP's influence on the money market

II.1.5.1 Intraday credit facility in zloty

Intraday credit facility enables banks to support liquidity management during the operating day, ensuring at the same time, smooth interbank settlements. It is a non-interest bearing credit,

¹⁰ From 27 October 2008 (Resolution No 44/2008 of the Management Board of the NBP), marginal lending facility granted by the NBP may be collateralised with other debt securities deposited with the National Depository for Securities (KDPW), i.e. EIB bonds, mortgage bonds, municipal bonds and corporate bonds of domestic issuers. The detailed list of the securities is published on the NBP's website.

collateralised with securities, and subject to repayment at the end of the same operating day on which it is taken out.

In 2008 42 commercial banks had an access to intraday credit facility, as in the previous year. Its use grew by 17.1% in comparison to 2007. The daily liquidity supply of the banks by means of the intraday credit facility ranged from PLN 11.3 to 19.5 billion and its average daily balance stood at PLN 14.8 billion. Throughout the year two banks repaid the intraday credit on the following operating day in the total amount of PLN 96.3 million.

II.1.5.2 Intraday credit facility in euro

The intraday credit facility in the euro performs the role of an instrument ensuring the liquidity of settlement in the SORBNET – EURO system. The facility is subject to repayment by the end of the same operating day on which it is taken out. The intraday credit is collateralised with Treasury bonds subject to MTS-CeTO fixing and valued in the full compliance with the Eurosystem standards. As in the two previous years, only one bank used the intraday credit facility in 2008. Its average daily debt with the NBP in 2008 was EUR 1,043,000, i.e. 60.5% higher than the average daily debt in 2007.

II.1.5.3 POLONIA rate

At the beginning of 2005 the NBP introduced POLONIA (Polish Overnight Index Average) rate. It is the average overnight rate weighted with the volume of transactions in the interbank deposit market. Its level reflects real interest rates on short-term interbank deposits. Owing to its structure (similar to that of EONIA rate functioning in the Eurosystem), it makes a better indicator than WIBOR O/N of the actual cost of overnight deposit. The POLONIA rate is published by the NBP on the Reuters website (NBPS) on a daily basis at 5 p.m.¹¹

During the period of 8 months in 2008 its average absolute deviation from the NBP reference rate remained at about 16 basis points (with the NBP reference rate being calculated on the basis of 365 days per year). Only from September 2008, i.e. along with the intensification of the crisis in the financial markets, the average absolute deviation grew to the level of 64 basis points. As a result, the average absolute deviation from the NBP reference rate amounted to 32 basis points in 2008.

¹¹ POLONIA fixing is conducted by the NBP on each operating day at 4.45 p.m. Each participant of the fixing is required to submit to the central bank a list of O/N transactions conducted with other participants and routed for settlement on a particular day by 4.30 pm. The list includes the amount of zloty deposits, the rate at which the transactions has been concluded, and the name of the bank, which is the counterparty to the overnight transaction.

II.1.5.4 Publishing information on Reuters website

In 2008, as in the previous years, the NBP provided banks, on the NBPM page of Reuters website, with information about the current liquidity scenario in the market, including data on:

- banks' current account balances, the deposit facility with the NBP, and the marginal lending facility granted by the NBP on a daily basis,
- the level of the reserves required in a given maintenance period,
- banks' average current account balances in a particular maintenance period,
- forecast of the average daily balance on the current account from the day of the NBP bills issue (within basic operations) until the day preceding their maturity. When the "Confidence Pact" came into force, the average current account balances of banks were published after the settlement of the tender for the NBP bills, because the operations were announced with no supply.

II.2 Developments in the interbank money market

In 2008 the NBP had an influence on the level of the market rate with a 1-day maturity (POLONIA) by conducting regular open market operations. Throughout the year the POLONIA rate remained close to the NBP reference rate within the fluctuation band determined by the lombard and deposit rates and amounted to 5.58% on annual average. The average deviation of this rate from the NBP reference rate amounted to 32 basis points in 2008 and was 9 basis points higher than in the previous year (the NBP reference rate was calculated on the basis of 365 days per year). In 2008 the average reference rate amounted to 5.80%, which constituted a growth of 134 basis points as compared to the previous year.¹² The increase in the deviation from the reference rate was due to expectations concerning the changes of the basic interest rates by the Monetary Policy Council during the year. It concerned both the expected decisions on the increase and on the decrease of basic interest rates of the NBP. The changes made by the MPC in 2008 were partly discounted by the FRA and OIS market since the end of 2007.¹³

In 2008 the scale of the NBP interest rate growth expected by the interbank market increased, inter alia, due to an inflation increase stronger than expected by investors. At the end of the year, the investors started to expect the interest rate reduction in connection to the global financial crisis. Apart from the assessment of the economic situation, the level of future interest rates in Poland was also influenced by the events in the international financial markets.

¹² The average reference level amounted to 4.46% in 2007.

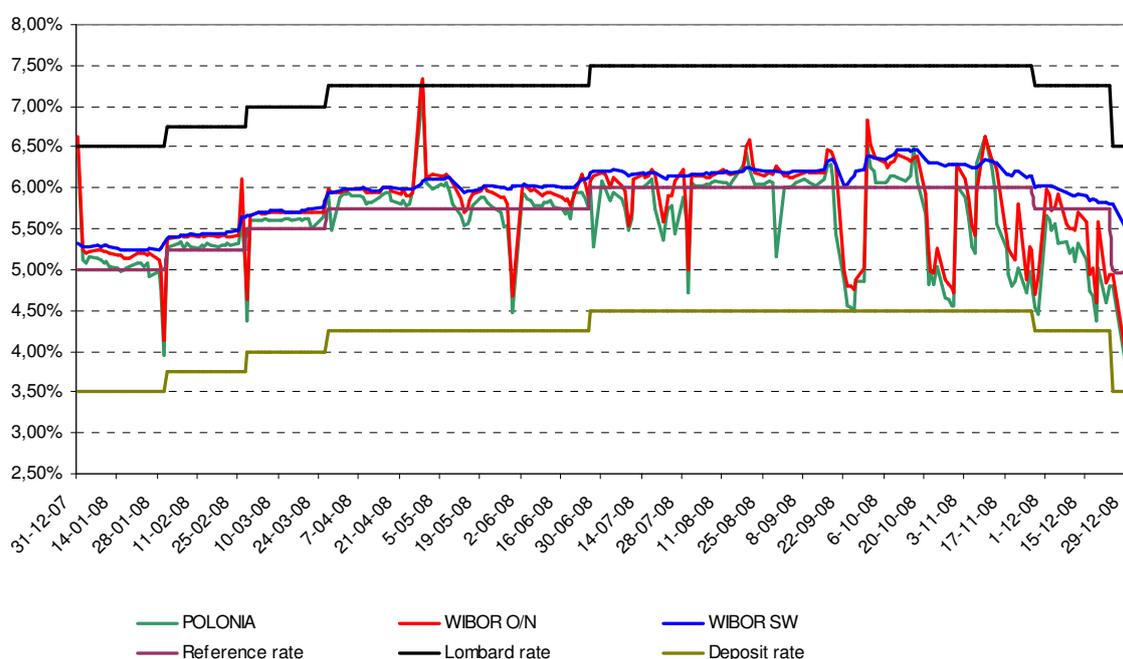
¹³ FRA (Forward Rate Agreement) – a fixed-term contract that determines the interest rate and protects the buyer of a FRA contract against the increase or the seller against the decrease in future interest rates.

IRS (Interest Rate Swap) – a financial contract between two parties that wish to exchange two payment streams of future interest (usually payments at a fixed interest rate for payments at a variable interest rate).

During the crisis, banks reported much lower demand for the NBP bills than the liquidity in the interbank market, leaving the surplus of funds on the current account in order to allocate it for the deposit facility. Therefore, in order to mitigate the risk related to the repayment of funds by counterparties, banks decided on lower revenues from deposit facility, as compared to the yield offered on the tenders for the NBP bills. It was reflected in the growth of the POLONIA rate deviation from the NBP reference rate and in a high positive deviation of the average current account balances of banks from the required reserve level.

Between January and the end of August the average absolute deviation of the POLONIA rate from the NBP reference rate (with the basis of 365 days per year) amounted to 16 basis points, while from October to the end of the year the deviation was 64 basis points.

Figure 11. WIBOR and POLONIA fluctuations against NBP interest rates in 2008



Source: NBP

During most of the reserve requirement maintenance period there are no significant fluctuations of short-term rates. Fluctuations of the short-term market rates are usually the highest at the end of the month, when banks are under the obligation to meet the requirements connected with maintaining the average level of current account balances at the required level in the reserve requirement maintenance period.

The largest financial flows (between the banking sector and the central budget) usually take place at the end of the month, causing the strongest fluctuations of banks' current account balances. Commercial banks have the possibility to use standing facilities then. Between January and August 2008 banks placed significant overnight deposits (over PLN 0.5 billion), usually in the last days of the required reserve maintenance period.

The situation changed starting from 16 September 2008. Banks started to use this instrument regularly. The amount of funds deposited overnight with the central bank reached PLN 17 billion. The average level of the deposit facility with the NBP amounted to 0.4 billion by August 2008, and to PLN 3.5 billion from September to the end of the year.

The financial shortages in commercial banks may be covered by using the marginal lending facility with the NBP. Such loan was used in six reserve requirement maintenance periods (only once in a higher amount – PLN 100 million on average in January as a result of settlements on the last day of 2007).

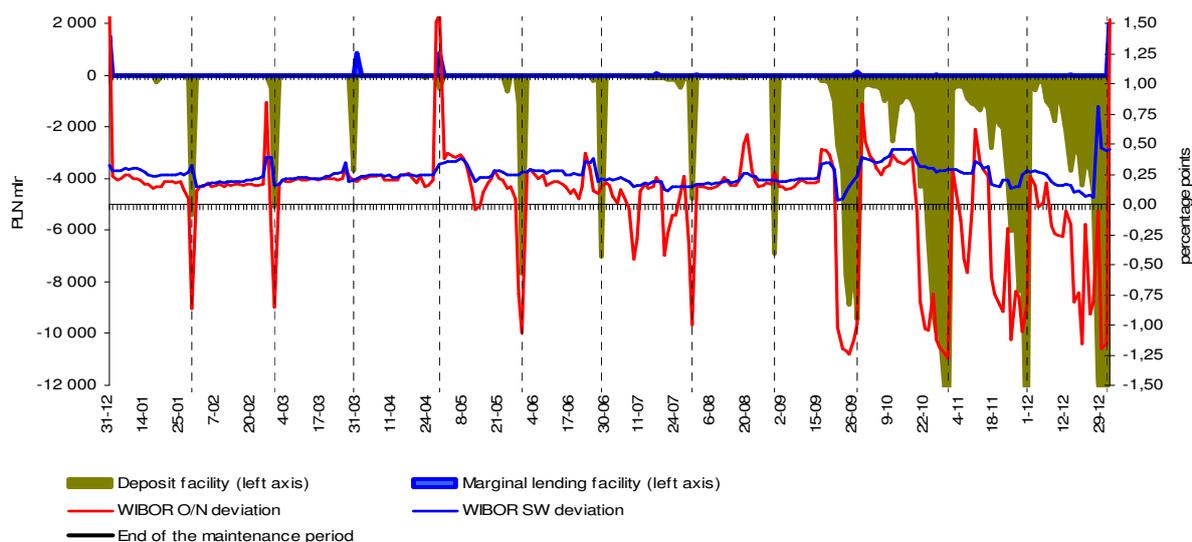
Standing facilities are relatively costly (the marginal lending facility determines the ceiling on the cost of the overnight money in the market) or entail lost profits (the deposit facility determines the lowest return on overnight deposits).

Starting from mid October 2008 commercial banks started to invest their funds in open market operations more carefully in view of the crisis in external markets. The NBP decided to carry out the operations without providing the pool.

A lower demand for NBP bills as compared to the existing liquidity situation led to a significant surplus in funds held by banks on current accounts against their required reserves and to placing higher deposits with the NBP.

This also caused higher fluctuations of the overnight rates in relation to the NBP reference rate, particularly at the end of the month.

Figure 12. Use of standing facilities offered by the NBP against deviation of WIBOR rates from NBP reference rate in 2008



Source: NBP

Due to the situation in the global financial markets, the NBP decided to implement the "Confidence Pact" on 17 October 2008. The Pact provides banks with an opportunity to enter into contracts on FX swaps. At the same time, the central bank announced its readiness to supply liquidity to the market, if necessary, in the form of repo transactions. The "Confidence Pact" is discussed in a separate chapter.

As a result of changes in the financial markets in 2008, the short-term rate in the (overnight) interbank market amounted to 5.75% on average in the year, and its average absolute deviation from the reference rate amounted to 30 basis points (where the NBP reference rate was calculated on the basis of 365 days per year).

It changed similarly to the changes in the POLONIA rate.

Between January and the end of August the average absolute deviation of the overnight rate from the NBP reference rate (with the basis of 365 days per year) amounted to 18 basis points, while from October to the end of the year the deviation grew to 53 basis points.

Chapter III

Confidence Pact

On 14 October 2008 the President of the National Bank of Poland announced the scope of measures that the National Bank of Poland intended to implement under the so-called "Confidence Pact". The measures were to focus on three practical objectives:

- to enable banks to obtain the zloty for longer than one day;
- to enable banks to obtain foreign currencies;
- to increase the possibility to obtain zloty liquidity by banks by means of wider securities for operations with the NBP.

In order to attain the above objectives, the NBP:

- a) began liquidity-providing repo operations with a maturity of up to 3 months;

The first fine-tuning repo operation was conducted on 17 October 2008. As a result of the operation, the banking sector was provided with liquidity for 6 days. Another fine-tuning repo operation was conducted on 21 October 2008 with a maturity of 14 days.

On 24 October the NBP announced the schedule of open market operations by the end of the year. In line with the schedule, the central bank conducted other repo operations with a maturity of 91 days on 4 and 12 November and 9 December 2008. As a result of the operations, the banking sector was provided with liquidity for a longer period of time.

An additional repo operation, except for 91-day operations envisaged in the schedule, was conducted on 16 December 2008. Its maturity was 28 days. It allowed banks to obtain additional liquidity from the central bank for the crucial period of the turn of the year.

Starting from 7 November all banks admitted to basic open market operations could participate in fine-tuning open market operations. Until then, only banks being the Money Market Dealers had been the authorised counterparties in fine-tuning operations.

- b) announced that the higher frequency of open market operations would be introduced, if necessary, in order to flexibly respond to changes in liquidity and stabilise the POLONIA rate around the NBP reference rate;

The first such operation was conducted on 25 November 2008 and consisted in the issue of the 3-day NBP bills.

Another operation was conducted on 10 December 2008 with a maturity of 2 days.

- c) announced that the issue of the 7-day NBP bills would be maintained as the main instrument of liquidity absorbing;

The operations were aimed at absorbing the surpluses of the banking sector liquidity. The basic open market operations in the form of the issue of the 7-day NBP bills were conducted regularly

(on Fridays). The operations in the second half of December were exceptions. Due to a holiday on Friday 26 December, the basic operation with a 5-day maturity was conducted on 19 December. Another basic operation took place on 24 December 2008, with a maturity of 9 days.

d) began to carry out FX swaps;

Since 17 October 2008 such operations have been offered to banks on USD/PLN and EUR/PLN currency pairs. Till 7 December 2008 those transactions could be concluded each day, with a maturity of 7 days. The first FX swap transaction was concluded on 21 October.

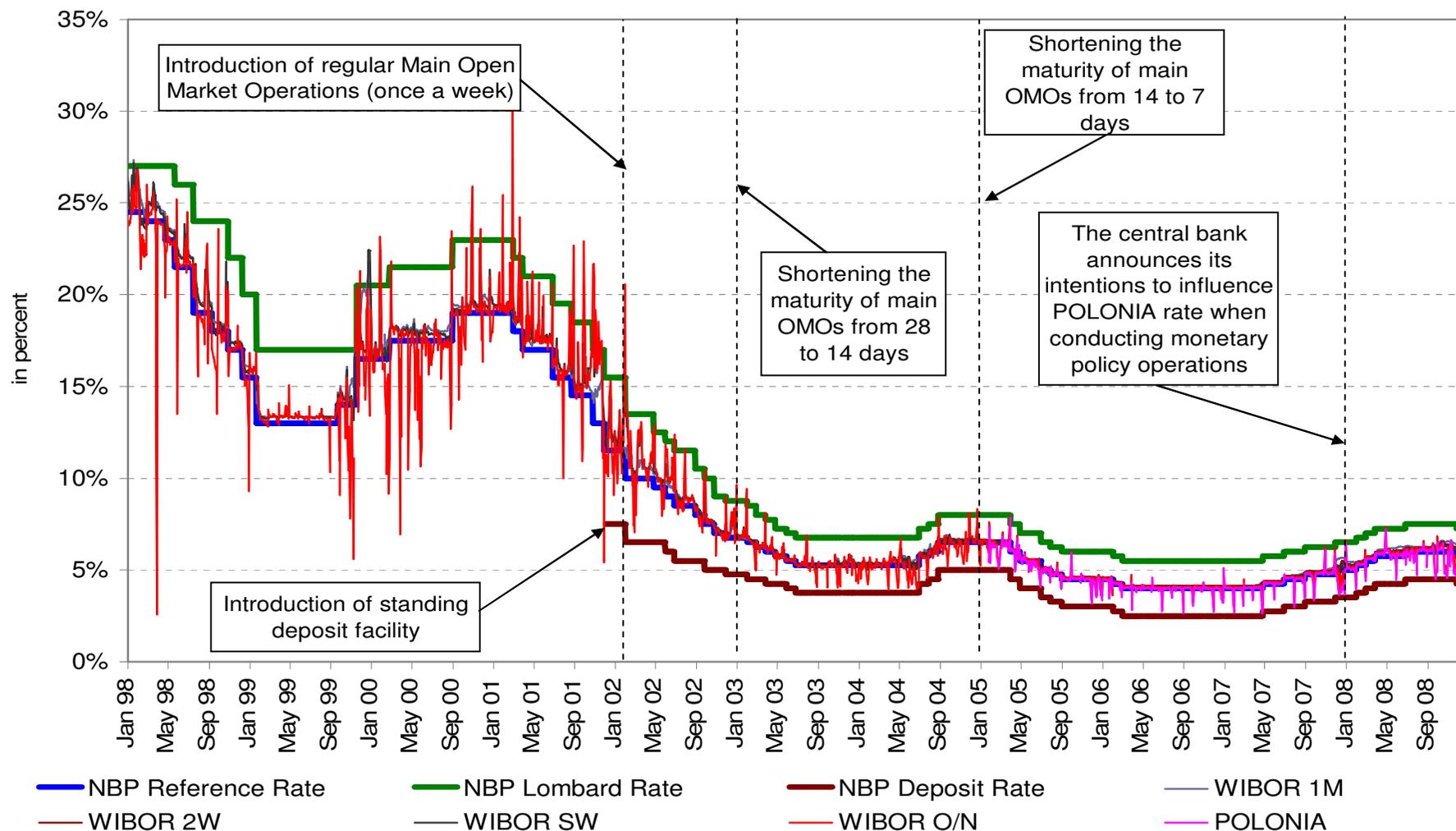
Since 8 December 2008 the FX swaps on EUR/PLN have been concluded once a week whereas the frequency of USD/PLN transactions remained unchanged.

In accordance with the agreement with the Swiss National Bank, the NBP began to carry out the FX swaps on CHF/PLN currency pair on 17 November 2008. The NBP conducted two types of such operations. The operations with a 7-day maturity were carried out regularly once a week. On 19 November, 3 and 17 December the central bank also conducted the operations with a maturity of 84 days.

e) introduced modifications to the operating system of the marginal lending facility, including:

- the reduction of haircut while determining the security for the marginal lending facility;
- expanding the list of assets which may act as a security for the marginal lending facility with the NBP.

Annex 1. Changes in the level of fluctuations of the shortest-term interest rates in the interbank market against the open market operations conducted in 1998-2008



Annex 2. NBP monetary policy instruments in 1990 – 2008

Item	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Required reserves																			
Issue of NBP bills																			
Issue/repurchase of NBP bonds																			
Repo/reverse repo																			
Outright																			
Loans for central investments																			
Rediscount loan																			
Marginal lending facility																			
Deposit facility																			
Loan limits																			
Deposits for households																			
Intraday credit																			
FX swap																			

Annex 3. Short-term banking sector liquidity in the NBP operations (PLN million)

	Average level of NBP bills	Average level of repo operations	Average level of FX swaps	Average level of overnight deposits	Average level of marginal lending facility	Total
2008	1	2	3	4	5	1+2+3+4+5
I	12 128			224	-100	12 252
II	13 979			197	0	14 177
III	13 932			361	0	14 293
IV	12 615			25	-59	12 580
V	8 877			754	0	9 631
VI	8 633			774	0	9 407
VII	12 960			276	-2	13 234
VIII	10 940			698	0	11 638
IX	11 232			1 996	-7	13 221
X	8 922	-4 290	75	3 565	0	8 272
XI	11 207	-8 542	476	3 592	0	6 733
XII	13 074	-12 783	1 410	4 610	-2	6 308
on average *	11 530	-2 135	162	1 421	-14	10 964

**/ - all these data are monitored in the required reserve maintenance periods, on average*

Share of individual instruments of the NBP monetary policy in liquidity absorption (%)

	Share of the average level of NBP bills in liquidity absorption	Share of the average level of repo operations in liquidity absorption	Share of the average level of FX swaps in liquidity absorption	Share of the average level of overnight deposits in liquidity absorption	Share of the average level of marginal lending in liquidity absorption	Total
2008						
I	98,99%	0,00%	0,00%	1,83%	-0,82%	100,00%
II	98,61%	0,00%	0,00%	1,39%	0,00%	100,00%
III	97,47%	0,00%	0,00%	2,53%	0,00%	100,00%
IV	100,28%	0,00%	0,00%	0,20%	-0,47%	100,00%
V	92,17%	0,00%	0,00%	7,83%	0,00%	100,00%
VI	91,77%	0,00%	0,00%	8,23%	0,00%	100,00%
VII	97,93%	0,00%	0,00%	2,09%	-0,01%	100,00%
VIII	94,00%	0,00%	0,00%	6,00%	0,00%	100,00%
IX	84,95%	0,00%	0,00%	15,10%	-0,05%	100,00%
X	107,86%	-51,86%	0,90%	43,10%	0,00%	100,00%
XI	166,45%	-126,87%	7,06%	53,36%	0,00%	100,00%
XII	207,24%	-202,64%	22,35%	73,07%	-0,03%	100,00%

Annex 4. Tenders for NBP bills

	Tender data	Maturity date	Maturity period (days)	Nominal value of sales offers (PLN mln)	Nominal value of offers to buy (PLN mln)	Nominal value of accepted offers (PLN mln)	Average yield on bills (annual) (365/360)
1	2008-01-04	2008-01-11	7	11 000,00	11 488,90	11 000,00	5,00%
2	2008-01-11	2008-01-18	7	13 500,00	10 689,10	10 689,10	5,00%
3	2008-01-18	2008-01-25	7	15 500,00	16 038,10	15 500,00	5,00%
4	2008-01-25	2008-02-01	7	15 000,00	14 095,30	14 095,30	5,00%
5	2008-02-01	2008-02-08	7	15 100,00	16 768,08	15 100,00	5,25%
6	2008-02-08	2008-02-15	7	13 300,00	16 703,84	13 300,00	5,25%
7	2008-02-15	2008-02-22	7	13 500,00	18 733,15	13 500,00	5,25%
8	2008-02-22	2008-02-29	7	14 000,00	15 253,96	14 000,00	5,25%
9	2008-02-29	2008-03-07	7	15 700,00	16 910,67	15 700,00	5,50%
10	2008-03-07	2008-03-14	7	14 600,00	13 555,60	13 555,60	5,50%
11	2008-03-14	2008-03-21	7	13 000,00	12 397,00	12 397,00	5,50%
12	2008-03-21	2008-03-28	7	14 700,00	15 759,75	14 700,00	5,50%
13	2008-03-28	2008-04-04	7	16 000,00	12 470,60	12 470,60	5,75%
14	2008-04-04	2008-04-11	7	11 000,00	13 202,30	11 000,00	5,75%
15	2008-04-11	2008-04-18	7	15 000,00	14 652,70	14 652,70	5,75%
16	2008-04-18	2008-04-25	7	12 000,00	13 304,50	12 000,00	5,75%
17	2008-04-25	2008-05-02	7	13 000,00	13 052,22	13 000,00	5,75%
18	2008-05-02	2008-05-09	7	10 000,00	9 580,00	9 580,00	5,75%
19	2008-05-09	2008-05-16	7	9 000,00	5 134,94	5 134,94	5,75%
20	2008-05-16	2008-05-23	7	10 600,00	10 900,24	10 600,00	5,75%
21	2008-05-23	2008-05-30	7	9 500,00	8 533,93	8 533,93	5,75%
22	2008-05-30	2008-06-06	7	10 000,00	16 918,30	10 000,00	5,75%
23	2008-06-06	2008-06-13	7	8 000,00	7 198,20	7 198,20	5,75%
24	2008-06-13	2008-06-20	7	8 000,00	5 492,40	5 492,40	5,75%
25	2008-06-20	2008-06-27	7	13 500,00	13 541,27	13 500,00	5,75%
26	2008-06-27	2008-07-04	7	12 700,00	6 129,80	6 129,80	6,00%
27	2008-07-04	2008-07-11	7	16 000,00	12 158,33	12 158,33	6,00%
28	2008-07-11	2008-07-18	7	18 000,00	20 810,50	18 000,00	6,00%
29	2008-07-18	2008-07-25	7	14 000,00	12 674,40	12 674,40	6,00%
30	2008-07-25	2008-08-01	7	12 900,00	18 130,40	12 900,00	6,00%
31	2008-08-01	2008-08-08	7	11 000,00	14 741,20	11 000,00	6,00%
32	2008-08-08	2008-08-14	6	12 000,00	12 596,30	12 000,00	6,00%
33	2008-08-14	2008-08-22	8	11 500,00	11 601,60	11 500,00	6,00%
34	2008-08-22	2008-08-29	7	10 500,00	12 214,40	10 500,00	6,00%
35	2008-08-29	2008-09-05	7	14 800,00	7 560,10	7 560,10	6,00%
36	2008-09-05	2008-09-12	7	14 000,00	14 457,00	14 000,00	6,00%
37	2008-09-12	2008-09-19	7	12 500,00	11 617,10	11 617,10	6,00%
38	2008-09-19	2008-09-26	7	13 900,00	8 023,50	8 023,50	6,00%
39	2008-09-26	2008-10-03	7	15 000,00	18 567,83	15 000,00	6,00%
40	2008-10-03	2008-10-10	7	12 300,00	9 757,90	9 757,90	6,00%
41	2008-10-10	2008-10-17	7	5 000,00	7 683,20	5 000,00	6,00%
42	2008-10-17	2008-10-24	7	0,00	7 394,50	7 394,50	6,00%
43	2008-10-24	2008-10-31	7	0,00	10 932,50	10 932,50	6,00%
44	2008-10-31	2008-11-07	7	0,00	6 294,20	6 294,20	6,00%
45	2008-11-07	2008-11-14	7	0,00	13 071,00	13 071,00	6,00%
46	2008-11-14	2008-11-21	7	0,00	10 866,50	10 866,50	6,00%
47	2008-11-21	2008-11-28	7	0,00	14 629,12	14 629,12	6,00%
48	2008-11-25	2008-11-28	3	0,00	190,00	190,00	6,00%
49	2008-11-28	2008-12-05	7	0,00	10 935,90	10 935,90	5,75%
50	2008-12-05	2008-12-12	7	0,00	9 997,90	9 997,90	5,75%
51	2008-12-10	2008-12-12	2	0,00	3 649,00	3 649,00	5,74%
52	2008-12-12	2008-12-19	7	0,00	15 529,11	15 529,11	5,75%
53	2008-12-19	2008-12-24	5	0,00	18 197,80	18 197,80	5,75%
54	2008-12-24	2009-01-02	9	0,00	10 213,30	10 213,30	5,00%
	Total in 2008:			520 600,00	652 999,44	606 421,73	

* - date of payment for NBP bills on the tender day

** - from 17 October 2008 NBP bills were sold without pool

*** - on 25 November 2008 NBP bills with a 3-day maturity were sold as a part of fine-tuning operations

*** - on 10 December 2008 NBP bills with a 2-day maturity were sold as a part of fine-tuning operations.

Annex 5 Tenders for repo operations

	Tender date	Maturity date	Type of repo (in days)	Nominal value of offers to buy (PLN mln)	Nominal value of sales offers (PLN mln)	Nominal value of accepted offers (PLN mln)	Min. Rate	Aver. Rate	Max. Rate	Discount Rate (%)
1	2008-10-17	2008-10-23	6	without pool	9809,9	9809,9	6,09	6,17	6,40	11,00%
2	2008-10-21	2008-11-06	14	without pool	9266,7	9266,7	6,15	6,16	6,25	11,00%
3	2008-11-04	2009-02-05	91	without pool	4746,1	4746,1	6,25	6,25	6,35	12,00%
4	2008-11-12	2009-02-12	91	without pool	5030,3	5030,3	6,25	6,25	6,27	12,00%
5	2008-12-09	2009-03-12	91	without pool	2717,3	2717,3	6,00	6,09	6,40	12,00%
6	2008-12-16	2009-01-15	28	without pool	2758,9	2758,9	5,95	5,95	5,99	12,00%

* - payment date T+2 (only on 12 November T+1)

** - from 17 October 2008 banks were supplied to the amount of notified demand (without pool)

Annex 6. Banks – Money Market Dealers in 2008

Starting from 1 January 2006 the access to the basic open market operations was granted to any bank which:

- participated in the SORBNET system;
- had an account with the Securities Register maintained with the NBP;
- had ELBON application.

The rules for the participation in the basic open market operations are set forth in the *Regulations for the NBP maintenance of securities' accounts and depositories and for the handling of operations on securities and their registration on accounts and depositories thereof* introduced by way of Resolution No. 29/2003 of the NBP Management Board of 12 September 2003 (as amended).

At the same time it was assumed that the access to the fine-tuning operations would be granted to the most active banks in the money and FX markets, which entered into agreements on performing the function of a Money Market Dealer with the National Bank of Poland.

The other functions of Money Market Dealers are as follows:

- participation in the fixing of WIBOR and WIBID reference rates;
- provision of information to the NBP about the overnight transactions concluded on a given day, on the basis of which the POLONIA rate is fixed;
- provision of information and data to the NBP about the current and forecasted liquidity of the bank and about the situation in the money, FX and bond markets.

From 17 October 2008 the NBP began to carry out repo operations supplying liquidity to the banking sector under the so-called "Confidence package". The counterparties to those operations included 13 banks – Money Market Dealers.

According to the decision of the Management Board of the NBP, starting from 7 November 2008 repo operations could be conducted with all banks which met the criteria essential to partake in basic operations.

Candidates for the Money Market Dealers are evaluated by the NBP on the basis of the uniform criteria of the Dealer Activity Index (IAD), covering the following issues:

- bank's offer and settlement potential;
- bank's activity in the interbank deposit market;
- bank's activity in the repo and sell/buy/back market;
- bank's activity in the interest rate derivatives (FRA, IRS) and in the FX swap markets.

Money Market Dealers in 2008:

1. PKO Bank Polski S.A.
2. Bank Handlowy w Warszawie S.A.
3. ING Bank Śląski S.A.
4. Bank BPH S.A.
5. Bank Zachodni WBK SA
6. Bank Gospodarstwa Krajowego
7. BRE BANK S.A.
8. Bank Millennium SA
9. Bank PEKAO SA
10. Kredyt Bank SA
11. Societe Generale SA Oddział w Polsce
12. Bank Gospodarki Żywnościowej S.A.
13. BNP Paribas S.A. Branch in Poland

Annex 7. Daily information (as at month-end)

Items	XII 2007	I 2008	II 2008	III 2008	IV 2008	V 2008	VI 2008	VII 2008	VIII 2008	IX 2008	X 2008	XI 2008	XII 2008
(mln PLN)													
CENTRAL BUDGET:													
revenues	240 853,43	14 974,40	45 374,05	67 537,52	93 941,34	110 684,18	129 197,96	153 001,79	175 810,74	195 134,68	216 697,15	238 244,06	258 030,48
expenditures	252 907,22	18 355,64	43 562,86	62 937,21	90 150,40	110 777,23	131 154,26	153 702,46	173 386,08	196 675,60	225 418,89	250 103,02	278 931,66
deficit(-)/surplus(+)	-12 053,79	-3 381,24	1 811,20	4 600,31	3 790,94	-93,06	-1 956,29	-700,68	2 424,66	-1 540,93	-8 721,75	-11 858,96	-20 901,18
central budget funds	13 282,40	1 174,89	1 816,80	1 686,78	1 336,94	1 237,45	1 445,06	1 265,22	1 425,29	1 398,08	1 088,12	1 365,58	10 529,57
MF foreign currency account	612,01	494,41	478,96	23,05	1 019,50	484,22	7 089,59	5 231,54	4 382,85	326,19	214,32	0,06	0,00
MF zloty term deposits	0,00	4 160,00	4 500,00	4 200,00	3 050,00	4 070,00	1 200,00	4 440,00	4 410,00	3 260,00	3 400,00	3 500,00	0,00
CURRENCY IN CIRCULATION	85 994,30	82 781,64	83 364,41	85 405,05	88 629,32	88 439,40	89 974,90	90 944,14	91 929,96	91 001,54	100 950,93	99 440,82	102 134,71
CURRENT ACCOUNT													
balance deviation from required reserve	16 998,12	19 612,84	15 805,98	17 110,60	15 704,20	10 516,54	24 064,10	17 716,99	17 370,47	19 025,99	27 832,19	10 478,15	24 075,23
REFINANCING LOAN	3 398,59	1 856,00	1 864,80	2 633,45	1 762,10	1 771,03	1 660,31	1 683,77	1 677,23	1 567,18	1 575,16	1 582,89	3 797,78
marginal lending	1 552,00	0,00	0,00	880,00	0,00	0,00	0,00	15,00	0,00	0,00	0,00	0,00	2 317,74
rediscount	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
INTRADAY CREDIT	12 842,08	13 180,96	12 575,15	13 498,86	13 511,42	12 953,98	14 868,79	15 726,84	14 481,70	16 816,14	16 004,80	15 112,07	18 098,49
DEPOSIT FACILITY	301,48	1,56	1,60	1,09	1,79	7 691,59	18,46	40,25	6 914,53	548,05	532,00	16 007,53	501,00
OPEN MARKET OPERATIONS*/	7 768,80	14 095,30	15 700,00	12 470,60	13 000,00	10 000,00	6 129,80	12 900,00	7 560,10	15 000,00	-2 177,51	1 756,72	-2 900,11
repo (-)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	9 266,66	9 776,40	15 252,62
NBP money market bills 7 days (+)	7 768,80	14 095,30	15 700,00	12 470,60	13 000,00	10 000,00	6 129,80	12 900,00	7 560,10	15 000,00	6 294,20	10 935,90	10 213,30
POLONIA turnover	6,47%	5,25%	5,60%	5,89%	6,07%	4,47%	6,08%	6,07%	5,16%	6,53%	6,02%	4,45%	6,39%
1 462,00	5 226,00	4 376,00	2 825,00	3 847,00	4 594,00	1 896,00	3 290,00	2 820,00	2 740,00	2 050,00	180,00	677,00	
WIBOR													
O/N	6,63%	5,36%	5,67%	5,94%	6,13%	4,68%	6,18%	6,17%	6,27%	6,83%	6,28%	4,92%	6,53%
T/N	5,30%	5,37%	5,68%	5,94%	6,13%	6,02%	6,18%	6,17%	6,22%	6,82%	6,28%	6,01%	5,64%
SW	5,32%	5,39%	5,67%	5,96%	6,10%	6,02%	6,17%	6,17%	6,20%	6,39%	6,29%	6,03%	5,46%
2W	5,37%	5,39%	5,67%	5,97%	6,11%	6,06%	6,22%	6,19%	6,22%	6,40%	6,40%	6,06%	5,48%
1M	5,52%	5,44%	5,72%	6,00%	6,17%	6,21%	6,29%	6,24%	6,25%	6,42%	6,55%	6,31%	5,61%
3M	5,68%	5,65%	5,94%	6,15%	6,34%	6,48%	6,65%	6,56%	6,50%	6,63%	6,85%	6,56%	5,88%
12M	6,19%	6,01%	6,37%	6,60%	6,64%	6,70%	6,91%	6,81%	6,65%	6,69%	6,91%	6,66%	5,98%
WIBID													
O/N	6,33%	5,16%	5,46%	5,74%	5,86%	4,38%	5,93%	5,96%	5,99%	6,53%	5,98%	4,62%	6,23%
T/N	5,00%	5,17%	5,47%	5,74%	5,85%	5,77%	5,95%	5,96%	5,98%	6,52%	5,98%	5,71%	5,34%
SW	5,12%	5,19%	5,49%	5,77%	5,90%	5,82%	6,00%	5,98%	6,00%	6,19%	6,09%	5,83%	5,26%
2W	5,18%	5,19%	5,49%	5,77%	5,91%	5,86%	6,02%	5,99%	6,03%	6,20%	6,20%	5,86%	5,28%
1M	5,32%	5,24%	5,53%	5,80%	5,97%	6,01%	6,09%	6,05%	6,05%	6,22%	6,35%	6,11%	5,41%
3M	5,48%	5,45%	5,74%	5,95%	6,14%	6,28%	6,45%	6,36%	6,30%	6,43%	6,65%	6,36%	5,68%
12M	5,99%	5,81%	6,17%	6,40%	6,44%	6,50%	6,71%	6,61%	6,45%	6,49%	6,71%	6,46%	5,78%
USD/PLN (fix)	2,4350	2,4438	2,3155	2,2305	2,2267	2,1824	2,1194	2,0509	2,2691	2,3708	2,8472	2,9196	2,9618
EUR/PLN (fix)	3,5820	3,6260	3,5204	3,5258	3,4604	3,3788	3,3542	3,2026	3,3460	3,4083	3,6330	3,7572	4,1724
EUR/USD	1,4710	1,4838	1,5204	1,5807	1,5540	1,5482	1,5826	1,5616	1,4746	1,4376	1,2760	1,2869	1,4087
official reserve assets													
(as at the end of the month)													
mln PLN	160 090,10	167 557,80	167 885,40	171 671,80	176 096,60	172 192,40	174 944,00	174 247,00	185 157,10	175 975,30	181 786,98	185 079,30	184 165,20
mln EUR	44 692,90	46 210,10	47 689,30	48 690,20	50 889,10	50 962,60	52 156,70	54 408,00	55 336,80	51 631,40	50 037,70	49 259,90	44 138,90
(-purchase) sale of foreign currency	712,17	2 294,26	53,03	2 093,08	-1 766,60	170,41	-781,26	-3 958,19	-2 121,50	-739,30	-1 648,45	-509,59	518,87
*/ - Open market operations are reported as at nominal value.													