

**Annual Report 2011**

**Banking Sector Liquidity**

**Monetary Policy Instruments of the National Bank of Poland**



# Table of contents

INTRODUCTION.....	5
<b>1. BANKING SECTOR LIQUIDITY.....</b>	<b>9</b>
<b>1.1. LIQUIDITY DEVELOPMENTS IN 2011.....</b>	<b>9</b>
<b>1.2. IMPACT OF AUTONOMOUS FACTORS ON CHANGES IN BANKING SECTOR LIQUIDITY .....</b>	<b>12</b>
<b>1.2.1. Purchase and Sale of Foreign Currencies by the NBP .....</b>	<b>12</b>
<b>1.2.2. Currency in Circulation.....</b>	<b>15</b>
<b>1.2.3. Public Sector Deposits held with the Central Bank.....</b>	<b>17</b>
<b>2. MONETARY POLICY INSTRUMENTS.....</b>	<b>21</b>
<b>2.1. INTEREST RATE .....</b>	<b>21</b>
<b>2.2. RESERVE REQUIREMENT .....</b>	<b>21</b>
<b>2.3. OPEN MARKET OPERATIONS.....</b>	<b>23</b>
<b>2.3.1. Main Operations .....</b>	<b>23</b>
<b>2.3.2. Fine-tuning Operations.....</b>	<b>24</b>
<b>2.3.3. Structural Operations .....</b>	<b>25</b>
<b>2.4. STANDING FACILITIES.....</b>	<b>25</b>
<b>2.5. OTHER OPERATIONS.....</b>	<b>26</b>
<b>3. POLONIA RATE.....</b>	<b>27</b>
<b>GLOSSARY.....</b>	<b>31</b>
<b><i>Annex 1. Volatility of the shortest interest rates in the interbank market against changes in open market operations in 1998-2011 .....</i></b>	<b><i>35</i></b>
<b><i>Annex 2. NBP monetary policy instruments in 1990 – 2011 .....</i></b>	<b><i>36</i></b>
<b><i>Annex 3. Tenders for the NBP bills in 2011 – main operations .....</i></b>	<b><i>37</i></b>
<b><i>Annex 4. Tenders for the NBP bills in 2011 – fine-tuning operations.....</i></b>	<b><i>38</i></b>
<b><i>Annex 5. Agreements with the Ministry of Finance .....</i></b>	<b><i>38</i></b>
<b><i>Annex 6. Banks – Money Market Dealers in 2011:.....</i></b>	<b><i>39</i></b>
<b><i>Annex 7. Daily information (as at the month-end).....</i></b>	<b><i>40</i></b>



## Introduction

In 2011, the monetary policy of the National Bank of Poland was pursued in accordance with the *Monetary Policy Guidelines for 2011*. The key objective of the policy, similarly to the previous years, was to maintain inflation at 2.5% in a mid-term horizon while supporting the sustainable economic growth.

The short-term interest rate is the monetary policy's primary instrument. By setting the NBP basic interest rates, the Monetary Policy Council determines the profitability of the monetary policy instruments. Changes in the NBP reference rate set the course of the monetary policy and affect the market rates. The deposit rate and the lombard rate determine the fluctuation band for overnight interest rates in the interbank market, symmetric to the reference rate.

In 2011, the Monetary Policy Council increased the NBP basic interest rates four times, including the reference rate, within the corridor for fluctuations in short-term market rates of +/- 1.5 percentage points. As of the end of 2011, the reference rate stood at 4.50%, the deposit rate at 3.0% and the lombard rate at 6.0%.

The NBP manages the banking sector liquidity and implements the adopted monetary policy guidelines by carrying out open market operations. In 2011, the main open market operations involved the issuance of 7-day NBP bills, on a regular basis, while fine-tuning operations consisted in the irregular issuance of NBP bills with shorter maturities. The yield on those securities was determined at the level of the NBP reference rate.

Access to all main and fine-tuning open market operations was granted to the banks complying with the terms and conditions set by the NBP, whereas access to main operations was also granted to the Bank Guarantee Fund.

In 2011, fifteen commercial banks most active in the money market and foreign currency markets had the Status of a Money Market Dealer.

In 2011, short-term liquidity of the banking sector averaged PLN 95,928 million, as compared with PLN 70,907 million in 2010. Thus, the annual average liquidity rose by PLN 25,021 million.

In 2011, commercial banks made use of standing facilities put at their disposal by the NBP, which facilitated current liquidity management. Banks were able to cover liquidity shortages via marginal lending facilities and to deposit excess funds with the NBP via deposit facility.

**Table 1. Open market operations, repo operations, FX swaps and standing facilities in 2001 – 2011 (in PLN millions)**

Period	NBP bills	Repos	FX swaps	Standing facilities		
				Deposit facility	Marginal lending facility	Balance (deposit - credit)
2011	95 217	0	0	711	0	711
2010	74 968	5 097	0	1 036	0	1 036
2009	31 873	11 456	1 076	2 461	14	2 447
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

- the values are quoted in annualized terms in the reserve maintenance periods

Source: NBP

The reserve requirement system was an instrument used by the NBP in order to moderate the fluctuations of short-term interest rates and stabilize the banking sector liquidity. The banks were obligated to maintain an average balance of funds in their accounts with the NBP in each reserve maintenance period at a level not lower than the amount of the required reserve. In 2011, the reserve requirement ratio remained unchanged and amounted to 3.5%.

In comparison with 2010, the volatility of market interest rates in 2011 was lower. There was also a decrease in the volatility of the POLONIA rate, measured by standard deviation. The average absolute POLONIA's deviation from the reference rate was 43 bps in 2011 versus 69 bps in 2010, while its volatility stood at 34 bps versus 38 bps.

In order to curb the volatility of the POLONIA rate, in 2011 the NBP carried out fine-tuning operations in the form of the issuance of short-term NBP bills.

**Table 2. Market rates in 2001 – 2011**

Period	Average reference rate (%)	Deviation of rates from reference rate in basis points (annual average)					Average deviation of banks' current accounts from required reserve (PLN mln)
		O/N	SW	2W	1M	POLONIA	
2011	4,22	21	3	3	9	43	21
2010	3,50	49	17	10	7	69	16
2009	3,77	69	23	14	11	89	27
2008	5,72	30	16	19	30	32	38
2007	4,40	19	9	11	16	23	36
2006	4,06	10	6	6	7	16	35
2005	5,34	21	6	6	9	29	28
2004	5,79	40	11	10	15		24
2003	5,67	28	8	7	9		25
2002	8,82	90	60		32		43
2001	16,13	142			42		151

- average reference rate was weighted by its duration

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

Source: NBP

Changes in autonomous factors influencing the liquidity of the banking sector resulted in fluctuations, often significant, of the level of the banking sector's liquidity in each month. An increase in liquidity specifically stemmed from such factors as purchase of foreign currencies by the NBP and transfer of payment from the NBP's profit to the State Budget.

On the other hand, the principal factors conducive to reducing the level of liquidity included an increase in currency in circulation and increase in the required reserve of banks.

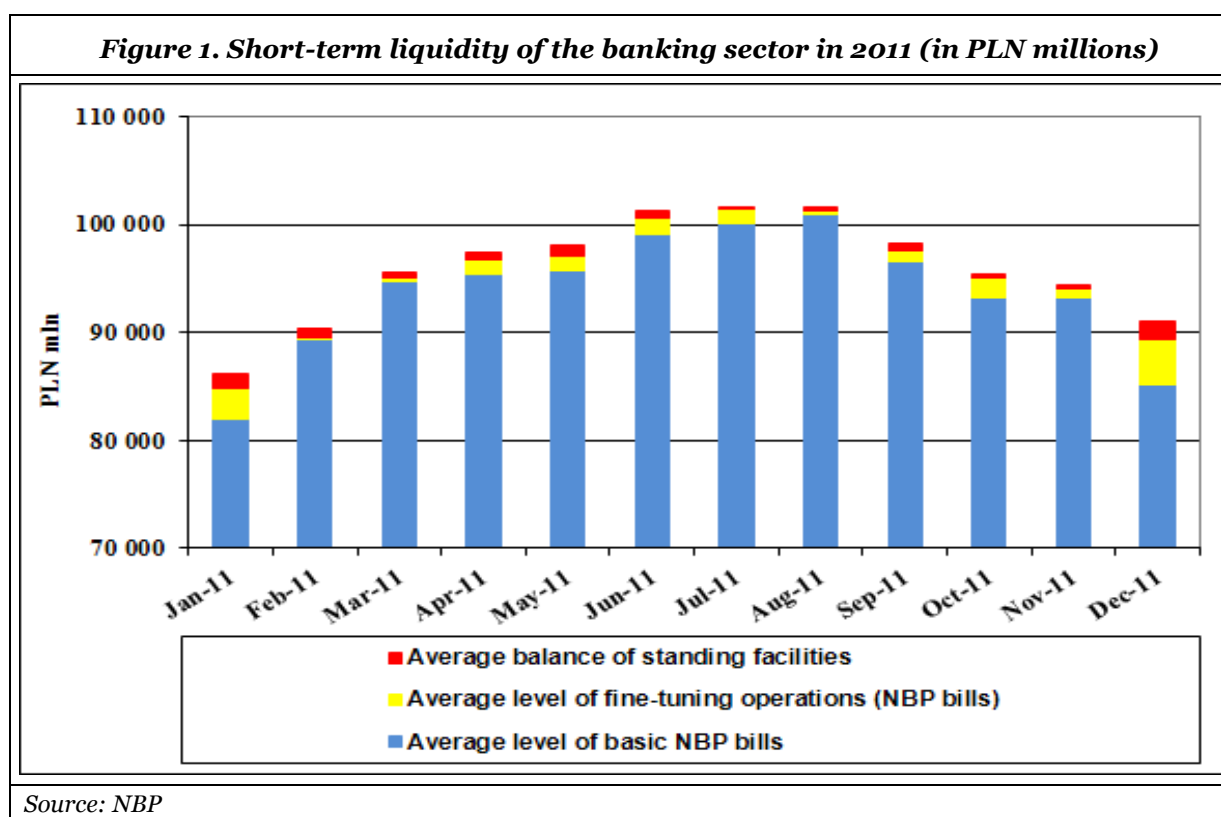




# 1. Banking Sector Liquidity

## 1.1. Liquidity Developments in 2011

In 2011, a short-term liquidity of the banking sector (accounting for the issuance of NBP bills and standing facilities) demonstrated considerable volatility in individual months as a result of the volatility of autonomous factors. In the first half of the year the short-term liquidity was increasing gradually and in June 2011 it stood at PLN 101,213 million on the average (i.e. an increase of PLN 16,700 million compared to December 2010). In subsequent months the banking sector surplus liquidity was declining and reached the level of PLN 90,962 million on average in December. The following figure shows the development of short-term liquidity in average monthly terms.



In December 2011, the average level of short-term liquidity of the banking sector was higher by PLN 6,449 million in comparison with December 2010.

The most important autonomous factors contributing to liquidity growth included the purchase of foreign currencies by the NBP with funds from the European Union budget (structural funds, Common Agricultural Policy) and purchase of foreign currencies from the Ministry of Finance's foreign currency account maintained with the NBP (the total balance of the purchase and sale of foreign currencies increased the liquidity of the banking sector on average, December 2011 to December 2010, by PLN 11,598 million). It should be noted that a high volume of the purchase of foreign currencies by the NBP was observed in the period from January to April 2011, while from May this purchase was considerably lower as the Ministry of Finance started to exchange foreign currencies on a larger scale in the money market in Poland and not, as previously, in the central bank.

The increase in the banking sector's liquidity was driven by the amount paid from the 2010 profit of the National Bank of Poland to the State Budget on 21 June 2011 in the amount of PLN 6,203 million, as well as by the consolidation of liquidity management of the public finance sector (in May 2011 amendments to the *Public Finance Act* entered into force). Earmarked State funds, social security funds and certain other budget entities are now required to transfer disposable financial resources from accounts in the National Bank of Poland to be managed by or deposited with the Minister of Finance (into accounts in Bank Gospodarstwa Krajowego (BGK)). The consolidation process contributed to the increase in surplus liquidity in the banking sector (in December 2011, the average level of deposits of the above mentioned institutions on accounts with the NBP was lower by PLN 1,030 million compared to April 2011).

The increase in the level of currency in circulation contributed to the reduction in the surplus liquidity in 2011 (its annual growth rate amounted to 8.1% in December 2011). A particularly rapid growth in currency in circulation was recorded in the second half of the year and, consequently, in December the average level was higher by PLN 7,459 million compared to June.

Another important constraint of surplus liquidity was an increase in the average level of the banks' reserve requirements, resulting from the Monetary Policy Council raising the reserve requirement ratio from the beginning of 2011 from 3.0% to 3.5% and an increase in the value of domestic and foreign currency deposits which constitute the basis for calculating the reserve requirement.

In order to absorb surplus liquidity, the central bank was issuing NBP bills with a 7-day maturity as main open market operations (the average value in 2011 was PLN 93,764 million), and NBP bills with shorter maturities as fine-tuning operations (the average value in 2011 amounted to PLN 1,453 million).

Whereas in a number of tenders banks' demand for the NBP bills was smaller than the supply predetermined in accordance with the forecast of the banking sector liquidity, in 2011 the banks located the deposit facility with the NBP, which averaged PLN 711 million over the year. In a situation when banks purchased smaller amounts of the NBP bills than those offered on the tender, the remaining surplus liquidity in the interbank market caused the POLONIA rate to fall below the NBP reference rate. In order to achieve an increase in the POLONIA rate, irregular fine-tuning operations in the form of the issuance of the NBP bills with maturities of less than 7 days have been executed since December 2010. They aim at limiting the impact of changes in liquidity conditions in the banking sector on the level of short-term interest rates. As from June 2011, additional fine-tuning operations were executed every month on the last day of the required reserve maintenance period. The modification of the rules of executing fine-tuning operations contributed to a significant reduction in the deviation of the POLONIA rate from the NBP reference rate in 2011 (by 26 basis points compared to 2010).

As the situation in foreign markets continued to be difficult, banks operating in Poland remained reluctant to provide unsecured loans in the interbank market. The vast majority of transactions in this market in 2011 was concluded for one day: O/N, T/N and S/N (between 90 - 95% of total turnover).

**Table 3. Absorption of short-term liquidity as part of operations  
executed by the NBP in 2011 (in PLN millions)**

	Average level of NBP bills (7 days)	Average level of NBP bills (1,2,3 and 4 days)	Average level of overnight deposits	Average level of marginal lending facility	Short-term banking sector liquidity
2011	1	2	3	4	1+2+3+4
I	82 029	2 835	1 326	0	86 190
II	89 395	60	947	0	90 402
III	94 723	316	586	-6	95 619
IV	95 433	1 319	732	0	97 484
V	95 743	1 301	1 036	0	98 080
VI	99 156	1 475	582	0	101 213
VII	100 165	1 351	152	0	101 668
VIII	100 901	453	312	0	101 666
IX	96 536	1 128	508	0	98 172
X	93 227	1 826	341	0	95 394
XI	93 213	810	316	0	94 339
XII	85 122	4 178	1 662	0	90 962
on average	93 764	1 453	711	0	95 928

- yearly average figures over required reserve maintenance period  
 "+" - denotes the absorption of zloty liquidity from the banking sector  
 "-" - denotes the supply of zloty liquidity to the banking sector

Source: NBP

## **1.2. Impact of Autonomous Factors on Changes in Banking Sector Liquidity**

### **1.2.1. Purchase and Sale of Foreign Currencies by the NBP**

In 2011, transactions of purchase and sale of foreign currencies by the NBP were a factor which affected the banking sector liquidity the most.

Purchase of foreign currencies by the NBP was related to:

- the use of EU aid funds – in the amount of PLN 17,330 million (in 2010, foreign currencies of the value of PLN 37,259 million were purchased),
- exchange for PLN of part of the funds deposited in the Ministry of Finance's foreign currency account with the NBP – in the amount of PLN 6,836 million (in 2010, foreign currencies of the value of PLN 16,703 million were purchased),
- services provided to the central government entities whose accounts are maintained with the NBP – in the amount of PLN 1,314 million,
- exchange of funds originating from loans granted by international financial organisations and repayments of loans granted to governments of other states – in the amount of PLN 368 million,
- exchange for PLN of some proceeds from bonds issued on foreign markets – in the amount of PLN 159 million.

The purchase of foreign currencies by the NBP, for the first two reasons mentioned above, was markedly lower in comparison with the previous year. This was due to the commencement at the end of April 2011 by the Ministry of Finance of a regular sale of a part of EU foreign currency funds directly in the domestic foreign exchange market. This change also resulted in a rapid slowdown of the fast growth in banking sector surplus liquidity originating from the sale of foreign currencies by the MF to the NBP. At the same time, from May 2011 the Ministry of Finance reduced the sale to the NBP of foreign currencies deposited on the MF currency account with the central bank.

Sale of foreign currencies by the NBP was a result of:

- exchange for foreign currency of the membership fee paid into the account of the European Commission (EC) – in the amount of PLN 14,860 million (as compared to PLN 15,185 million in 2010),
- services provided to the central government entities whose accounts are maintained with the NBP – in the amount of PLN 2,284 million.

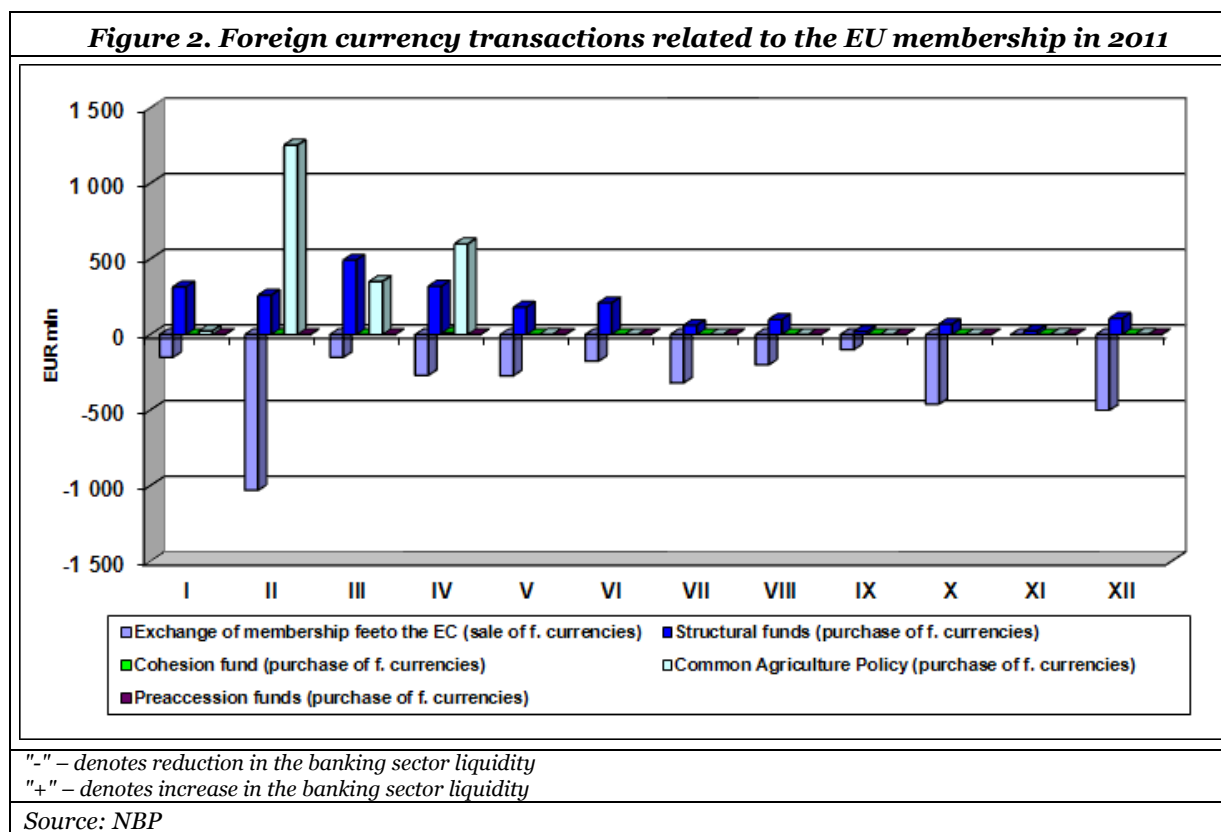
### **FX operations carried out by the central bank under the purchase and sale of foreign currencies in 2011**

Transactions related to the membership in the European Union

The EU funds, deposited in the EUR accounts with the NBP, remain at the disposal of the Ministry of Finance. The funds are earmarked for programmes and projects relating to the regional development of Poland. The majority of funds are used by the end beneficiary in PLN, upon their conversion into the domestic currency in the central bank or in the market.

In 2011, the NBP exchanged for zloty the funds received by Poland as part of the Common Agricultural Policy (CAP) and structural funds. The former were converted into the domestic currency in the central bank in the first four months of the year, while in subsequent months these transactions were executed in the market. Structural funds were converted into PLN in the NBP (in the first quarter the conversion accounted for 50% of annual conversions in the central bank). In subsequent quarters the value of foreign currencies converted into the domestic currency was declining (in Q2 – 33%, in Q3 – 8% and in Q4 – 9%). In the case of the Cohesion Fund, over 90% of funds were supplied by the NBP in EUR. This implies that in the following phase the funds were exchanged into PLN by commercial banks or payments under specific projects were made in EUR.

The sale of foreign currencies by the NBP concerned mainly the conversion of Poland's membership fee paid to the EU budget. Such a conversion facilitates the transfer of funds by the EC to accounts with other central banks of Member States from which aid fund accounts are subsequently credited. In 2011, the transactions of converting the membership fee into EUR represented an equivalent of EUR 3,627 million.



### Foreign operations of the State Treasury

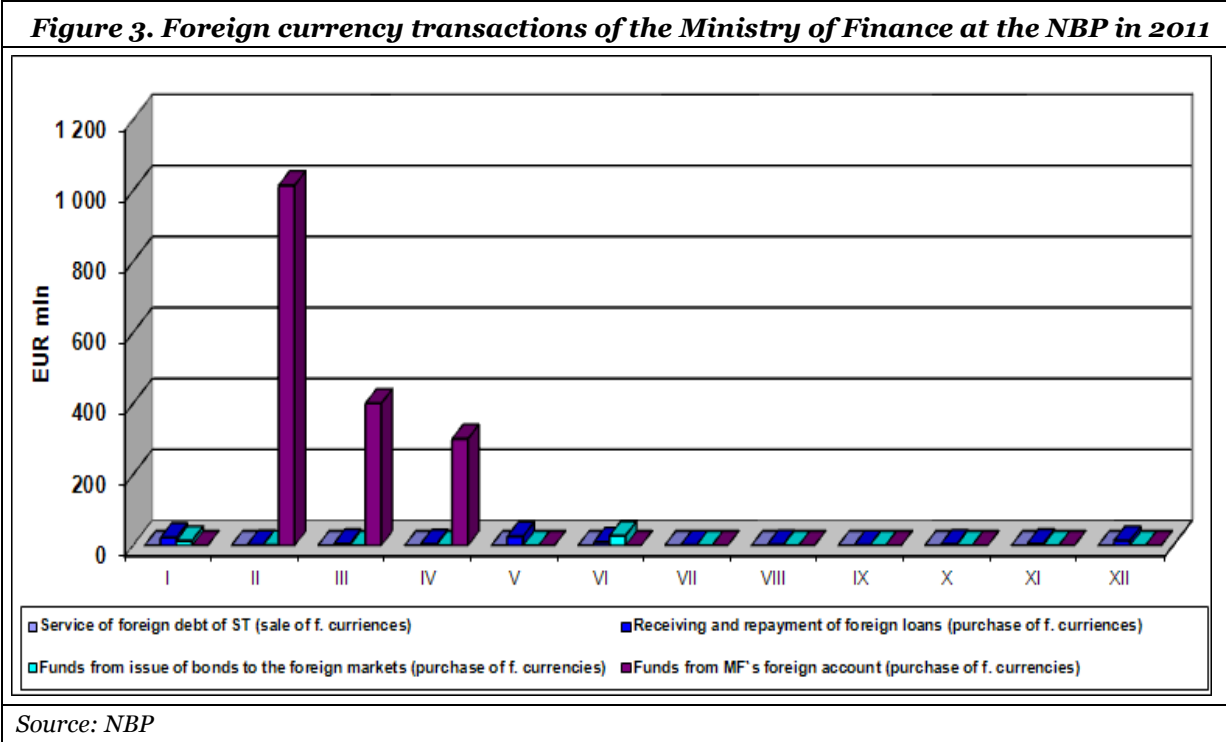
In 2011, as in the previous year, the Ministry of Finance did not purchase foreign currencies at the NBP. The State Treasury's foreign liabilities were settled with the funds of the MF's foreign currency account with the central bank. The account was mostly provided with proceeds from the issue of bonds for foreign markets (equivalent to EUR 4,917 million) and loans contracted from international financial institutions (equivalent to EUR 2,190 million).

In 2011, transactions involving the sale of foreign currencies by the MF to the NBP (purchase of foreign currencies by the central bank) represented a significant value. The transactions related to:

- ✓ loans received from international monetary institutions and extended to other states,
- ✓ issuance of bonds in international markets,
- ✓ the use of a part of funds from the MF currency account with the NBP to finance the current budgetary needs.

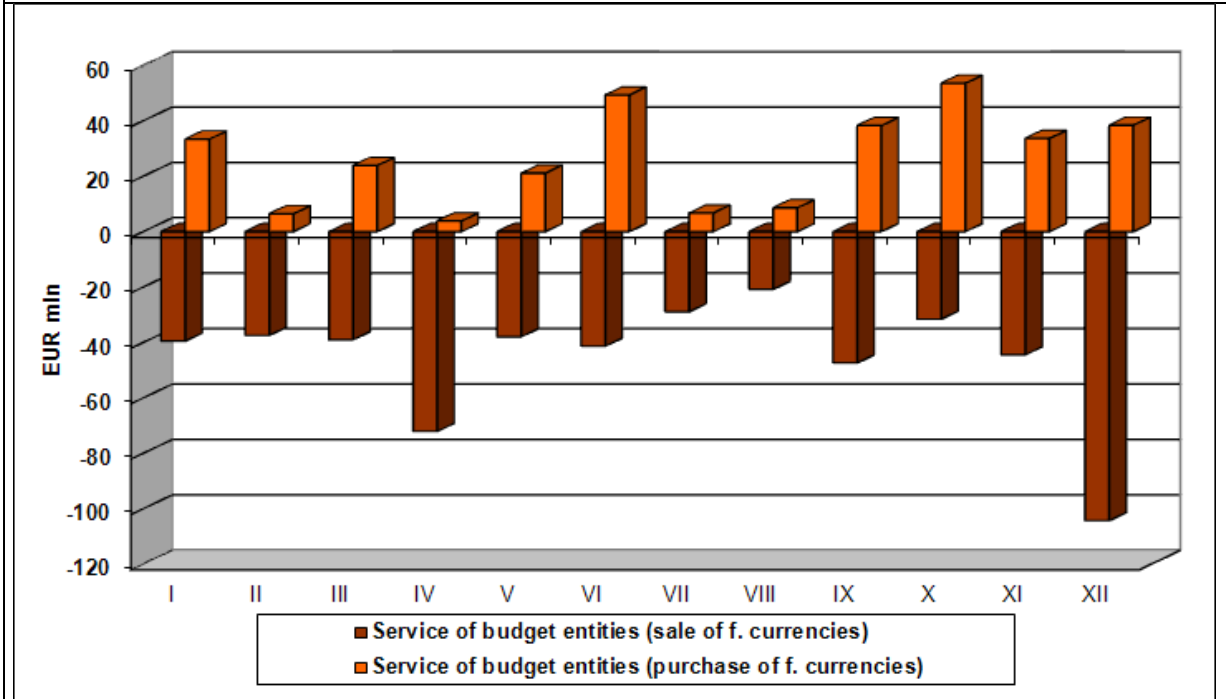
The total volume of these transactions in 2011 amounted to the equivalent of PLN 7,363 million (i.e. EUR 1,845 million).

The Ministry of Finance executed foreign payments with the funds deposited in the foreign currency account as part of servicing claims of the creditors of the Paris Club (EUR 23 million), the London Club (EUR 9 million), and holders of State Treasury foreign bonds (EUR 2,790 million), in respect of foreign loans contracted, payments for shares and other transactions (EUR 1,019 million).



Apart from foreign currency operations related to servicing foreign liabilities and receivables of the State Treasury and transactions involving the use of EU funds, the central bank carried out foreign currency operations with entities authorised to purchase or sell foreign currencies at the central bank under a bank account agreement. In 2011, the value of transactions where the NBP purchased foreign currencies amounted to the equivalent of PLN 1,314 million, while the sale of foreign currencies by the central bank under this category of agreements amounted to the equivalent of PLN 2,284 million.

**Figure 4. Other foreign currency transactions carried out at the NBP in 2011**



"-" – denotes reduction in the banking sector liquidity

"+" – denotes increase in the banking sector liquidity

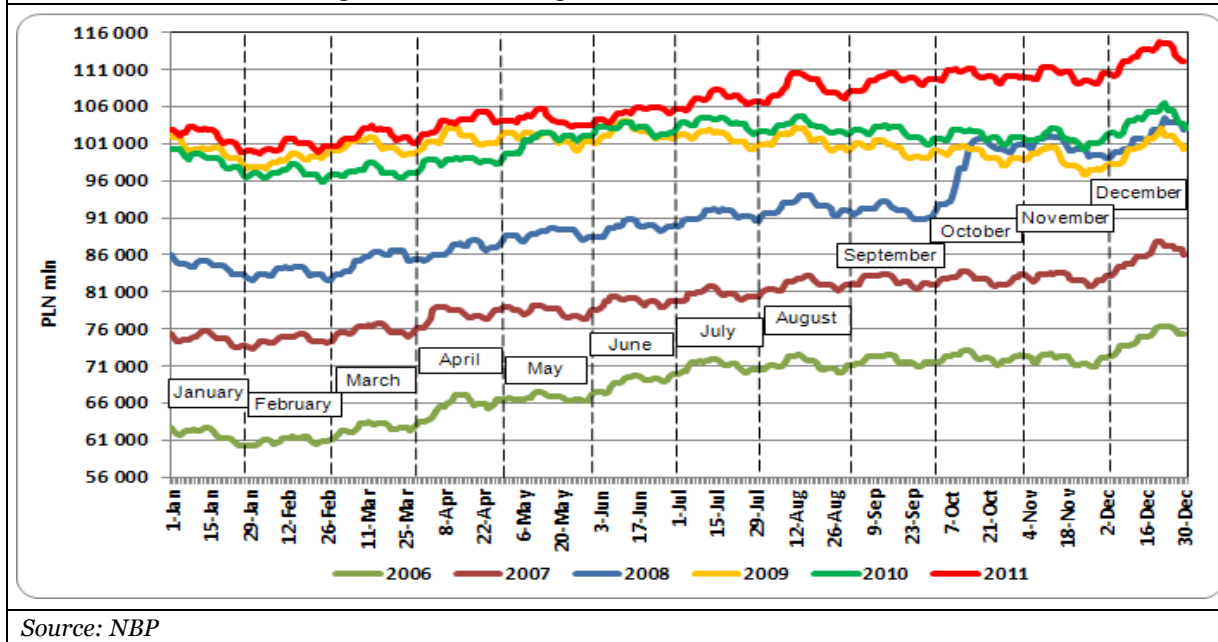
Source: NBP

### 1.2.2. Currency in Circulation

In 2011, currency in circulation reflected the changes in factors of a seasonal nature (significant increases in the currency level before official and summer holidays). Following intensive disturbances in long-term seasonal trends during the crisis, in 2011 changes in the balance of currency in circulation returned to classical trends observed in the years before the crisis and trends observed in 2010.

In 2011, the level of currency in circulation averaged PLN 106,364 million, i.e. the average level increased by PLN 5,207 million or by 5.15% year-on-year. In contrast, this increase a year earlier was only 0.48 %.

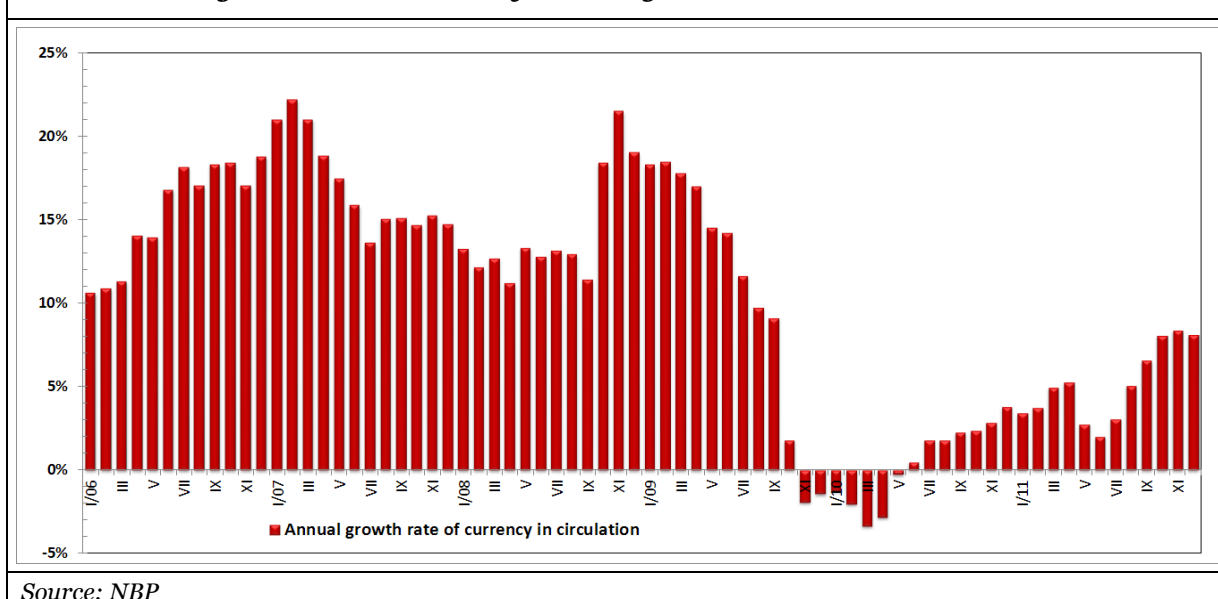
**Figure 5. Currency in circulation 2006 – 2011**



Between January and April and between July and November 2011 the annual growth of currency in circulation systematically was increasing. The greatest value of this ratio was recorded in November (8.38%), while in December 2011 it reached 8.12% year-on-year.

Usually, the greatest increases in currency in circulation are observed in December. In the last month of 2011, currency in circulation increased by PLN 2,314 million on average and was similar to the previous year's level (in 2010, it stood at PLN 2,387 million). The December growth in currency in circulation was of a seasonal nature and resulted from both a higher demand for transactional cash caused by intensive shopping before Christmas and pay-outs of additional bonuses to some groups of employees.

**Figure 6. Growth rate of currency in circulation in 2006 – 2011**





### **1.2.3. Public Sector Deposits held with the Central Bank**

Public sector deposits placed with the central bank include primarily funds held on current accounts, term deposits of the State Budget and deposits of other budget entities.

It should be noted that deposits of other budget entities (other ministries excluding the MF), were moved, in accordance with the new *Public Finance Act*, in the middle of the year from the accounts at the NBP to the accounts at Bank Gospodarstwa Krajowego. As part of the consolidation process of liquidity management of the public finance sector, money of Earmarked State funds and social security funds was transferred in addition to transferring funds of other budget entities. The consolidation process resulted in liquidity rise in the banking sector.

The level of public sector deposits was the result of:

- changes in the volume of budgetary incomes and expenses,
- settlements due to the issue and redemption of State Treasury securities,
- funds originating from the MF's foreign currency account with the NBP converted into PLN,
- limits set for the Ministry of Finance's PLN term deposits with the central bank,
- transfer of funds between Poland and the European Union (including, among others, payment of Poland's membership fee to the EU budget and disbursement of EU funds),
- the degree of using of EU funds,
- payments resulting from the handling of other transactions connected with the State Budget's borrowing needs.

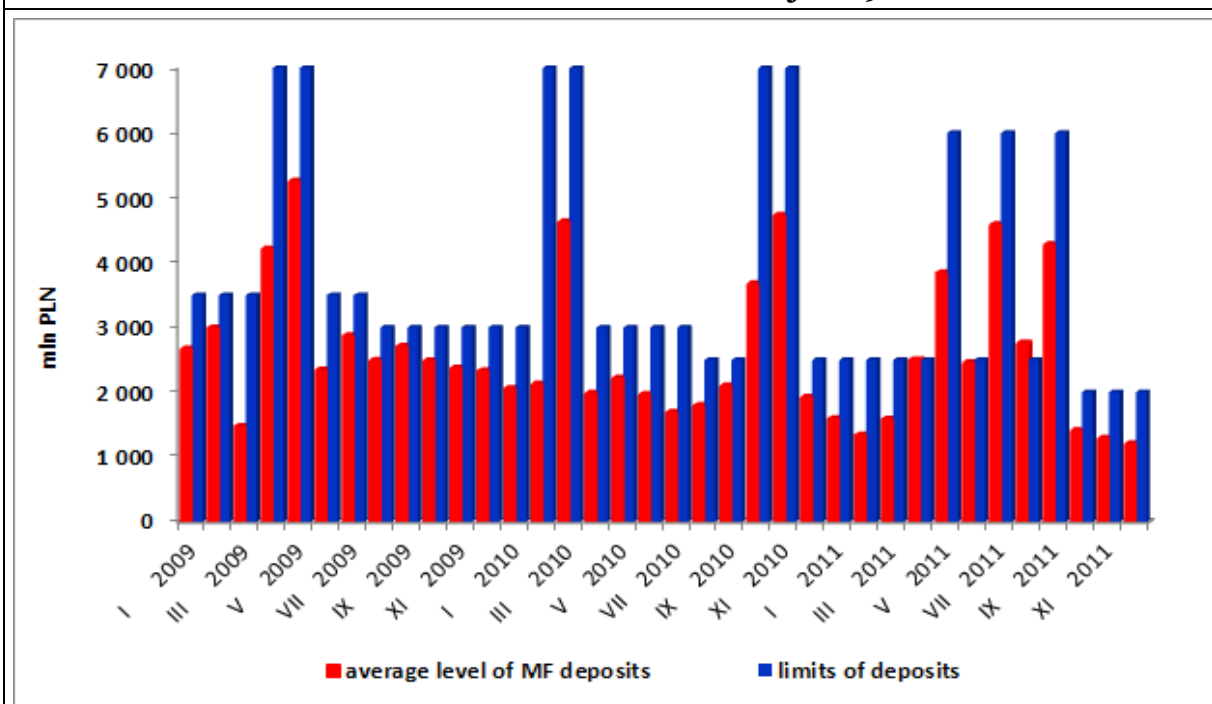
The average level of the public sector deposits in 2011 stood at PLN 5,502 million, i.e. it decreased by PLN 348 million year-on-year (PLN 5,850 million in the previous year).

The level of the public sector deposits maintained on the current accounts with the NBP in the previous year demonstrated a downward trend. In 2011, these stood at PLN 3,072 million (against PLN 3,184 million in 2010).

In 2011, the Ministry of Finance's term deposits with the NBP represented the largest item in the PLN structure of the public sector deposits (on average MF term deposits amounted to PLN 2,400 million throughout the year). In 2011, the share of the Ministry of Finance's PLN term deposits in total budgetary deposits amounted to 43.6%, compared with 43.8% in 2010.

The Ministry of Finance invests surplus funds of the State Budget on a temporary basis in the form of PLN term deposits. The funds were deposited with the National Bank of Poland for a period of 1 to 7 days. The deposits placed for 7 days accounted for nearly 55.7 % of all the deposits.

**Figure 7. Average level of the Ministry of Finance's term deposits with the NBP in consecutive months of 2009 – 2011**



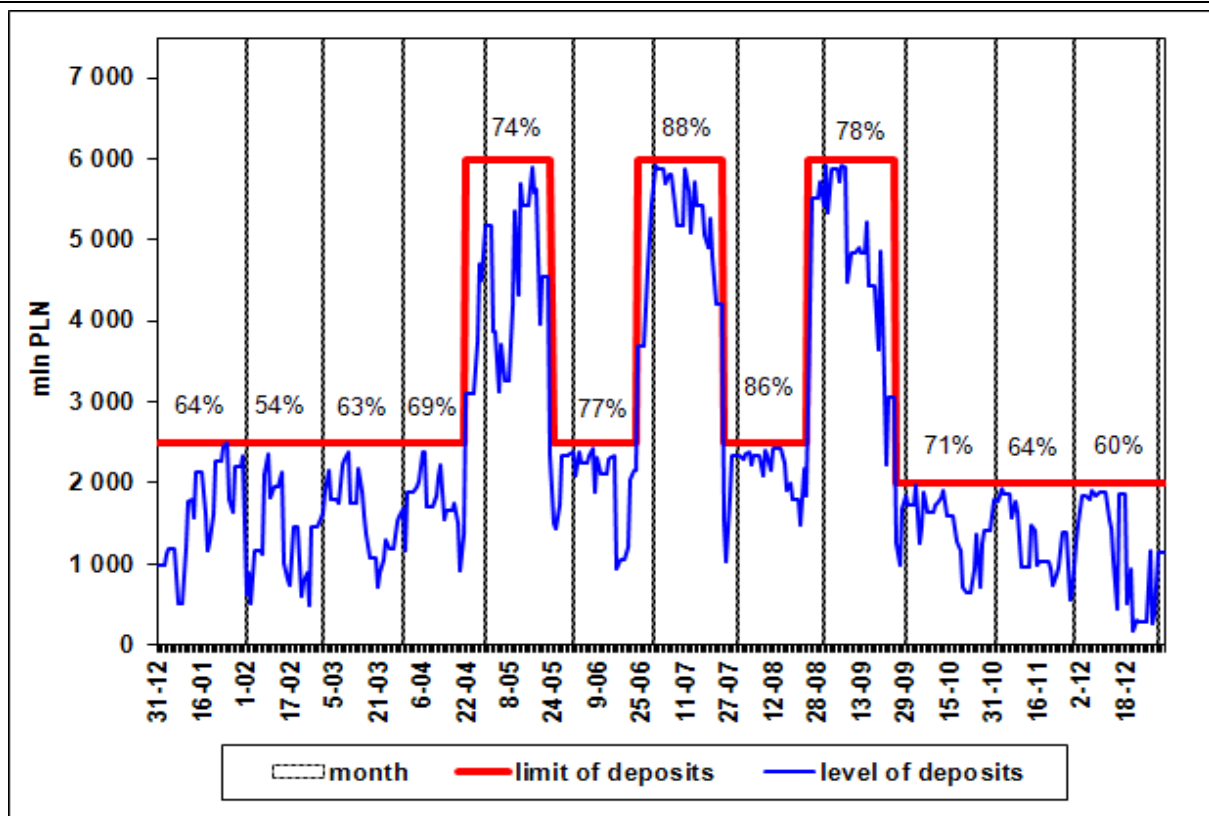
Source: NBP

The average level of the Ministry of Finance's term deposits with the NBP in recent years has shown a downward trend (from PLN 2.7 billion in January 2009 to PLN 1.2 billion in December 2011). In 2011 (May, July and September), they rose on a temporary basis (to PLN 3.8 billion, PLN 4.6 billion and PLN 4.3 billion, respectively), owing to a temporary increase in the limit for the Ministry of Finance's deposits with the NBP (to PLN 6.0 billion). Such a situation reflected the need for the Ministry of Finance to accumulate PLN funds to redeem Treasury Bonds on 24 May 2011 (PSO511), on 25 July 2011 (OKO711) and on 26 September 2011 (WZO911).

The largest use of the limit on deposits was recorded in the second and third quarter (approximately 79% on the average). It was lower both in the first and the last quarter and amounted to approximately 60% and 65%, respectively. A rise in the limit usage in the second half of the year was linked with the positive zloty liquidity position of the State Budget.

In 2011, the Ministry of Finance maintained funds on zloty term deposit accounts with the NBP whose average yearly value was PLN 2,400 million (PLN 165 million less than in 2010). The decrease in the value of the Ministry of Finance's deposits with the NBP is related to the decrease in the daily limit for those deposits. In 2011, the value of deposits accounted for 73.3% of the set daily limit (for comparison: in 2010, the ratio was approximately 72.2%).

**Figure 8. The use of the limit for Ministry of Finance's deposits with the NBP in 2011**



Source: NBP

As in the previous year, in 2011 some surplus funds of the State Budget were deposited in the interbank market through the Bank Gospodarstwa Krajowego - for the average amount of PLN 10,308 million annually. They were collateralised with both Treasury bills and Treasury bonds. In addition, in 2011, the Ministry of Finance continued to deposit surplus funds in the interbank market of uncollateralised term deposits. The Ministry of Finance could also deposit surplus funds through Bank Gospodarstwa Krajowego as a deposit facility with the NBP (in the periods from January to May and from September to December 2011).

The largest amounts were transferred by the Ministry of Finance to the banking sector between June and November 2011, nearly PLN 15 billion on the average per month. It is worth pointing out that in 2011 the average level of the Ministry of Finance's deposits with commercial banks was higher by PLN 4,176 million (i.e. approximately 68%) in comparison with the previous year.

Between January and May, other ministries used the option of investing their surplus funds at the NBP. In 2011, deposits of those entities stood at a lower level in comparison with the previous year and averaged PLN 32 million, which represents a decrease by PLN 66 million year-on-year.



## 2. Monetary Policy Instruments

### 2.1. Interest rate

The short-term interest rate, also referred to as the NBP reference rate, is the primary instrument of the monetary policy. It determines the yield on main open market operations, affecting at the same time the level of short-term market interest rates. Changes in the NBP reference rate stem from the course of the monetary policy pursued by the central bank. Furthermore, the NBP deposit and lombard rates set the fluctuation band of the overnight interest rate in the interbank market.

In 2011, the Monetary Policy Council increased the NBP basic interest rates four times, including the reference rate, within the corridor for fluctuations in short-term market rates of +/- 1.5 percentage point. As at the end of 2011, the reference rate stood at 4.50% which was 100 basis points higher than the level at the end of 2010. A similar scale of increases applied to the deposit rate and the lombard rate.

Applicable from:	Reference rate	Lombard rate	Deposit rate
20.01.2011	3,75%	5,25%	2,25%
06.04.2011	4,00%	5,50%	2,50%
12.05.2011	4,25%	5,75%	2,75%
09.06.2011	4,50%	6,00%	3,00%

*Source: NBP*

### 2.2. Reserve Requirement

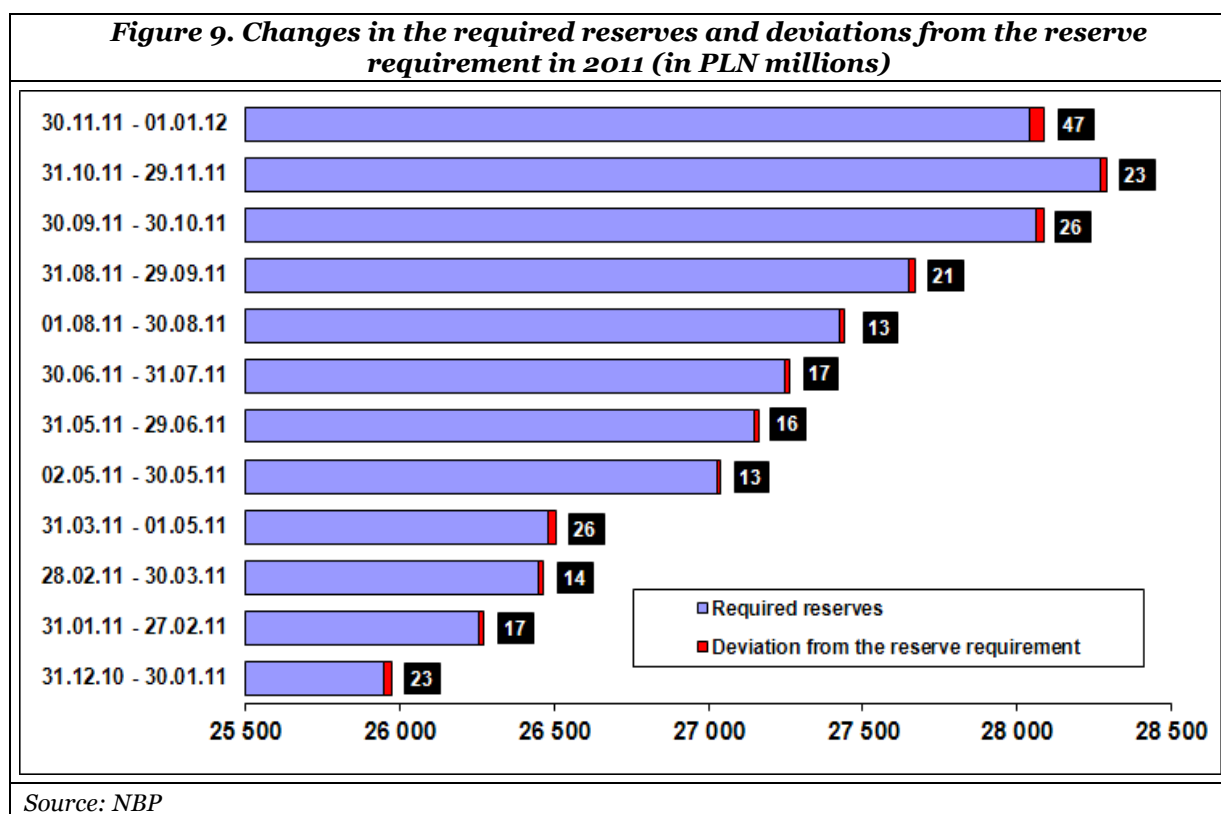
In order to stabilize the level of short-term interest rates, the NBP used the averaged reserve requirement system, which implied that the banks were obliged to maintain an average balance of funds on their accounts with the NBP in the reserve maintenance period at a level not lower than the amount of the required reserve.

The main reserve requirement ratio in 2011 was 3.5% of all liabilities, except for funds received from the sell-buy-back securities, on which the main reserve requirement ratio was 0%.

The required reserve as at 31 December 2011 amounted to PLN 28,039 million and was higher by PLN 2,091 million - an increase of 8.1% - in comparison with the level as at 31 December 2010.

The funds of the required reserve maintained by banks on their accounts with the NBP were remunerated at 0.9 of the NBP rediscount rate. In 2011, the average interest rate on the reserve requirement funds was 4.03% and was higher compared to 2010 by 0.65 percentage points. This

increase resulted from changes in the rediscount rate, which was increased in 2011 from 3.75% to 4.75%, pursuant to the decisions of the Monetary Policy Council.



In 2011, in all the reserve maintenance periods there was a minor surplus of the average level of funds in banks' accounts in relation to the reserve requirement, amounting from PLN 13 million in May to PLN 47 million in December. The mean balance in the bank accounts deviated from the reserve requirement by PLN 21 million on average, constituting 0.08% of the average reserve requirement in 2011.

The maintaining minimal differences between required and maintained reserve in particular reserve periods were result of the use of instruments facilitating funds management in accounts with the NBP by banks (deposit facility, marginal lending facility and intraday credit facility) as well as remuneration of reserve funds only up to the amount of the required reserves.

In 2011, one violation of the obligation to maintain the required reserve by a commercial bank was recorded. All cooperative banks maintained the required level of reserves in 2011.

## **2.3. Open Market Operations**

In 2011, the following open market operations represented the key instrument used to shape market interest rates:

- main operations – in the form of a regular issue of the NBP bills, usually with a 7-day maturity<sup>1</sup>;
- fine-tuning operations – in the form of the issue of the NBP bills with maturities shorter than those of main operations (1-, 2-, 3- and 4-day).

From the beginning of 2011 until the end of July the level of open market operations increased regularly and stood between PLN 84,864 million and PLN 101,516 on the average during the maintenance period. Starting from August, the level of banks' purchases of NBP bills began to gradually decrease, reaching the level of PLN 89,300 million in the December maintenance period. At the same time, due to the continued lack of confidence among counterparties in the interbank market, banks were exercising caution when investing in the NBP bills.

### **2.3.1. Main Operations**

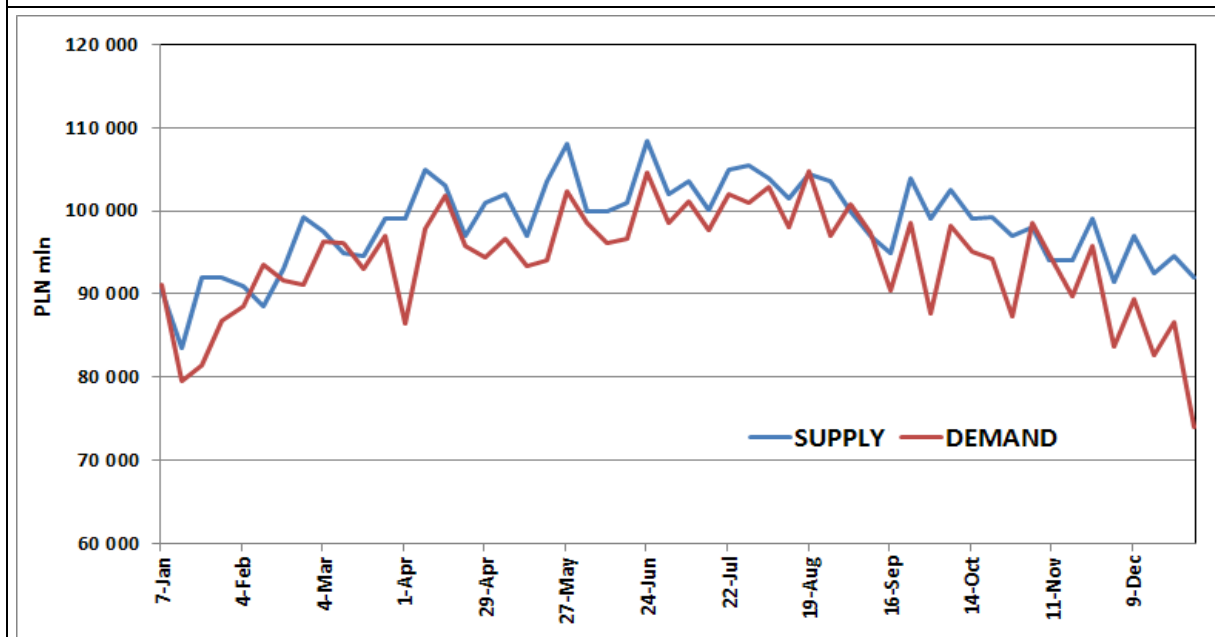
In 2011, the NBP carried out main open market operations, which consisted in issuing the NBP bills with a 7-day maturity. The NBP bills were issued on a systematic basis, once a week, on Fridays. As in the previous year, all banks participating in the SORBNET system with an account in the Register of Securities operated by the NBP and were equipped with the ELBON application as well as the Bank Guarantee Fund had access to main open market operations. Tenders for the NBP bills had a settlement period of t+0, and the yield equal to the NBP reference rate.

In 2011, the level of the NBP bills, issued under the main operations, averaged PLN 93,764 million, i.e. increased by PLN 18,844 million as compared with the average level in 2010. In 2011, the central bank offered NBP bills for sale in the main operations with the value of PLN 5,115,800 million. In that period the bids received from banks amounted to PLN 4,893,760 million, while the value of bids accepted by the central bank amounted to PLN 4,884,099 million.

---

<sup>1</sup> In 2011, regular operations with a 6-day maturity were issued on 4 November and 30 December, and an operation with an 8-day maturity – on 10 November.

**Figure 10. The NBP bills - demand and supply in 2011**



- the figure includes only the values related to the demand and supply of main open market operations.

Source: NBP

Whereas the cumulated values of supply and demand were on similar levels in 2011, commercial banks and the central bank had different assessments of liquidity conditions in individual tenders. Hence, both overbidding and underbidding tended to occur, with the predominance of the latter. During the year, the ratio of commercial banks' demand for NBP bills in individual tenders in comparison to the supply offered by the central bank fluctuated between 0.80 and 1.06.

### **2.3.2. Fine-tuning Operations**

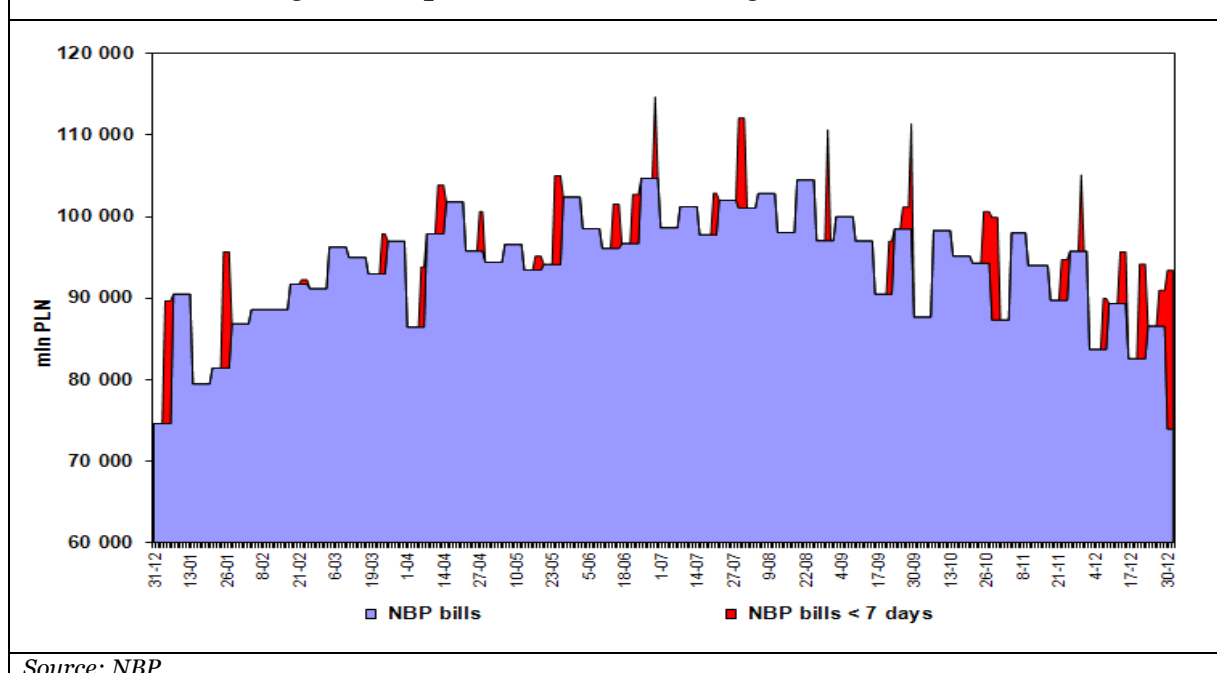
In 2011, in order to reduce the impact of changes in liquidity conditions in the banking sector on the level of short-term market interest rates, the NBP conducted fine-tuning operations in each reserve maintenance period, by issuing the NBP bills with maturities shorter than in the case of main operations. In June 2011, the NBP started to carry out fine-tuning operations on the last day of the maintenance period. Their purpose was to balance the liquidity conditions in the banking sector on average over the entire reserve maintenance period. The NBP is trying to reduce the frequency of such operations so as not to slow down the process of the interbank market returning to the situation before the crisis.

All fine-tuning operations conducted in 2011 were aimed at absorbing liquidity from the banking sector.

In 2011, the NBP conducted fine-tuning operations 27 times, including 7 times as at the end of the reserve maintenance period. The average level of the NBP bills issued under this type of operations amounted to PLN 1,453 million. In 2011, the central bank offered the NBP bills for sale in fine-tuning operations amounting to PLN 386,800 million. Bids received from banks in that period amounted to PLN 217,205 million, which was also the amount of bids accepted by the central bank.



**Figure 11. Operations carried out by the NBP in 2011**



Source: NBP

### 2.3.3. Structural Operations

The aim of structural operations is to change the banking sector liquidity in the long-term. In 2011, the NBP conducted no such operations.

## 2.4. Standing facilities

The possibility of using standing facilities was conducive to the stabilization of interbank liquidity and short-term market rates.

With these standing operations, banks could invest surplus liquidity (deposit facility) and cover their short-term liquidity needs with the use of marginal lending facility (with O/N maturity).

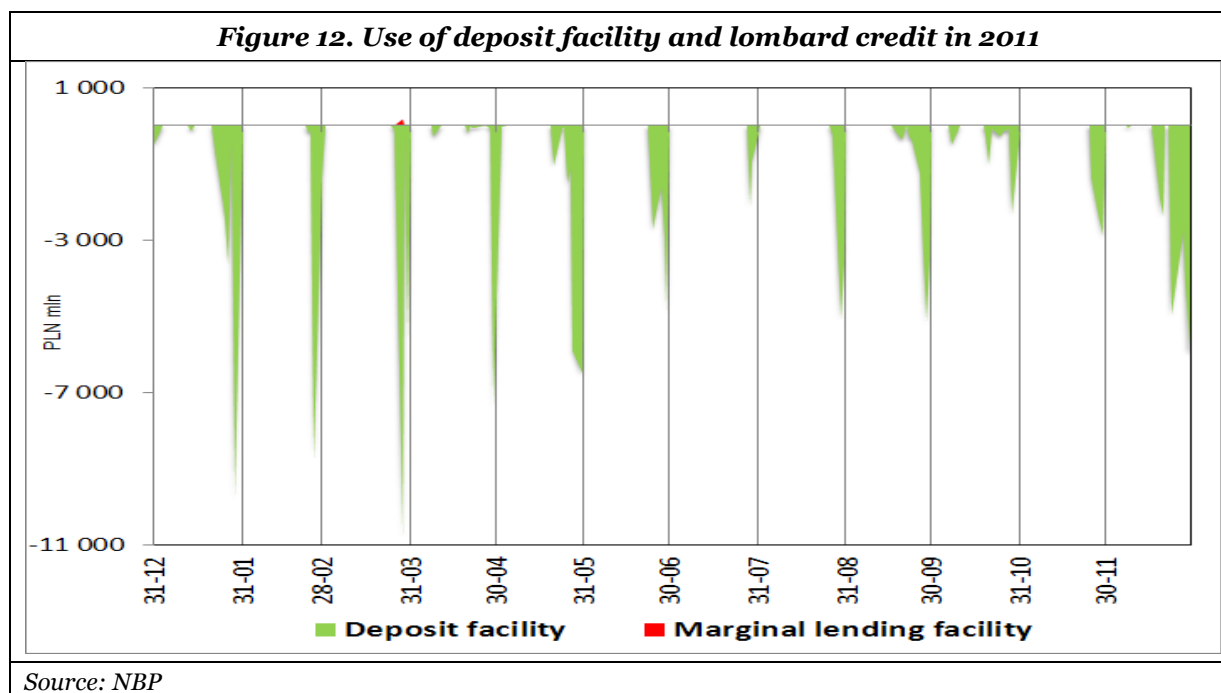
The lombard rate set the maximum price of raising money in the NBP, while also indicating the upper level of overnight rate fluctuations in the interbank market with the deposit rate constituting the lower level for their fluctuations.

### Deposit facility

In 2011, overnight deposits placed by banks with the NBP totalled PLN 261,101 million and were lower by 30.96% as compared to the O/N deposits placed in 2010. The total unit value of O/N deposits placed by banks ranged between PLN 63 thousand and PLN 10,700 million. The daily level of this category averaged PLN 711 million, against PLN 1, 036 million in the previous year. Banks placed the largest funds on the last days of the required reserve maintenance periods. The decrease in the value of deposits was a direct result of the introduction and active use of fine-tuning operations during the year.

### Marginal lending facility

Last year, when supplementing liquidity in their current accounts with the NBP, banks were able to make use of the marginal lending facility (lombard credit) collateralised with securities. The using of lombard credit amounted to PLN 173 million annually (in 2010: PLN 182 million). Its daily average use was similar to the 2010 level and amounted to PLN 0.5 million.



## 2.5. Other operations

### Intraday credit facility

Intraday credit facility is an instrument which facilitates banks to manage liquidity during the operating day as well as make interbank settlements in the NBP. It is a non-interest bearing facility collateralised with securities that is taken and repaid on the same operating day. In 2011, daily injection of liquidity to banks with the use of this instrument ranged between PLN 15,380 billion and PLN 41,126 billion. The use of this facility rose by 45.50% as compared to 2010.

### Intraday credit facility in euro

Intraday credit facility in euro is an instrument that ensured the liquidity of settlements in the SORBNET-EURO and TARGET2-NBP systems. The facility is collateralised with Treasury bonds accepted by the ECB. In 2011, daily injection of funds in euro to the bank ranged from EUR 2 million to EUR 55 million<sup>2</sup>. The use of this facility rose more than 2 times in comparison with 2010, however it was still low.

<sup>2</sup> In the period of 18.01-28.01.2011 one of the banks used the intraday credit facility in euro of EUR 50 million per day.

### 3. POLONIA rate

In line with the *Monetary Policy Guidelines*, in 2011 the NBP strove – through open market operations – to make the POLONIA rate run close to the NBP reference rate.

In 2011, as in the previous year, global financial market strains continued which indirectly affected the limited efficiency of the domestic interbank market. This situation was demonstrated, among other things, by the fact that banks exercised increased caution in managing their liquidity positions, together with a parallel tendency to manage liquidity on an overnight basis, and the preference for building up liquidity buffers. Participants of the interbank market continued to maintain low-level lending limits imposed on mutual transactions.

As in the previous year, the circumstances presented above restricted the effectiveness of the main open market operations conducted by the NBP. During the execution of the main open market operations on the basis of tenders this led to episodes of underbidding.

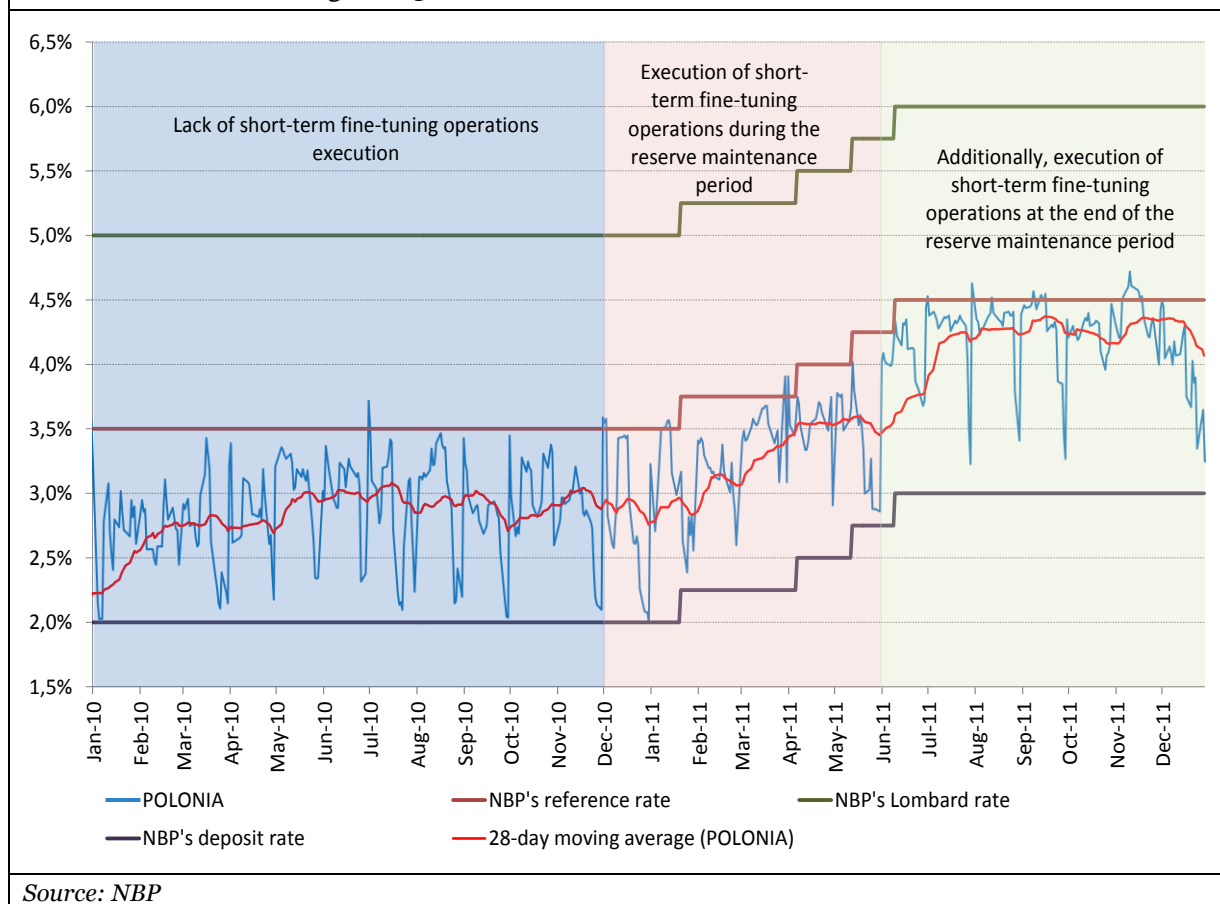
In spite of adverse trends persisting in the financial markets, in 2011 the POLONIA rate came closer to the NBP reference rate, as compared to previous years. The positive trend in this respect became particularly pronounced in the second half of 2011, when the deviation of the POLONIA rate was reduced to levels seen only before the collapse of Lehman Brothers.

The gap between the POLONIA rate and the NBP reference rate gradually narrowed over 2011, primarily as a result of short-term fine-tuning operations launched by the NBP in December 2010. Initially, the NBP carried out fine-tuning operations on an ad hoc basis, within the required reserve maintenance period, in order to affect the liquidity conditions prevailing in the banking sector. These were usually operations with a 2-day or 3-day maturity. From June 2011 they were supplemented by fine-tuning operations at the end of the maintenance period, with the O/N maturity. Fine-tuning operations of this type enabled banks to balance their own liquidity position over the entire reserve maintenance period.<sup>3</sup>

---

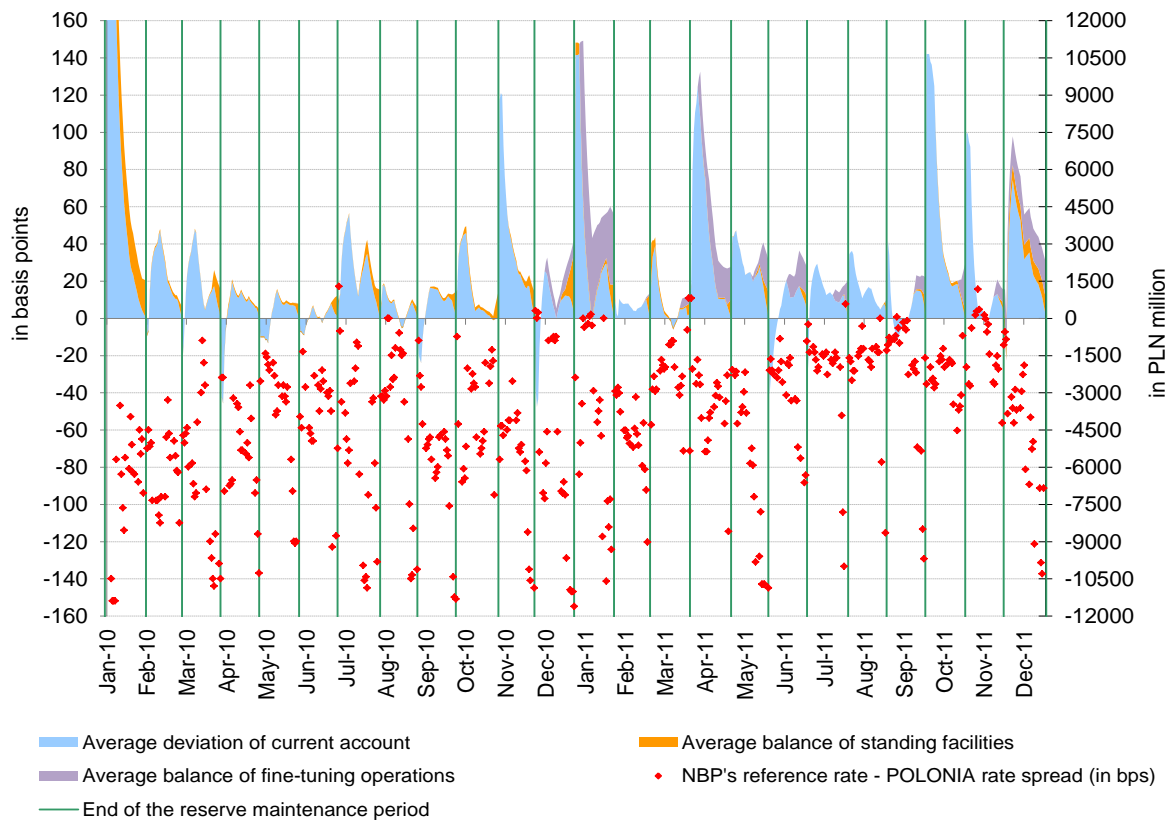
<sup>3</sup> Depending on the nature of the imbalance in the liquidity conditions in the banking sector, i.e. either a surplus or shortage of funds, fine-tuning operations at the end of the period were of either liquidity absorbing or providing nature. In practice, they were all liquidity absorbing operations.

**Figure 13. POLONIA rate and NBP rates in 2011**



Fine-tuning open market operations conducted by the NBP substantially reduced banks' use of deposit facility as compared to the time of the Lehman Brothers' collapse. This can be put down to the fact that shorter maturity of the instruments offered under fine-tuning operations, compared with the 7-day maturity of the main operations, coupled with their higher yield versus the remuneration of deposit facility (150 basis points difference) encouraged banks to invest more of their liquidity buffer in the NBP bills (under fine-tuning operations). Consequently, as compared to the previous years, the impact of the deposit facility remuneration (the NBP deposit rate), relatively largely used by banks in the previous years, on the POLONIA rate, diminished. Market participants began to expect the central bank to be able to balance the liquidity conditions in the banking sector predominantly through open market operations with yields equal to the NBP's reference rate.

**Figure 14. Volatility of the POLONIA rate compared to the average deviation of the aggregate level of banks' current accounts with the NBP in the maintenance period from the required reserve level, taking into account the use of NBP standing facilities and fine-tuning open market operations in 2010-2011**



Source: NBP

The changes presented above to the manner of banking sector liquidity management by the NBP contributed to the improvement in the indicators describing the evolution of the POLONIA rate in relation to the NBP reference rate. The average absolute deviation of the POLONIA rate from the NBP reference rate in 2011 was 43 bps, as compared to the average of 69 bps in 2010, whereas the rate volatility decreased respectively from 38 bps to 34 bps.



## Glossary

**Banking sector short-term liquidity** – liquidity defined as the balance of open market operations conducted by the NBP, i.e. main and fine-tuning operations as well as foreign exchange swaps and standing facilities.

**Deposit facility** – an instrument which enables banks to deposit their liquidity surplus on an overnight basis with the central bank. The interest rate on that deposit constitutes the lower limit for the market rate quoted for that particular period.

**Fine-tuning operations** – operations which may be conducted by the NBP in order to limit the impact of changes in the banking sector liquidity conditions on the short-term market interest rates.

**Foreign exchange swaps** – operations under which the NBP is able to purchase (or sell) the zloty for foreign currencies, in the spot market, and simultaneously to resell (or repurchase) the zloty under forward transaction on a specific value date.

**Intraday credit facility (PLN or EUR)** – a non-interest bearing credit facility which enables banks to obtain funds on an intraday basis, collateralised with securities accepted by the central bank. It is an instrument which allows commercial banks to manage intraday liquidity.

**Main operations** – operations used in the conditions of the banking sector liquidity surplus, consisting in the issue of the NBP bills, typically with 7-day maturity. They are basically conducted on a regular basis (once a week). During the tenders a fixed yield at the level of the NBP reference rate is binding.

**Marginal lending facility (lombard credit)** – an instrument which enables commercial banks to obtain credit on an overnight basis. The interest on that facility indicates the marginal cost of obtaining funds from the central bank. It is collateralised with securities accepted by the central bank.

**Money Market Dealers** – banks that are the most active in the money and foreign exchange markets, with which the NBP enters into contracts on acting as the Money Market Dealer. In addition to the access to the main open market operations, these banks are involved in fine-tuning operations. Money Market Dealers participate in the fixing of the WIBOR and the WIBID reference rates, provide the NBP with information concerning overnight transactions concluded on a given day which are the base for the POLONIA fixing.

**NBP deposit rate** – determines the interest rate on deposits with the NBP. It sets the floor for fluctuations of the overnight market rate. The deposit rate and the lombard rate create the corridor for the overnight rate fluctuations which is symmetric to the central bank's reference rate.

**NBP lombard rate** – determines the costs of funding obtainable from the NBP. It sets the ceiling for the growth in the overnight market rate.

**NBP reference rate** – determines the yield obtainable on the main open market operations, affecting, at the same time, the level of short-term market interest rates.

**Open market operations** – a principal instrument of the central bank which is used to maintain short-term market interest rates at a level consistent with the NBP reference rate determined by the Monetary Policy Council.

**POLONIA rate** – the POLONIA rate (Polish Overnight Index Average) was introduced by the NBP and ACI Polska in early 2005. It is an average overnight rate weighted by the value of transactions in the interbank deposit market. The rate reflects the actual interest rates on short-term interbank deposits. The POLONIA rate is published by the NBP in the Reuters service on the NBPS page each day at 5.00 p.m.

The POLONIA rate's fixing is carried out by the NBP on each operating day at 4.45 p.m. The participant is obliged to provide the central bank with the list of overnight transactions concluded with other participants and submitted for settlement on a given day until 4.30 p.m.

**Repo operations** – short- and long-term refinancing operations aimed at providing the liquidity to the banking sector collateralised with securities approved by the NBP.

**Reserve requirement** – a monetary policy instrument used by the central bank, among other things, to regulate the banking sector liquidity and to mitigate volatility of short-term interest rates. The obligation to maintain the reserve is also an element of liquidity management at banks. The reserve requirement is an obligation imposed on banks to maintain a specific average level of funds (set as a percentage) on their accounts with the central bank.

The obligation to maintain required reserve on accounts with the NBP applies to banks, branches of credit institutions and branches of foreign banks operating in Poland. The required reserves are maintained in the averaged system. Banks are obliged to maintain an average balance of funds in their accounts with the NBP over the maintenance period at a level not lower than the value of the required reserve. The required reserve is calculated on the basis of returnable funds deposited in bank accounts and the funds obtained from the sale of securities. The basis for the reserve's calculation does not include funds accepted from another domestic bank, obtained from abroad for minimum two years and deposited in savings & credit accounts with building societies and in individual pension accounts. The required reserve is calculated and maintained in zloty. The value of the reserve calculated is diminished by banks by an equivalent of EUR 500 thousand.

**Standing facilities** – operations conducted at the initiative of commercial banks under which commercial banks are able to deposit their liquidity surplus with the NBP using deposit facility or reduce short-term liquidity shortages using marginal lending facility.

**Structural operations** – operations conducted in order to change the long-term structure of liquidity in the banking sector. Under these operations the central bank may carry out the following structural operations: issue of bonds, early redemption of bonds, purchase or sale of securities in the secondary market.



---

**Publication of information in information services** – in the Reuters service on the NBPM site and in the Bloomberg service on the NBPX site, NBP provides banks with information on the current market liquidity situation, specifically concerning:

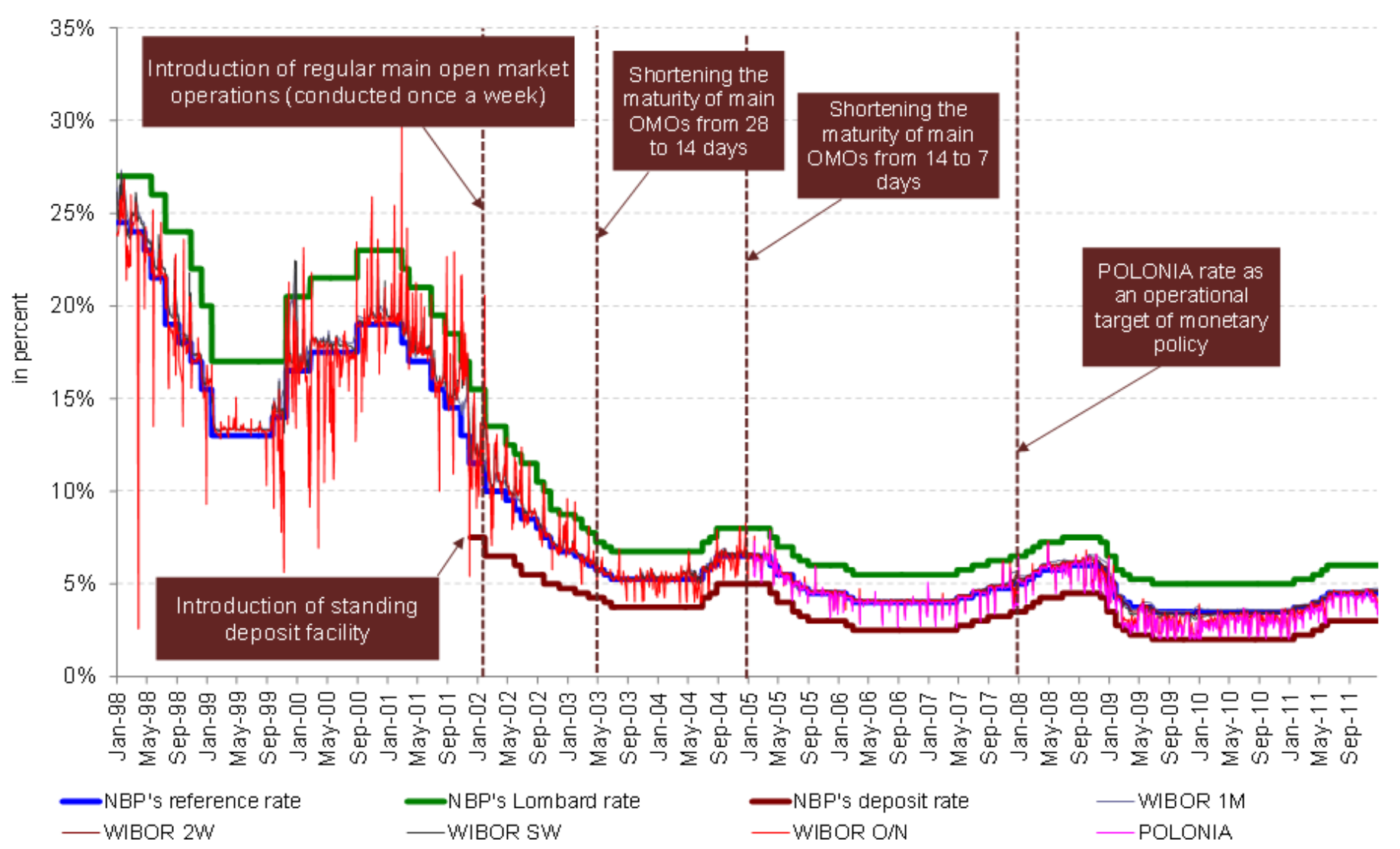
- banks' current accounts, deposit facility placed with the NBP and marginal lending facility (lombard credit) provided by the NBP, on a daily basis,
- level of required reserve during a specific reserve maintenance period,
- average balance of banks' current accounts during the required reserve maintenance period,
- forecast of an average daily balance of the current account in the period from the issue date of the NBP bills (under main operations) until the day preceding their maturity. Information on the forecasted average balance of the current account of banks is published on the Reuters website at the moment the decision on the value of the NBP bills offered by the NBP is taken.

Information on current auctions for NBP bills is also published on the NBPT site of the Reuters news service and the NBP7 site of the Bloomberg news service. The outcome of tenders is posted on the NBPU site (Reuters) and NBP8 site (Bloomberg).

---



**Annex 1. Volatility of the shortest interest rates in the interbank market against changes in open market operations in 1998-2011**



**Annex 2. NBP monetary policy instruments in 1990 – 2011**

Item	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	
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. Tenders for the NBP bills in 2011 – main operations**

	Tender date	Maturity date	Maturity period (in 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	07-01-2011	14-01-2011	7	90 500,00	91 179,23	90 500,00	3,50%
2	14-01-2011	21-01-2011	7	83 500,00	79 489,11	79 489,11	3,50%
3	21-01-2011	28-01-2011	7	92 000,00	81 421,99	81 421,99	3,75%
4	28-01-2011	04-02-2011	7	92 000,00	86 846,65	86 846,65	3,75%
5	04-02-2011	11-02-2011	7	91 000,00	88 586,77	88 586,77	3,75%
6	11-02-2011	18-02-2011	7	88 600,00	93 476,77	88 600,00	3,75%
7	18-02-2011	25-02-2011	7	93 000,00	91 699,66	91 699,66	3,75%
8	25-02-2011	04-03-2011	7	99 200,00	91 155,44	91 155,44	3,75%
9	04-03-2011	11-03-2011	7	97 500,00	96 271,74	96 271,74	3,75%
10	11-03-2011	18-03-2011	7	95 000,00	96 212,44	95 000,00	3,75%
11	18-03-2011	25-03-2011	7	94 500,00	92 994,84	92 994,84	3,75%
12	25-03-2011	01-04-2011	7	99 000,00	96 989,20	96 989,20	3,75%
13	01-04-2011	08-04-2011	7	99 000,00	86 464,60	86 464,60	3,75%
14	08-04-2011	15-04-2011	7	105 000,00	97 891,55	97 891,55	4,00%
15	15-04-2011	22-04-2011	7	103 000,00	101 794,55	101 794,55	4,00%
16	22-04-2011	29-04-2011	7	97 000,00	95 801,89	95 801,89	4,00%
17	29-04-2011	06-05-2011	7	101 000,00	94 403,44	94 403,44	4,00%
18	06-05-2011	13-05-2011	7	102 000,00	96 594,46	96 594,46	4,00%
19	13-05-2011	20-05-2011	7	97 000,00	93 454,77	93 454,77	4,25%
20	20-05-2011	27-05-2011	7	103 500,00	94 143,86	94 143,86	4,25%
21	27-05-2011	03-06-2011	7	108 000,00	102 393,73	102 393,73	4,25%
22	03-06-2011	10-06-2011	7	100 000,00	98 538,61	98 538,61	4,25%
23	10-06-2011	17-06-2011	7	100 000,00	96 108,29	96 108,29	4,50%
24	17-06-2011	24-06-2011	7	101 000,00	96 687,83	96 687,83	4,50%
25	24-06-2011	01-07-2011	7	108 500,00	104 693,37	104 693,37	4,50%
26	01-07-2011	08-07-2011	7	102 000,00	98 634,30	98 634,30	4,50%
27	08-07-2011	15-07-2011	7	103 500,00	101 226,59	101 226,59	4,50%
28	15-07-2011	22-07-2011	7	100 200,00	97 764,20	97 764,20	4,50%
29	22-07-2011	29-07-2011	7	105 000,00	102 004,85	102 004,85	4,50%
30	29-07-2011	05-08-2011	7	105 500,00	101 059,69	101 059,69	4,50%
31	05-08-2011	12-08-2011	7	104 000,00	102 811,70	102 811,70	4,50%
32	12-08-2011	19-08-2011	7	101 500,00	98 051,60	98 051,60	4,50%
33	19-08-2011	26-08-2011	7	104 500,00	104 804,20	104 500,00	4,50%
34	26-08-2011	02-09-2011	7	103 500,00	97 052,00	97 052,00	4,50%
35	02-09-2011	09-09-2011	7	100 000,00	100 823,88	100 000,00	4,50%
36	09-09-2011	16-09-2011	7	97 000,00	97 282,00	97 000,00	4,50%
37	16-09-2011	23-09-2011	7	95 000,00	90 503,40	90 503,40	4,50%
38	23-09-2011	30-09-2011	7	104 000,00	98 495,26	98 495,26	4,50%
39	30-09-2011	07-10-2011	7	99 000,00	87 674,20	87 674,20	4,50%
40	07-10-2011	14-10-2011	7	102 500,00	98 295,00	98 295,00	4,50%
41	14-10-2011	21-10-2011	7	99 000,00	95 174,20	95 174,20	4,50%
42	21-10-2011	28-10-2011	7	99 300,00	94 288,05	94 288,05	4,50%
43	28-10-2011	04-11-2011	7	97 000,00	87 335,41	87 335,41	4,50%
44	04-11-2011	10-11-2011	6	98 000,00	98 645,95	98 000,00	4,50%
45	10-11-2011	18-11-2011	8	94 000,00	94 835,65	94 000,00	4,50%
46	18-11-2011	25-11-2011	7	94 000,00	89 750,90	89 750,90	4,50%
47	25-11-2011	02-12-2011	7	99 000,00	95 755,43	95 755,43	4,50%
48	02-12-2011	09-12-2011	7	91 500,00	83 729,43	83 729,43	4,50%
49	09-12-2011	16-12-2011	7	97 000,00	89 343,25	89 343,25	4,50%
50	16-12-2011	23-12-2011	7	92 500,00	82 587,15	82 587,15	4,50%
51	23-12-2011	30-12-2011	7	94 500,00	86 570,55	86 570,55	4,50%
52	30-12-2011	05-01-2012	6	92 000,00	73 965,96	73 965,96	4,50%
	<b>Total in 2011:</b>			<b>5 115 800,00</b>	<b>4 893 759,59</b>	<b>4 884 099,47</b>	

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

#### **Annex 4. Tenders for the NBP bills in 2011 – fine-tuning operations**

L.p	Tender date	Maturity date	Maturity period (in 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	04-01-2011	07-01-2011	3	18 000,00	15 029,99	15 029,99	3,50%
2	25-01-2011	28-01-2011	3	21 000,00	14 265,11	14 265,11	3,75%
3	22-02-2011	25-01-2011	3	5 000,00	560,00	560,00	3,75%
4	23-03-2011	25-03-2011	2	9 500,00	4 900,00	4 900,00	3,75%
5	06-04-2011	08-04-2011	2	25 000,00	7 350,00	7 350,00	4,00%
6	12-04-2011	15-04-2011	3	13 000,00	5 960,00	5 960,00	4,00%
7	27-04-2011	29-04-2011	2	10 000,00	4 820,00	4 820,00	4,00%
8	17-05-2011	20-05-2011	3	9 000,00	1 700,00	1 700,00	4,25%
9	24-05-2011	27-05-2011	3	19 000,00	10 875,00	10 875,00	4,25%
10	14-06-2011	17-06-2011	3	9 000,00	5 400,00	5 400,00	4,50%
11	21-06-2011	24-06-2011	3	16 800,00	6 030,00	6 030,00	4,50%
12	29-06-2011	30-06-2011	1	14 000,00	9 968,00	9 968,00	4,50%
13	20-07-2011	22-07-2011	2	11 500,00	5 110,00	5 110,00	4,50%
14	29-07-2011	01-08-2011	3	11 500,00	11 007,50	11 007,50	4,50%
15	30-08-2011	31-08-2011	1	15 500,00	13 586,11	13 586,11	4,50%
16	21-09-2011	23-09-2011	2	17 000,00	6 490,00	6 490,00	4,50%
17	26-09-2011	30-09-2011	4	7 500,00	2 660,00	2 660,00	4,50%
18	29-09-2011	30-09-2011	1	12 500,00	10 230,00	10 230,00	4,50%
19	25-10-2011	28-10-2011	3	12 500,00	6 315,00	6 315,00	4,50%
20	28-10-2011	31-10-2011	3	14 000,00	12 559,00	12 559,00	4,50%
21	22-11-2011	25-11-2011	3	12 000,00	4 990,00	4 990,00	4,50%
22	29-11-2011	30-11-2011	1	11 500,00	9 354,50	9 354,50	4,50%
23	07-12-2011	09-12-2011	2	17 000,00	6 260,00	6 260,00	4,50%
24	13-12-2011	16-12-2011	3	15 000,00	6 330,00	6 330,00	4,50%
25	20-12-2011	23-12-2011	3	20 000,00	11 600,00	11 600,00	4,50%
26	27-12-2011	30-12-2011	3	15 000,00	4 390,00	4 390,00	4,50%
27	30-12-2011	02-01-2012	3	25 000,00	19 464,75	19 464,75	4,50%
<b>Total in 2011:</b>				<b>386 800,00</b>	<b>217 204,96</b>	<b>217 204,96</b>	

#### **Annex 5. Agreements with the Ministry of Finance**

The agreement on the purchase and sale of foreign currencies – an agreement laying down the rules and terms and conditions of transactions concluded between the Ministry of Finance and the NBP relating to the purchase and sale of foreign currencies. The agreement set out the following limits on FX transactions in 2011: the total sales of foreign currencies by the NBP to the Ministry of Finance may not exceed the equivalent of EUR 4,000 million, the total amount of foreign currencies purchased by the NBP from the Ministry of Finance may not exceed the equivalent of EUR 6,500 million. Furthermore, the accumulated absolute difference between the amount of foreign currencies sold and purchased as at the year-end may not exceed the equivalent of EUR 4,000 million while the accumulated absolute difference between the amount of foreign currencies purchased and sold as at the year-end may not exceed the equivalent of EUR 4,300 million.

The agreement on PLN term deposits placed by the Ministry of Finance with the NBP – pursuant to the Public Finance Act, the Minister of Finance is competent to place interest bearing deposits with the National Bank of Poland or in the banking sector through Bank Gospodarstwa Krajowego should there be a temporary surplus of funds in the central current account of the State Budget. In 2011, the limit for the Ministry of Finance’s deposits placed with the NBP, counted according to daily balances was as follows: PLN 2.5 billion in the period from 1 January to 21 April, PLN 6.0 billion in the period from 22 April to 23 May, PLN 2.5 billion in the period from 24 May to 23 June, PLN 6.0 billion in the period from June 24 to July 24, PLN 2.5 billion in the period from 25 July to 24 August, PLN 6.0 billion in the period from 25 August to 25 September and PLN 2.0 billion in the period from 26 September to 31 December.

## **Annex 6. Banks – Money Market Dealers in 2011:**

In 2011, the access to the main open market operations and fine-tuning operations was granted to all banks which:

- participate in the SORBNET system,
- have accounts with the Register of Securities with the NBP,
- have the ELBON application.

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

Banks that have access to open market operations include banks – Money Market Dealers that additionally perform the following functions:

- participate in the fixing of WIBOR and WIBID reference rates,
- provide the NBP with information on overnight transactions concluded on a given day on the basis of which the POLONIA rate is fixed,
- provide the NBP with information and data concerning a bank's current and forecasted financial liquidity and the situation in the money, foreign exchange and bond markets.

Candidates for the function of the Money Market Dealer are evaluated by the NBP on the basis of standard criteria of the Dealer Activity Index (IAD), comprising:

- bank's settlement and the offer 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 2011 (in the order of the bank's sort code):**

- |                                          |                                             |
|------------------------------------------|---------------------------------------------|
| 1. Powszechna Kasa Oszczędności BP S. A. | 9. Bank Polska Kasa Opieki S. A.            |
| 2. Bank Handlowy w Warszawie S. A.       | 10. Kredyt Bank S. A.                       |
| 3. ING Bank Śląski S. A.                 | 11. Raiffeisen Bank Polska S. A.            |
| 4. Bank BPH S. A.                        | 12. Societe Generale S. A. Oddział w Polsce |
| 5. Bank Zachodni WBK S. A.               | 13. Deutsche Bank Polska S. A.              |
| 6. Bank Gospodarstwa Krajowego           | 14. Bank Gospodarki Żywnościowej S. A.      |
| 7. BRE Bank S. A.                        | 15. BNP Paribas S. A. Oddział w Polsce      |
| 8. Bank Millenium S. A.                  |                                             |

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

Items	XII 2010	I 2011	II 2011	III 2011	IV 2011	V 2011	VI 2011	VII 2011	VIII 2011	IX 2011	X 2011	XI 2011	XII 2011
(PLN mln)													
<b>CENTRAL BUDGET:</b>													
revenues	252 790,16	26 829,01	44 055,75	65 213,53	90 067,98	110 287,42	136 275,91	160 474,84	183 924,36	207 795,73	234 809,19	257 972,21	280 726,85
expenses	295 323,37	27 410,62	56 451,32	80 096,94	109 128,42	131 671,18	154 888,36	179 437,65	201 916,10	226 914,38	254 416,41	276 539,14	303 156,88
deficit(-) / surplus(+)	-42 533,21	-581,61	-12 395,57	-14 883,41	-19 060,44	-21 383,76	-18 612,45	-18 962,82	-17 991,75	-19 118,65	-19 607,23	-18 566,94	-22 429,04
central budget funds	1 305,15	1 013,25	1 322,80	1 055,55	635,76	100,75	72,19	68,90	83,77	82,14	79,58	78,42	85,16
MF foreign currency account	129,15	4 729,22	5 889,77	6 073,03	6 105,39	4 904,74	8 297,37	785,11	289,63	209,97	321,98	236,28	132,60
MF zloty term deposit	984,00	2 335,00	1 581,00	1 162,00	5 187,00	2 387,00	5 917,00	2 326,00	5 920,00	1 724,00	1 797,00	1 273,00	1 145,00
<b>CURRENCY IN CIRCULATION</b>	103 065,50	99 967,90	100 756,38	101 565,44	104 142,52	103 423,29	105 374,07	106 795,68	107 188,03	109 647,71	110 100,34	109 187,78	112 089,54
<b>CURRENT ACCOUNT</b> (including required reserve account)	36 562,97	26 978,68	28 174,83	27 896,76	21 882,95	24 098,40	25 241,96	18 633,23	30 674,16	38 717,84	35 731,27	27 429,43	20 308,64
balance deviation from required reserve %/	10 615,42	723,13	1 725,98	1 416,86	333,99	-3 047,54	-1 997,84	592,12	3 027,43	10 658,33	7 461,39	-609,07	548,69
<b>REFINANCING LOAN</b>	728,94	732,66	736,01	635,81	638,94	642,18	542,67	545,44	548,20	449,53	451,82	454,04	356,40
marginal lending	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
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
<b>INTRADAY CREDIT</b>	14 340,31	21 559,36	22 549,96	16 971,23	22 434,76	38 798,64	33 369,71	35 493,38	34 813,20	32 847,08	34 893,22	38 433,10	35 592,79
<b>DEPOSIT FACILITY</b>	500,80	0,81	1 319,65	0,00	7 289,24	0,00	0,00	928,32	0,00	0,00	0,00	0,00	5 975,28
<b>OPEN MARKET OPERATIONS **/</b>	74 639,68	86 846,65	91 155,44	96 989,20	94 403,44	102 393,73	104 693,37	112 067,19	97 052,00	87 674,20	87 335,41	95 755,43	93 430,71
repo (-)	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
NBP money market bills 7 days (+)	74 639,68	86 846,65	91 155,44	96 989,20	94 403,44	102 393,73	104 693,37	101 059,69	97 052,00	87 674,20	87 335,41	95 755,43	73 965,96
NBP money market bills <7 days (+)	0,00	0,00	0,00	0,00	0,00	0,00	0,00	11 007,50	0,00	0,00	0,00	0,00	19 464,75
<b>POLONIA</b>	3,23%	3,41%	3,23%	3,91%	2,91%	4,03%	4,53%	4,63%	4,42%	4,21%	4,30%	4,49%	3,65%
turnover	187,00	2 245,00	4 757,00	4 900,00	2 274,00	2 530,00	1 234,00	1 266,00	1 790,00	2 997,00	1 965,00	2 403,00	412,00
<b>WIBOR</b>													
O/N	3,63%	3,41%	3,47%	3,85%	3,84%	4,20%	4,67%	4,45%	4,56%	4,62%	4,53%	4,65%	4,24%
T/N	3,61%	3,50%	3,51%	3,85%	3,91%	4,21%	4,63%	4,52%	4,56%	4,63%	4,55%	4,66%	4,54%
SW	3,48%	3,75%	3,80%	3,83%	4,05%	4,25%	4,56%	4,55%	4,55%	4,57%	4,57%	4,61%	4,61%
2W	3,51%	3,80%	3,84%	3,86%	4,06%	4,27%	4,57%	4,56%	4,56%	4,59%	4,60%	4,65%	4,66%
1M	3,66%	3,85%	3,89%	3,92%	4,10%	4,36%	4,62%	4,62%	4,61%	4,64%	4,71%	4,75%	4,77%
3M	3,95%	4,09%	4,15%	4,19%	4,30%	4,45%	4,69%	4,71%	4,72%	4,76%	4,91%	4,97%	4,99%
12M	4,37%	4,50%	4,54%	4,57%	4,66%	4,76%	4,85%	4,85%	4,88%	4,88%	4,94%	4,97%	5,00%
<b>WIBID</b>													
O/N	3,33%	3,11%	3,17%	3,55%	3,54%	3,90%	4,37%	4,15%	4,26%	4,32%	4,23%	4,36%	3,94%
T/N	3,31%	3,20%	3,21%	3,55%	3,61%	3,91%	4,33%	4,22%	4,26%	4,33%	4,25%	4,36%	4,24%
SW	3,28%	3,55%	3,60%	3,63%	3,85%	4,05%	4,36%	4,35%	4,35%	4,37%	4,37%	4,41%	4,41%
2W	3,31%	3,60%	3,64%	3,66%	3,86%	4,07%	4,37%	4,36%	4,36%	4,39%	4,40%	4,45%	4,46%
1M	3,46%	3,65%	3,69%	3,72%	3,90%	4,16%	4,42%	4,42%	4,41%	4,44%	4,51%	4,55%	4,57%
3M	3,75%	3,89%	3,95%	3,99%	4,10%	4,25%	4,49%	4,51%	4,52%	4,56%	4,71%	4,77%	4,79%
12M	4,17%	4,30%	4,34%	4,37%	4,46%	4,56%	4,65%	4,65%	4,68%	4,68%	4,74%	4,77%	4,80%
<b>USD/PLN (fix)</b>	2,9641	2,8845	2,8765	2,8229	2,6501	2,7468	2,7517	2,8109	2,8695	3,2574	3,1024	3,4248	3,4174
<b>EUR/PLN (fix)</b>	3,9603	3,9345	3,9763	4,0119	3,9376	3,9569	3,9866	4,0125	4,1445	4,4112	4,3433	4,5494	4,4168
<b>EUR/USD</b>	1,3361	1,3640	1,3823	1,4212	1,4858	1,4405	1,4488	1,4275	1,4443	1,3542	1,4000	1,3284	1,2924
<b>Official reserve assets</b> (as at the end of the month)													
in PLN millions	277 186,10	276 171,90	297 816,10	301 008,70	296 780,10	295 578,40	300 337,70	299 829,40	307 011,10	326 847,50	318 557,80	337 908,30	334 447,20
in EUR millions	69 991,20	70 192,40	74 897,80	75 029,00	75 370,80	74 699,50	75 336,80	74 723,80	74 076,70	74 094,90	73 344,60	74 275,40	75 721,60
<b>(-purchase) sale of foreign currency</b>	-3 080,48	-637,00	-5 712,79	-4 321,73	-3 538,16	336,43	-176,96	1 189,30	473,10	381,33	1 590,57	-85,23	1 991,24
*/ - Average deviation of current account from the required reserve calculated cumulatively from the beginning of reserve requirement period.													
**/ - Open market operations are reported at nominal value. The balance of this position includes NBP bills minus repo operation													